Draft Mitigated Negative Declaration

Project: South Kaweah Mutual Water Company Three Rivers Water Tanks Project

Lead Agency: State Water Resources Control Board

Project Location: East of the Interstate-5 and West of Sequoia National Park, off State Route 198 in the town of Three Rivers, near Terminus Court, (Figure 1).

Project Description: South Kaweah Mutual Water Company proposes to remove an existing 24-foot high, 32-foot diameter, 150,000-gallon bolted steel water storage tank that is deteriorating and replace it with two new 24-foot high, 28-foot diameter 100,000-gallon storage tanks. Asphalt will be added to an approximately 0.2-mile unnamed roadway from Terminus Court to the Tank site. The roadway, at a hairpin turn, will be widened by 10 feet (five feet on either side of road, but within the existing road right of way), for approximately 52 linear feet, 260 feet south of the tank site. Five oak trees will be removed at the tank site to allow for excavation. Two hundred feet of additional 6-foot tall chain link fence will be installed for security. Approximately 80 feet of swales will also be also installed.

Deterination: An Initial Study (IS) has been prepared to assess the proposed Project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed Project would not have any significant effects on the environment because mitigation measures will be implemented to reduce impacts to a less than significant level. This conclusion is supported by the following findings:

1) The proposed project would not impact Agriculture and Forestry Resources, Cultural Resources, Geology and Soils, Land Use and Planning, Mineral Resources, Recreation, and Tribal Cultural Resources.
2) The proposed project would have a less than significant impact to Aesthetics, Air Quality, Biological Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Population and Housing, Public Services, Transportation, Utilities and Service Systems, Wildfire.
3) Mitigation has been adopted to reduce potentially significant impacts related to Biological Resources, Geology and Soils, Hydrology and Water Quality, Utilities and Service Systems, and Wildfire.

Mitigation Measures:

BIO-1 Pre-construction Survey: No more than 14 days prior to the start of Project ground disturbance activities in any specific area, a pre-activity clearance survey shall be conducted by a qualified biologist knowledgeable in the identification of listed species. The surveys shall cover the Project site plus a 250-foot buffer. Pedestrian surveys achieving 100% visual coverage shall be conducted. If no evidence of special-status species is detected, no further action is required. Any observations of federally or state-listed species will be reported to the Service and the CDFW within three (3) working days of the observation. All federally and state-listed wildlife species observed will be allowed to leave the project area on their own. The on-site biologist will determine whether activities must cease in order to ensure their protection. A report of survey findings shall be provided to the lead agency to confirm compliance with this measure.

BIO-2: Avoid and Minimize Impacts to Special-status and Migratory Birds.

a) If work is to take place within the general bird nesting season (February 1 through August 31), a qualified biologist will conduct pre-construction surveys and identify active migratory bird nests within 250 feet of the proposed project area more than 14 days prior to start of construction. If no nests are found, no further mitigation is required. Construction activity that occurs between September 1 and January 31, outside the nesting season, shall not require pre-construction nesting bird surveys. For raptor species (except Swainson's hawk) the survey and avoidance shall be 500-feet.

b) If an active nest is located within 250 feet of construction or 500 feet for raptors, an appropriate non-disturbance buffer zone shall be established around the nest in coordination with CDFW guidelines. Buffer zones shall be determined in consultation with CDFW and will depend on species of bird, site conditions, and type of work proposed in proximity to the nest. No new project activity shall occur within the buffer zone until the young have fledged, until the nest is no longer active, or until a qualified biologist has determined in consultation with CDFW that reducing the buffer would not result in nest abandonment. Monitoring of the nest by a qualified biologist during construction activities shall be required to ensure that the nest is not jeopardized by construction activities.

BIO-3: Worker Environmental Awareness Training. Prior to the initiation of construction and for the duration of Project construction and maintenance activities that could affect natural habitat all personnel shall attend a Construction Worker Environmental Awareness Training and Education Program. The program shall be developed and presented by a qualified biologist.

a) The program shall include information on the life history of special status species known to be in the area, Swainson's hawk, migratory birds, and raptors that may be encountered during construction and operations and maintenance activities.
b) The program shall discuss each species' legal protection, status, the definition of "take" under the Endangered Species Act (ESA), measures the Project operator must implement to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the State and federal ESAs.
c) The program shall discuss how some bird species are known to nest on human structures, including construction equipment.
d) The program shall provide information on how and where to bring injured wildlife for treatment in the case any animals are injured on the Project site, and how to document wildlife mortalities and injuries.

e) An attendance form signed by each worker indicating that environmental training has been completed shall be kept on record.

BIO-4: Best Management Practices. The Project shall use best management practices and other measures designed to protect surface water and groundwater from the adverse effects of construction activities. The soils used to widen the roadway shall not encroach into any drainage area. Soil erosion and sediment control measures shall be implemented around the backfilled area of the drainage culvert. These measures include but are not limited to the installation of straw-wattle, silt fencing, geotextiles, sandbags, and erosion control blankets.

BIO-5: Oak Tree Replacement. Replacement native oak trees will be planted at the project site prior to commencement of operations to replace the five oak trees removed for the Project. The new oak trees will be the same species as those removed. New trees will be maintained for seven years and replaced if they die.

Statement of No Significant Effect:

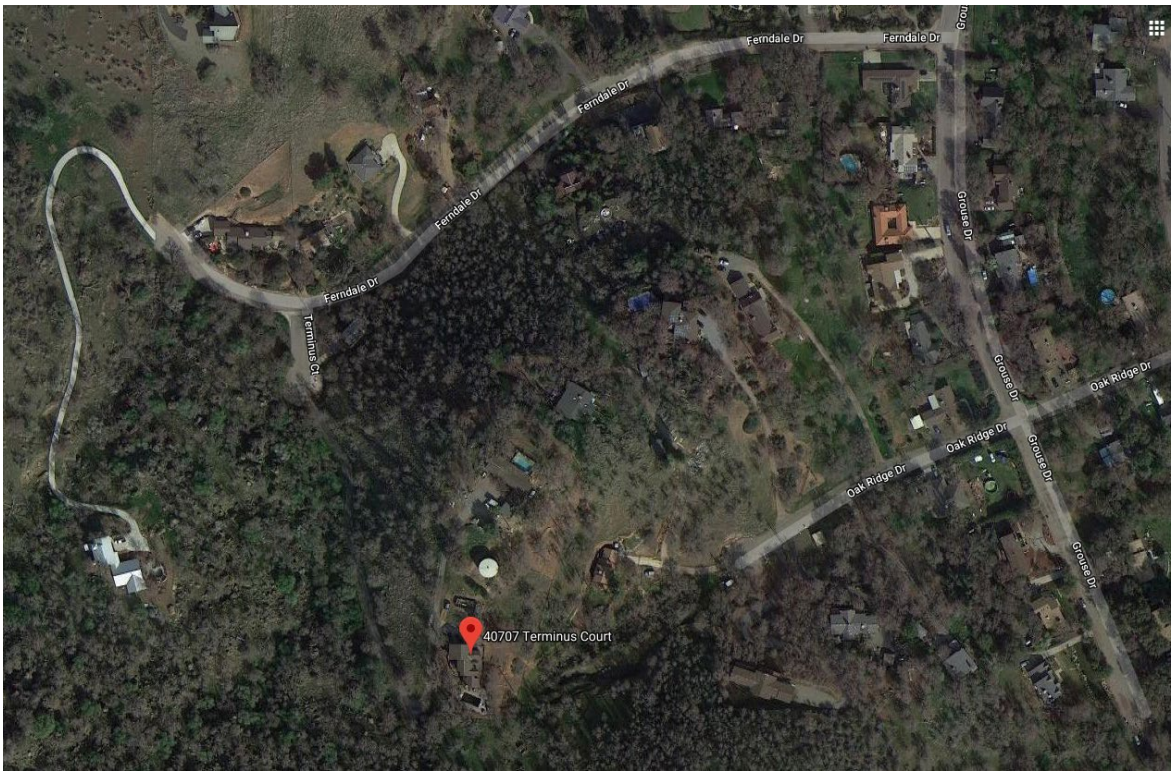
QK, on behalf of the State Water Board and South Kaweah Mutual Water Company, has prepared an Initial Study in support of this Mitigated Negative Declaration. Copies of the Initial Study/Mitigated Negative Declaration (IS/MND) will be provided to the State Clearinghouse and a 30-day public review period will commence.

Pursuant to Section 21082.1(c) of the California Environmental Quality Act, the State Water Resources Control Board (SWRCB) has independently reviewed and analyzed the Initial Study /Mitigated Negative Declaration (IS/MND) for the proposed project and finds that the IS/MND reflects the independent judgment of the SWRCB. As the lead agency for the project, the SWRCB further finds that with implementation of these mitigation measures, the proposed project as modified would have no significant effect on the environment.

South Kaweah Mutual Water Company

Three Rivers Water Tanks Replacement Project

Initial Study / Negative Declaration



July 2020

Prepared for:

State Water Resources Control Board

Prepared by:

QK

Preparers:

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Ronald Hunter- Principal Consultant

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Project Description & Background

Project title: Water Tank Replacement Project

Lead agency name and address:
State Water Resources Control Board
1001 I Street, 16th Floor
Sacramento, CA 95814

Contact person and phone number:

Lead Agency Contact:
Wendy Pierce
Division of Financial Assistance
State Water Resources Control Board
Special Project Review Unit
(916) 449-5178

CEQA Consultant:
Jaymie L Brauer
Quad Knopf, Inc
5080 California Avenue, Suite 220
Bakersfield, CA 93309

Project location:
40707 Terminus Court,
Three Rivers CA 93271

Project sponsor's name and address:
South Kaweah Mutual Water Company
PO Box 191
40690 Crystal Drive
Three Rivers, CA 93271

General plan designation:
High Density Residential (I family /1/2 acre, 14-30 dwellings per acre)[1,2] (Tank / Road Extension Site)
Low Density Residential[1](Road Extension Site)

Zoning:

R-1-20 Single Family Residential (20,000 square foot minimum)[1,3] (Tank/ Road Extension Site)
AE-80, Exclusive Agricultural Zone- 80 Acre Minimum[1,3] (Road Extension Site)

Source: [1]Three Rivers Community Plan
[2]The County General Plan
[3]Tulare County Parcel Zoning Lookup, https://tularecounty.ca.gov/assessor/index.cfm/parcel-search/

Description of project:

South Kaweah Mutual Water Company (SKMWC) currently provides potable water to 138 connections in the community of Three Rivers, Tulare County (Figure 1). There are currently three water supply wells in operation: two wells for fire suppression and one for existing demand. There is a 150,000-gallon water storage tank located on the ridgetop at 40707 Terminus Drive (APN 068-230-003-000).

The Project involves two construction sites, the Tanks Site and the Road Extension Site (Figure 2). At the Tanks Site, SKMWC proposes to build a second tank that will be installed on an adjacent 0.08-acre area of undeveloped land adjacent to the northwest of the existing tank for a total 0.38-acres for the two tanks (Tanks Site). The area for the new tank is on a sloping portion of the residential lot between the access road and the existing tank pad. The area will be leveled by excavation, graded, and an approximately 2,830-foot^2 gravel pad with a concrete anchor ring will be installed for the tank foundation. A retaining wall, not more than 5-feet tall and 40-feet long, will be constructed against the cut banks. Within this new tank area, approximately 78-feet of piping, less than 9-inches in diameter, will be installed at a depth of approximately 3-feet to connect the tanks to the existing water system. Eleven feet of 6-inch piping will also be installed to connect a new fire hydrant to the system.

SKMWC proposes to either repair or replace the existing 24-foot high, 32-foot diameter, 150,000-gallon bolted steel water storage tank that is deteriorating and replace it with a new 24-foot high, 28-foot diameter 100,000-gallon storage tank, (Figure 3). There will be no ground disturbance on the existing 0.3-acre area tank replacement site. The old tank would be disassembled, removed, and a replacement tank will be built on the existing 3,630 foot^2 steel retaining ring and gravel pad. No grading or trenching would be necessary to replace the old tank. The replacement tank, will use the existing storm drainage grate to the southwest of the site for overflow, as needed.

Both new tank and replacement tank overflow piping will be connected to an existing separate drainage box that connects to a 10-inch culvert drainage pipe, which then discharges downhill. Discharge using this culvert drainage pipe would be rare and would only occur if there is a malfunction of the sensor to turn off the pump when the high-water level is reached or if the tank needs to be drained. Tank drainage is not a standard practice. The inflow pumped water is 250-gpm, thus, overflow would be the same.

Five oak trees will be removed at the Tank Site to allow for excavation. New oak trees will be planted to replace the removed trees. Two hundred feet of additional 6-feet tall chain link fence will be installed for security. Two new swales will also be also installed to help channel and

discharge stormwater. An approximately 25-foot long one will be constructed along the retaining wall that will drain runoff to an existing v-ditch on the side of the driveway, where it will filter to groundwater. An approximately 35-foot one will be installed around three sides of the new tank. This one will drain to a swale box on either side and then to existing drainage piping. Jute netting and riprap will also be installed at the Tank Site.

At the Road Extension Site, the construction activities will include widening the existing road by approximately 10 feet (five on either side of the road, but within the road right-of-way easement) along 52 feet of the roadway at a hairpin turn approximately 260 feet south of the Tank Site, which is approximately 0.01 acres of land. The existing drainage will not be impacted by the road widening, and the culvert will not be modified, (Figure 4). The road widening is anticipated to take approximately one month. During widening activities, a portion of the roadway will be open to allow for use by residents and construction crews. Trees along the access road may need to be pruned to allow heavy equipment and materials to be delivered or moved on site. After construction asphalt will be added to the approximately 0.2-mile roadway from Terminus Court to the Tank site to repair any damage caused by the construction vehicles.

The Tank Site and the Road Extension Site, along with a 250-foot buffer, is considered the Area of Potential Effects, (APE) (Figure 2). The maximum depth would be approximately three feet, for installing some of the pipelines for the Project, (vertical APE). The equipment staging area and all construction activities will fall within the APE.

The 50,000-gallon increase in water storage capacity is intended to provide sufficient potable water to the existing SKMWC clients, that include 138 service connections. No increase in the number of connections, water demand or pumping capacity is proposed. The increased storage capacity will ensure compliance with Three Rivers Fire Department requirements for fire suppression.

Surrounding land uses and setting: Briefly describe the project's surroundings: Rural residential development.

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

A Tulare County building permit, Tulare County Fire department review, and Tulare County Planning Review will be required for the Project.

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.?

No. See Section XVIII

Figure 1
Regional Location

Figure 2
Project Site and Biological Survey Area

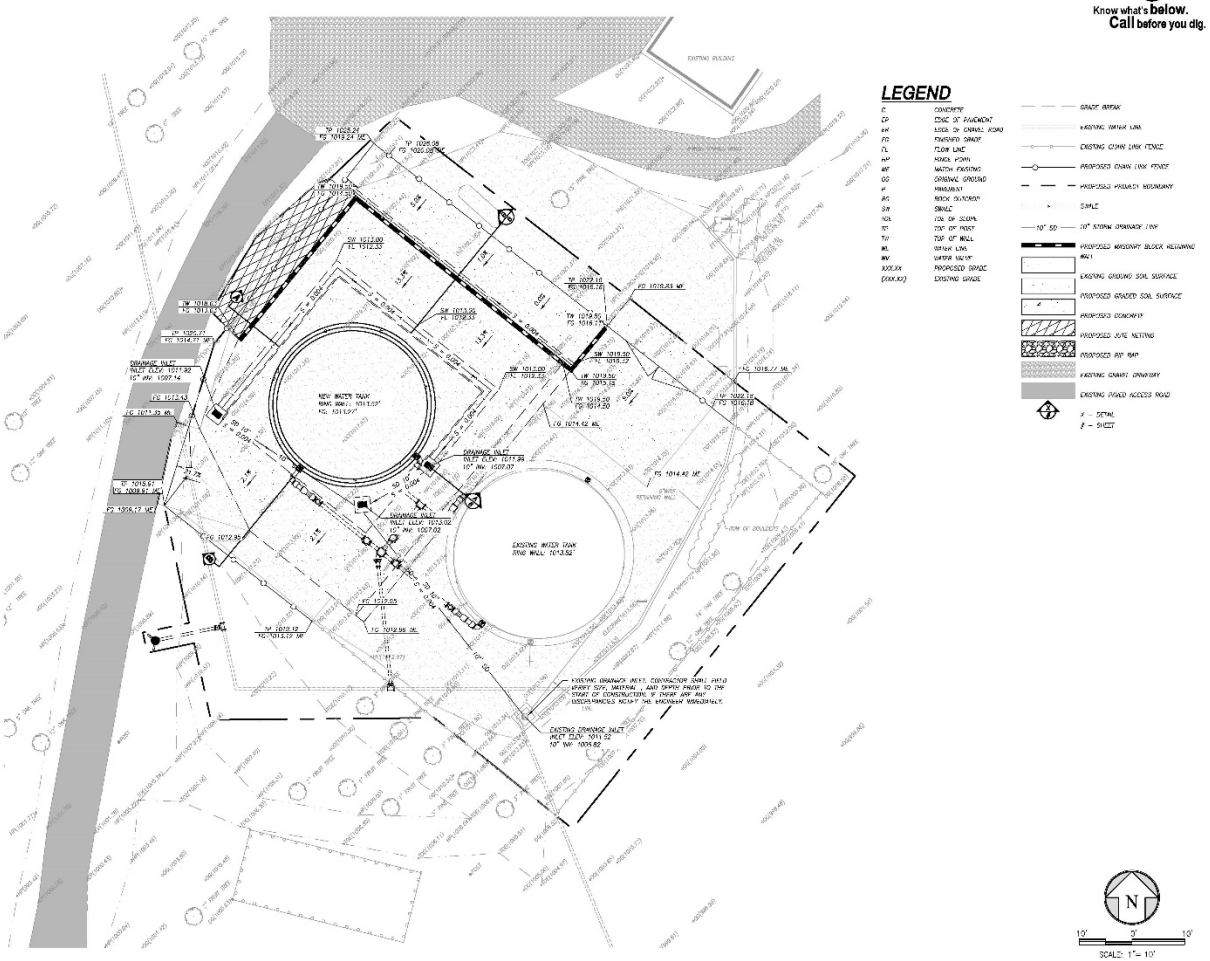

Figure 3 Tank Designs

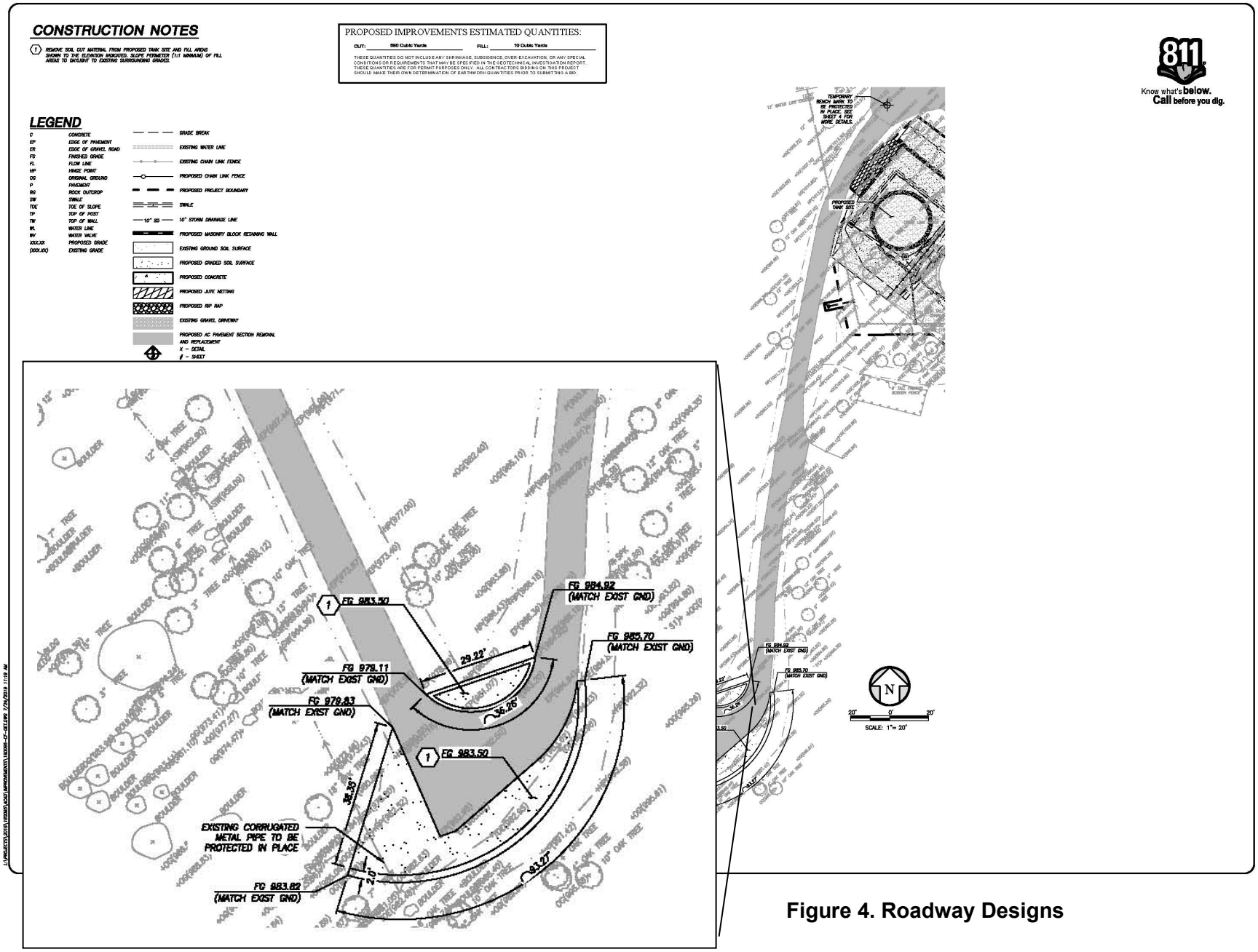

Figure 4. Roadway Designs

I. Aesthetics

The following significance determinations have been made, except as provided in Public Resources Code Section 21099:

Question-Would the Project:	CEQA Significance Determination for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant Impact

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

The proposed Project is not located in or in close proximity any designated scenic vista or scenic resource. The Project area is fully developed with the existing water tank infrastructure. The surrounding area is developed with residences. The closest scenic area is on the north side of SR 198, which is approximately 0.5 miles to the northwest. The Project is not visible from SR 198 and therefore will not impact scenic views or resources. The Project would have no impact.

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

Pursuant to the California Streets and Highways Code, §260 through 263 there are certain elements that make a highway "scenic," which include "the amount of natural landscape that can be seen by drivers, the scenic quality of the landscape, and the extent of development." The closest State Scenic Highway is State Route (SR) 198 (California Department of Transportation, n.d.). The portion of SR 198 designated as a Scenic Highway is within the Sequoia National Forest, which is approximately 15 miles northeast of the Project. SR 198 is more than 0.5 miles to the southwest of the Project, and the Project is not visible to passing motorists.

Based on the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR) and the Three Rivers Community Plan, no historic buildings exist on the Project site. There are no historic buildings, trees, or rock outcroppings in the immediate vicinity of the Project sites.

The project includes the removal of five oak trees. The removal of five trees will not affect the scenic view of the area, as this represents a very small number of trees, primarily located on the Project site, and not visible to the public. Removal of five trees does not constitute an impact to the visual character of the area- which has numerous residences, with cleared and open areas. Residents often create defensible zones by clearing away trees from around structures as a way to reduce fire impacts. HS-6.17 of the Three Rivers Community Plan specifically speaks to the integration of open space as a way to increase fire safety effectiveness, (Tulare County Management Agency, 2018).

Therefore, the proposed Project will not impact scenic resources within a State scenic highway.

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

Part of the Project site is currently developed with the existing water storage facility enclosed by a fence. Another portion of the Project site extends out from the existing water storage facility toward the existing road. And a final piece of the Project site includes an area surrounding an existing road and the road. The overall surrounding area has been developed with rural residences. The topography of the surrounding area is mostly hilly, and there are areas that still maintain a forested character. As noted previously, the site is not visible to SR 198 or anyone other than the people who live in the vicinity. Access to the site is from a long and winding driveway that is not typically used by the public. The current road is visible to the surrounding homes, which utilized the roadway for ingress and egress to their homes. This is baseline; the widening of the road by 10 feet and paving does not appreciably change the way the road looks to the residents, but it will make it safer to drive by allowing for safer vehicle movement. Grading is anticipated but will not substantially change the current visual character of the Project location. The widening and paving of the road will have minimal to no visual impact to the area, as it is an existing roadway. The existing water storage related infrastructure has an industrial appearance. The installation of a replacement tank, additional tank, and removal of five trees will not significantly change or degrade the visual character of the Project site. Therefore, the proposed Project will not have an adverse effect on the visual character of the site or surrounding area, and impacts are considered less than significant.

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

Construction activities would be conducted during daylight hours, from 7:00 AM to 7:00 PM Increased truck traffic and the transport of construction materials to the Project site may temporarily increase glare conditions during construction. Construction crews will use minimal illumination to perform the work safely.

The existing water facility does not use lighting, and once operational, the facility will not use lighting. The new tank will not be visible to motorists or the general public. With the surrounding vegetation and existing homes, outbuildings, etc. the project will not create a glare impact.

The Project will comply with night sky conservation and protection measures as outlined in the Community Plan, County design guidelines, and County development standards. Adherence to these guidelines and requirements would ensure that the proposed Project would not adversely affect day or nighttime views significantly in the area. Therefore, the Project is anticipated to have a less-than-significant impact on light or glare.

Aesthetics Mitigation Measures

No mitigation is required.

Aesthetics Summary

Impacts to Aesthetic Resources would be less than significant or have no impact.

II. Agriculture and Forestry Resources-

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agricultural 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 Forest and Rangeland Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

The following significance determinations have been made:

Question-Would the Project:	CEQA Significance Determination for Agriculture and Forestry Resources
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?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
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))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
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?	No Impact

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

The Project site and surround area is designated as Rural Residential or Grazing Land by the Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP) (Department of Conservation, 2016), (See Figure 5). The land is not designated as prime farmland, unique farmland, or farmland of Statewide Importance, (Farmland). Therefore, no prime farmland, unique farmland, or farmland of Statewide Importance will be converted so there will be no impact.

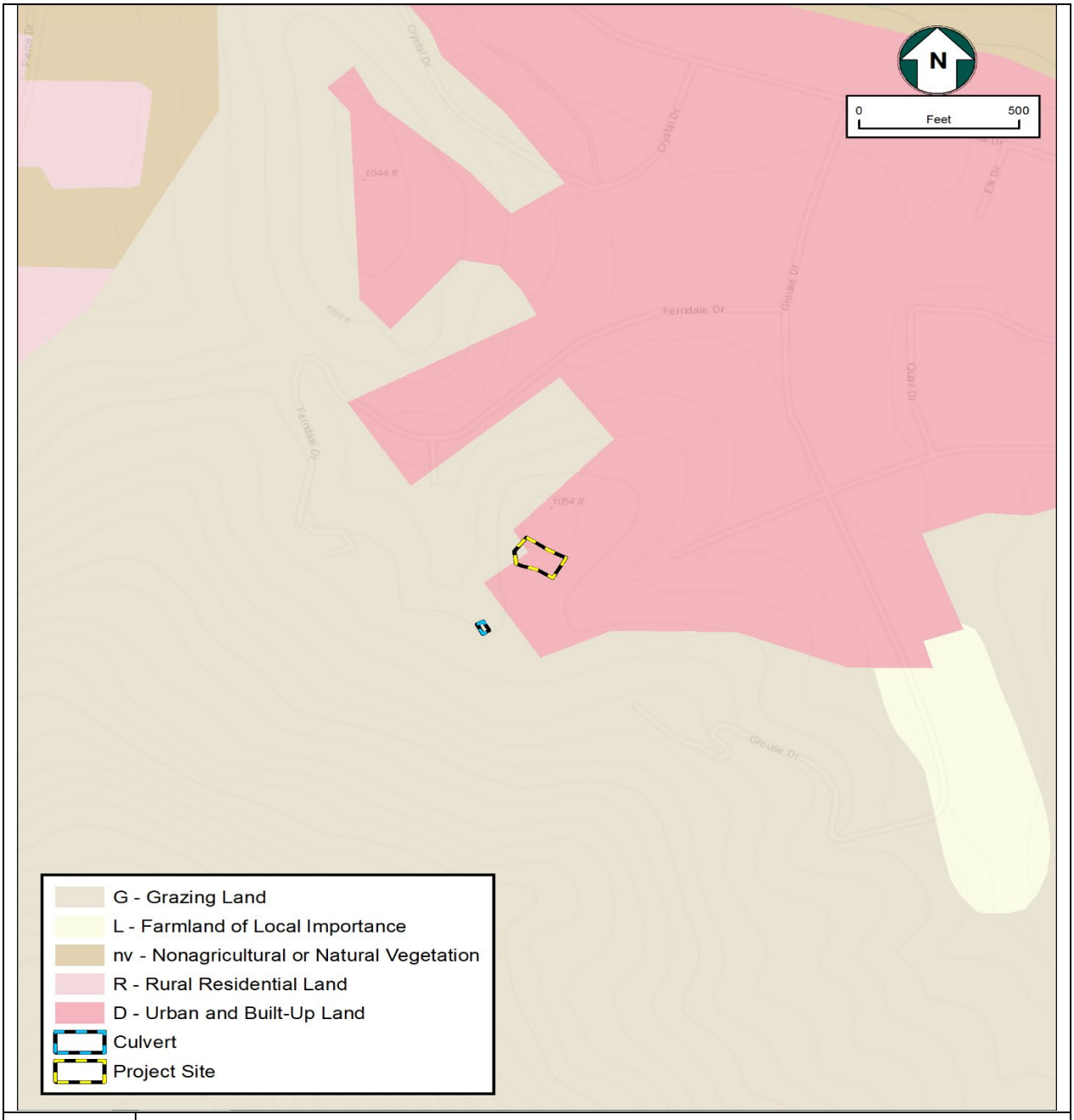

Figure 5
Farmland Mapping and Monitoring Program

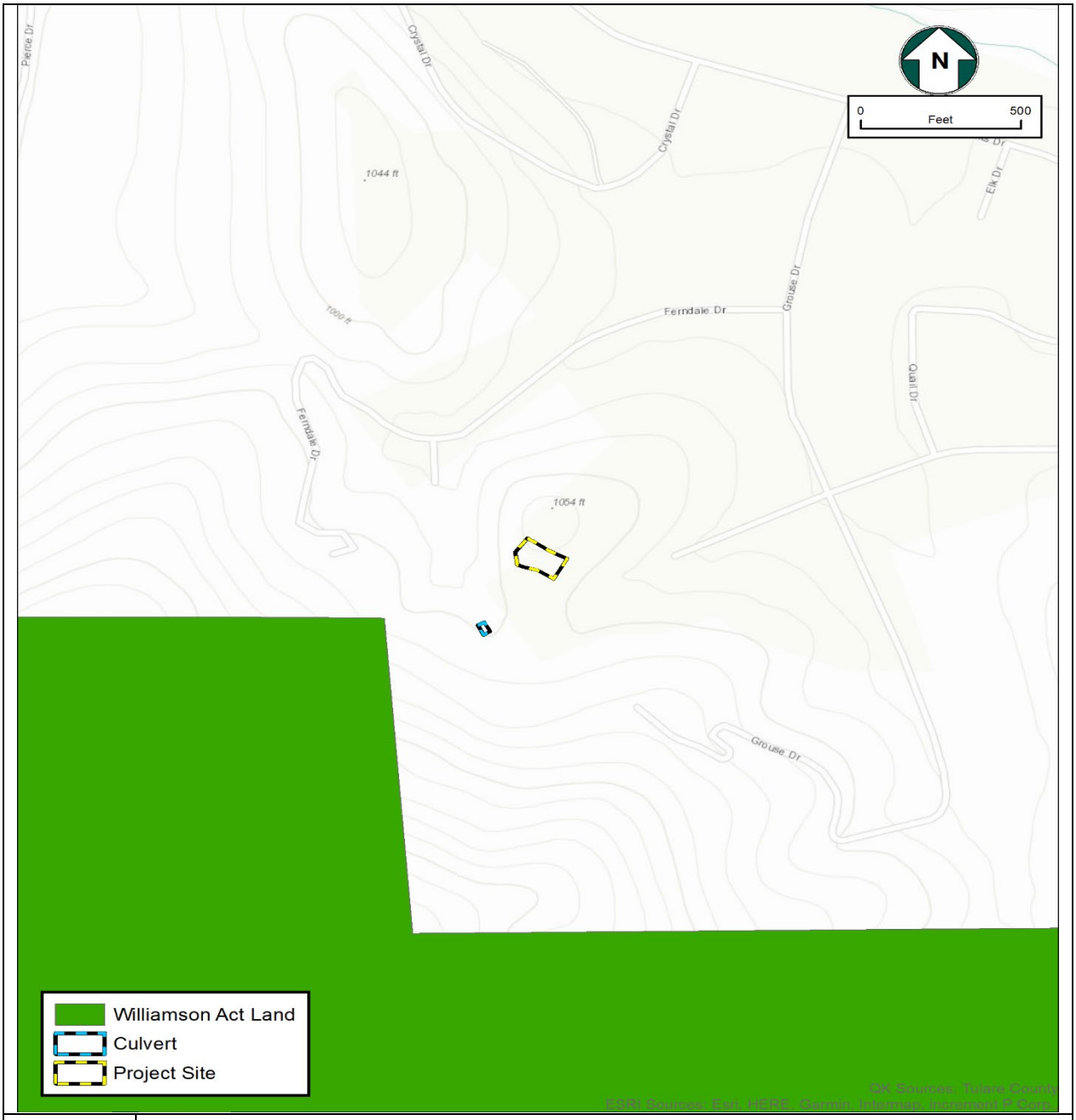

Figure 6
Department of Conservation Williamson Act Lands

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

According to the Department of Conservation maps, the Project site is not subject to a Williamson Act land use contract, (See Figure 6). The project area is zoned High Density Residential for the tank site and High Density Residential and Agriculture for the Road Extension site by the County. However, the proposed roadway falls with an existing roadway easement that allows for such use. Roads are allowed in any zone district. The area is not used for any type of agriculture, as it is unsuitable for cultivation of crops to the surrounding terrain and residential uses. The Project would not conflict with the existing zoning for agricultural land use or a Williamson Act contract. Therefore, there is no impact.

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))?

"Forest land" as defined by Public Resources Code Section 12220(g) is "…land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

"Timberland" as defined by Public Resources Code Section 4526 means "…land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis."

"Timberland zoned Timberland Production" is defined by Public Resources Code Section 51104(g) as "..an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision h."

The project area does not meet the definition of Forest land as defined by Public Resources Code Section 12220(g). the property does not support 10-percent native tree cover of any species and does not allow for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

The area is residential and does not meet the threshold of Timberland as defined by Public Resources Code Section 4526

Although the area is wooded in places, there is no Timberland zoned Timberland Production" as defined in PRC § 51104(g) on the Project site or surrounding area. The area is zoned for rural residential development and agriculture, not Timberland zoned Timberland Production, and so does not meet the definition of Timberland zoned Timberland production.

The project is not converting land designated for Forest land use. The project is an existing water facility with surrounding residential development. The land is privately owned and is not publicly managed or maintained. No forestry activities are active in this area. There are no indirect or direct impacts to timberland or forestland by implementation of the project.

The Project site is not a designated forest resource. It is already been zoned for residential development and agriculture per the County Three Rivers Community Plan, and therefore, is will not conflict with zoning or cause rezoning.

The Project will not conflict with existing zoning for, or cause rezoning of, Forest land, Timberland, or Timberland zoned Timberland Production. No Impact.

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

“Forest land” as defined by Public Resources Code Section 12220(g) is “…land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”

The Project site does not support 10-percent native tree cover of any species and does not allow for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” No Impact.

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?

There will be no other changes, including indirect changes, in the existing environment that will occur besides those addressed above, 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 Project site does not support 10-percent native tree cover of any species and does not allow for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” No impact.

Agriculture and Forestry Resources Mitigation Measures

No mitigation is required.

Agriculture and Forestry Resources Summary

There would be no impact to Agricultural and Forest Resources.

II. Air Quality

The analysis in this section is based on a Small Project Analysis Level (SPAL) report prepared for the project (Appendix A), the Three Rivers Community Plan, and other available data. The following significance determinations have been made:

Question-Would the Project:	CEQA Significance Determination for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant Impact
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?	Less Than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact

The Project is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). This assessment was prepared pursuant to the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD's GAMAQI) (SJVAPCD 2015), the CEQA (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

The SJVAPCD created the screening tool, Small Project Analysis Tool (SPAL), to streamline air quality assessments of commonly encountered projects. According to SJVAPCD's GAMAQI, the SJVAPCD "pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding emissions thresholds".

The SJVAPCD SPAL process established review parameters to determine whether a project qualifies as a "small project." A project that is found to be "less than" the established parameters, according to the SPAL review parameters, has "no possibility of exceeding criteria pollutant emissions thresholds.

The total Project area is approximately 11,025 square feet which is far below the allowable project size for a general light industrial project, which is 510,000 square feet for the SPAL limit for General Light Industrial projects. The proposed Project would not exceed the established SPAL limits for a General Light Industrial project. The Project would consist of 0.08 acres of ground disturbance (3,485 SF). The Project would consist of approximately 1,655.28-ft^2 area at the Tank Site, 520-ft^2 of road widening and paving area at the Road Extension Site, and approximately 8,850 -ft^2 of roadway paving on the existing

roadway. Based on the above information, this Project qualifies for a limited air quality analysis, applying the SPAL guidance to determine air quality impacts.

The proposed Project would also not exceed the established SPAL vehicle trip limits for Industrial projects. The Project would generate four to five daily trips during the construction phase, and an average one to two weekly trips during operations, which is less than one average daily trip, compared to the allowable project vehicle trips for an industrial project that is 1,506 average daily trips. Thus, the Project qualifies for a limited air quality analysis applying the SPAL guidance to determine air quality impacts.

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

If implemented, the Project would generate short-term construction emissions, and minimal long-term operation emissions. Construction is anticipated to last four months, (80 working days). Construction equipment that will be used include: a backhoe, road grader, concrete/cement mixer truck, paver, and small bulldozer. Once constructed the tanks will be put into operation. The electric pumps used to move groundwater operates on an intermittent, as-need basis, and are expected to generate negligible operational emissions, (see Appendix A). The consistency with the Air Quality Attainment Plans and SJVAPCD adopted rules and regulations are discussed below for emissions.

The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB), which is under the jurisdiction of the SJVAPCD and the United States Environmental Protection Agency (USEPA). The SJVAPCD is responsible for developing air quality plans and implementing air quality control measures in the SJVAB. For air quality standards, the SJVAB is designated as State and Federal nonattainment for ozone and particulate matter of less than 2.5 microns (PM2.5). The SJVAB is also designated as nonattainment by the State for particulate matter less than 10 microns (PM10). To meet National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), the SJVAPCD has multiple air quality attainment plan documents, including:

- 2013 Plan for the Revoked 1-Hour Ozone Standard;
- 2007 Ozone Plan for attainment for the 8-hour ozone standard;
- 2007 PM_{10} Maintenance Plan and Request for Redesignation; and
- 2012 $PM_{2.5}$ Plan

Because of the region's non-attainment status for ozone, PM_{10}, and $PM_{2.5}$, if the Project-generated emissions of either of the ozone precursor pollutants—reactive organic gases (ROG) or oxides of nitrogen (NO_x), or PM_{10}, or $PM_{2.5}$ were to exceed the SJVAPCD's significance thresholds, then the Project uses would be considered to conflict with the attainment plans. In addition, if the Project uses were to result in a change in land use that results in a corresponding increase in vehicle miles traveled, the vehicle miles traveled may be unaccounted for in regional emissions inventories contained in regional air quality control plans.

As discussed in Response (c), below, predicted construction and operational emissions would not exceed the SJVAPCD's significance thresholds for ROG, NO_x, PM_{10}, and $PM_{2.5}$. As a result, the Project uses would not conflict with emissions inventories contained in regional air quality attainment plans and would not result in a significant contribution to the region's air quality non-attainment status. In addition, the Project would not result in a significant contribution to the region's air quality non-attainment status. In addition, the Project would not result in a change of land use that would result in a considerable corresponding increase in vehicle miles traveled that are unaccounted for in regional emission inventory. Additionally, the Project would comply with all applicable rules and regulations. Therefore, this impact is less than significant.

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 Project must be in compliance with the federal General Conformity Rule for the Federal Clean Air Act (FCAA). A FCAA general conformity analysis applies only to projects in a nonattainment area or an attainment area subject to a maintenance plan and is required for each criteria pollutant for which an area has been designated nonattainment or maintenance. If a project's emissions are below the "de minimis" level and are less than 10% of the areas inventory specified for each criteria pollutant in a nonattainment or maintenance area, further general conformity analysis is not required. A conformity determination must be made if emissions from project facilities are above "de minimis" thresholds established for the area. This Section includes an analysis of the General Conformity Rule for the FCAA.

The short- and long-term air quality impacts of the proposed Project analysis were evaluated with the methodology and criteria provided in the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (San Joaquin Valley Air Pollution Control District, 2015). Short-term impacts are associated with Project-related construction activities, such as site grading and structural construction, and are recognized to be short in duration. Long-term impacts are associated with the operation of a particular project upon completion of construction. Federal and State laws require emission control measures in areas where air pollution levels exceed ambient air quality standards. The SJVAB is one of these areas. SJVAPCD strategies focus on reducing Criteria Pollutants to meet federal and State standards and regulating stationary source emissions.

SHORT-TERM AIR QUALITY IMPACTS

The following short-term thresholds of significance from the GAMAQI are used to determine if a significant air quality impact would occur due to the proposed Project:

- Emissions of Particulate Matter (PM)—Construction impacts associated with the proposed Project would be considered significant if the feasible common control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented. Emissions for particulate matter for PM_{10} and PM_{25} over 15 tons per year would also be considered significant.
- Emissions of Ozone Precursors (ROG and NOx)—Construction impacts associated with the proposed Project would be considered significant if the Project generates emissions of ROG or NOx that individually exceed 10 tons per year (TPY).
- Hazardous Air Pollutants (HAPs)—Exposure to HAPs would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual would exceed 10 in one-million or would result in a Hazard Index greater than one.
- Odorous Emissions—Odor impacts associated with the proposed Project would be considered significant if the Project has the potential to frequently expose members of the public to objectionable odors.
- Local Mobile-Source CO Concentrations—Local mobile source impacts associated with the proposed Project would be considered significant if the Project contributes to carbon monoxide (CO) concentrations at receptor locations in excess of the California Ambient Air Quality Standard for that pollutant (i.e., nine parts per million for eight hours or 20 parts per million for one hour). Emissions for CO concentrations over 100 tons per year would also be considered significant.

For purposes of the proposed Project, short-term emission impacts from construction activities are anticipated. Some ground disturbance is proposed during construction activities and would comply with the SJVAPCD's Regulation VIII dust control requirements during construction and demolition. Along with these requirements, exposed areas would be watered three times a day and vehicle speed would be less

than 15 miles per hour. Compliance with these regulations would reduce the potential for significant localized PM10 impacts to less than significant levels.

Emissions for the 2019 construction are estimated, in tons per year, to be 0.06 for ROG, 0.57 for NOx, 0.45 for CO, zero for SOx, 0.04 for PM_{10}, and 0.03 for $PM_{2.5}$. The SJVAPCD Construction Emissions thresholds for these pollutants are 10 tons per year for ROG and NOx, 100 tons per year for CO, 27 tons per year for Sox, and 15 tons per year for PM10 and PM2.5. The construction numbers were calculated based on these best management practice assumptions. These emissions are far below the adopted thresholds for all of the criteria pollutants. Based on these anticipated activity levels, the Project construction activities for the tank work would not exceed construction thresholds.

It is anticipated, based on the numbers for the construction of the tanks, that the asphalt paving and widening on the roadway, would also not exceed these numbers. Even if the road widening and the asphalt paving tripled these numbers, the construction emission thresholds for the total project would remain under the thresholds for exceedance. Construction emissions for PM, ROG and NOx, and CO therefore were found to be less than significant, and no further evaluation is required.

(SJVAPCD's GAMAQI, states, "Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact, (San Joaquin Valley Air Pollution Control District, 2015)."- The only odorous emissions anticipated from the construction of the Project is from the laying of asphalt from Terminus Court to the driveway of the Tank Site at the end of the road.

The roadway that will be repaved runs near to the neighboring residence, all of whom use the road, and requested the repaving to make the roadway safer, more easily traversable, and to repair damage done by heavy equipment. Repaving is a normal maintenance activity for an asphalt driveway and is needed to improve safety. The temporary nature of the repaving process will not cause long term odor or significant HAPs impacts.

The existing road pavement will not be removed. The amount of anticipated construction emissions produced by the project are extremely minimal and will occur over one day. The closest residence's houses for residents that might be affected by HAPs and odor, are 114-feet away from the location where paving will occur.– The construction of the project is short term and the probability of contracting cancer from any HAPs emissions generated is exceedingly unlikely.

SJVAPD has laid out the following rules regarding air quality and asphalt paving projects:

Rule 9510, Indirect source review, went into effect on March 1, 2006 and is required of projects involving new roads, expansion to existing roads, interchange and intersection improvements, and transit projects that involve facility construction. These types of projects that involve construction exhaust of greater than two tons/year of NOx and two tons/year of PM10 are subject to the rule, (SJVAPCD). Such projects also must submit an Air Impact Assessment Application to the San Joaquin Valley Air Pollution Control Board. Maintenance and resurfacing projects and projects with less than two tons/year of NOx and two tons/year of PM10 do not apply. The air board states as a rule of thumb, constructing the equivalent of 0.125 miles of two-lane paved road may exceed the two tons/year threshold. This is equivalent to 660-feet of two lane road-way.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). The purpose of the rule is to limit Volatile Organic Carbon emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations. This rule applies to the

manufacture and use of cutback asphalt, slow cure asphalt, and emulsified asphalt for paving and maintenance operations. The rule involves maintaining records for the types, amounts received, and amounts used. The rule also lays out testing methods for the asphalt.

The project will comply with Air District rules and regulations including, Indirect Source Review Rule 9510 and Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations 4641, as applicable.

Short-term HAPs and odorous emissions from construction were found to be less than significant. The Project's short-term emissions would not 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. Impacts are less than significant.

LONG-TERM AIR QUALITY IMPACTS

The following long-term thresholds of significance from the GAMAQI are used to determine if a significant air quality impact would occur due to the proposed Project:

- Emissions of Particulate Matter (PM) Operational impacts associated with the proposed Project would be considered significant if the Project generates emission of PM_{10} and PM_{25} that are individually exceed 15 TPY.
- Emissions of Ozone Precursors (ROG and NOx) —Operational impacts associated with the proposed Project would be considered significant if the Project generates emissions of ROG or NOx that individually exceed 10 TPY.
- Hazardous Air Pollutants (HAPs) —Exposure to HAPs would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual would exceed 10 in one million or would result in a Hazard Index greater than one.
- Odorous Emissions —Odor impacts associated with the proposed Project would be considered significant if the Project has the potential to frequently expose members of the public to objectionable odors.
- Local Mobile-Source CO Concentrations —Local mobile source impacts associated with the proposed Project would be considered significant if the Project contributes to carbon monoxide (CO) concentrations at receptor locations in excess of the California Ambient Air Quality Standard for that pollutant (i.e., nine parts per million for eight hours or 20 parts per million for one hour).

Long term emissions are caused by operational mobile, area, and stationary sources.

The only long-term emissions from this Project would be from a maximum of one vehicle trip per week for maintenance and electricity usage to fill the water tanks. The old tank already required a weekly maintenance trip. In addition, there would be a minimal incremental increase in electricity usage from that of the existing water tank's current electricity usage. Once operational, the project would not generate PM_{10} or PM $_{2.5}$. There would be no ground disturbance necessary. There are no generator or pumps on the project site, and there are no new pumps or generators proposed. Therefore, the proposed Project's long-term air quality ROG, NOx, CO, SOx, PM_{10}, and $PM_{2.5}$ emissions are expected to be negligible and would not pose a significant impact to criteria air pollutants.

The Project will not produce long-term hazardous air pollutants or odorous emissions. As a result, no significant impacts will occur regarding these emissions.

The Project would not 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. Impacts are less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

The proposed Project is located at the southeast corner of Ferndale Drive on and off of Terminus Court. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and daycare centers are locations where sensitive receptors would likely reside. There are no known schools, hospitals, or nursing homes within a mile radius of the Project. The closest school, Three Rivers Union School, is three miles away. The closest hospital, Kaweah Delta Medical Center is 28 miles away, in Visalia. The closest medical clinic, Family HealthCare Network, is 2.6 miles away. And the closest nursing home, Indian Oaks Residential Care, is 1.4 miles away. Based on the predicted operational emissions and activity types, the proposed Project is not expected to affect sensitive receptors and is not expected to have any adverse impacts on any known sensitive receptor. Impacts are less than significant.

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

The proposed Project is located in a rural residential neighborhood, (zoned R-1-20). Land uses allowed in the R-1-20 zone district are not known to be a source of nuisance odors and are not listed in Table 6 of the SJVAPCD's GAMAQI (San Joaquin Valley Air Pollution Control District, 2015). As part of the Project, the road will be widened. The only odors anticipated from the Project would be repaving of from Terminus Court to the driveway of the Tank Site. Repaving is a normal maintenance activity for an asphalt driveway and is needed to improve safety. This is a minimal repaving Project that will be completed in one day and be a safety benefit to the neighbors. The residence's houses for residents that might be affected by this exposure, are 114-feet away from the location where paving will occur. There will be no odors emanating from the Project once operational. The Project will not adversely affect a substantial number of people. The Project is not anticipated to have substantial odor impacts, and impacts would be less than significant.

Air Quality Mitigation Measures

No mitigation is required.

Air Quality Summary

Impacts are less than significant.

IV. Biological Resources

Considering the information in the Biological Resources Study (Appendix B), the following significance determinations have been made:

Question-Would the Project:	CEQA Significance Determination for Biological Resources
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Less Than Significant with Mitigation Incorporated
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	Less Than Significant Impact
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?	Less Than Significant with Mitigation Incorporated
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less Than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less Than Significant with Mitigation Incorporated
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact

The analysis in this section is based on a Biological Technical Report prepared for the project (Appendix B), the Three Rivers Community Plan and other available data.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

There are no local or regional habitat plans associated with the area. Two biological reconnaissance surveys were conducted for the Project. The initial biological reconnaissance survey of the existing facility was conducted on March 1, 2019, and a subsequent survey of the road area was conducted on June 4, 2019. The survey area includes the Project site, the Road Extension site and a 250-foot buffer (Biological Survey Area or BSA), where feasible, (Figure 2). The survey was conducted by meandering pedestrian transects which included 100% visual coverage of the Project site. The survey was conducted during the daytime, during which there is a high probability of detecting special-status species including sign, (e.g. tracks, scat, prey remains, dens, etc.). Areas that were not surveyed included private properties located to the east and west of the Project site. Areas that were not surveyed on foot were observed using binoculars.

The proposed Project site consists of a previously disturbed property that is adjacent to two residential homes. Vegetation present on the Project site consists of common ruderal grassy vegetation that is found locally, and five oak trees (Quercus sp.) that will be removed to allow for the installation of the water storage tanks. The Road Extension Site primarily consists of common ruderal grasses and poison oak (*Toxicodendron diversilobum*). Several oak and fir (*Abies* sp.) trees may require pruning along the access route to allow large vehicle access.

Presence/Absence of Candidate, Rare, Special-status Species, and Species of Concern

Special-status species are those given state and federal protection that may affect Project development. Among this, for California Department of Fish and Game (CDFW) is Endangered, Threatened, and Candidate Species. For United States Fish and Wildlife (US FWS), this includes Endangered and Threatened Species.

For CDFW an endangered species is a native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. For US FWS an endangered species is a species in danger of extinction throughout all or a significant portion of its range.

For CDFW a threatened species is a native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts. For US FWS a threatened species is a species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

For CDFW a Candidate Species is a species that has been petitioned for listing that is provided the same protections as a state listed threatened or endangered species. For the US FWS, a candidate species is a species that has been studied and the Services concluded that they shall be proposed for addition the federal endangered and threatened species list. Candidate species under federal law receive no protection under the Endangered Species Act.

For US FWS, sensitive species are defined as having small or declining populations, are at-risk, and/or are of management concern. In general, rare species are also species that although not presently threatened with extinction, are in such small numbers throughout its range that it may become endangered if its present environment worsens. CDFW designates rare species under Fully Protected Animals. The California Native Plant Society (CNPS) and other biologists also provide rare species lists.

Species of Concern are species designated by CDFW as: may include any of the following: are extirpated, are listed federally as threatened or endangered but not by the state, meets the definition of threatened or endangered but has not been formally listed, is experiencing or has experienced serious population declines or range retractions that if not reversed could qualify it for state threatened or endangered status, or had naturally small populations that exhibit high susceptibility to risk from any factors that could lead to the decline that would qualify it for State threatened or endangered status. Species of Concern for U.S. FWS is species that have not been petitioned or been given Endangered, Threatened, or Candidate status but have been identified as important to monitor.

QK conducted a desktop analysis for candidate, sensitive/rare, species of concern, and special-status species of the Project site. A California Natural Diversity Database (CNDDB) and federal Information for Planning and Consultation (IPaC) query was conducted prior to the site visit. Both CNDDB and IPaC presents historical occurrences for candidate, sensitive/rare, species of concern, and special-status plant species, invertebrates, reptiles, amphibians, bird, and mammal species. The species that were listed by the database search focuses the on-site biological resource survey to target candidate, sensitive/rare, species of concern, and special-status plant and wildlife species that may occur or have occurred in the general area of the Project site.

Species that were identified on the list, but where the Project area lacks suitable habitat, is outside the known range for the species, or has other excluding environmental limitations, are not discussed in depth. A table describing candidate, sensitive/rare, species of concern, and special-status plant and wildlife species identified in the database search includes: the habitat requirements, potential to occur within the Project site, and rationale for occurrence, are presented in Appendix B. Below are candidate, sensitive/rare, species of concern, and special-status species that have or may occur within the Project site according to the database search and observations during the site visit.

Sensitive/Rare, Special-Status, and Plant Species of Concern

Based on CNDDB, IPac, and CNPS database query, there are 26 candidate, rare/sensitive, special-status, and plant species of concern that have been identified within the nine-quadrangle search area. Of those identified, nine plant species have been determined to have the necessary environmental criteria to potentially occur on the Project site. These include: San Joaquin adobe sunburst (*Pseudobahia peirsonii)*, Greene's tuctoria (*Tuctoria greenei*), striped adobe lily (*Fritillaria striata*), Calico monkeyflower (*Diplacus pictus*), Kaweah brodiaea (*Brodiaea insignis*), Madera leptosiphon (*Leptosiphon serrulatus*), mouse buckwheat (*Eriogonum nudum* var. *murinum*), Springville clarkia (*Clarkia springvillensis*), and San Joaquin Orcutt grass (*Orcuttia inaequalis*).

<u>San Joaquin adobe sunburst</u>

San Joaquin adobe sunburst (*Pseudobahia peirsonii)* is a federally threatened and State endangered species and is listed 1B.1 California Rare Plant Rank (CRPR) species. A 1B.1 species is seriously threatened in California and is rare throughout the species range and primarily endemic to California. The nearest CNDDB recorded occurrence (EONDX 32159) of this species is located approximately 6.6-miles west of the Project site. No San Joaquin adobe sunburst was observed on the BSA during the surveys. Due to the previously disturbed condition of the Project site it is unlikely for San Joaquin adobe sunburst to be present.

Greene's tuctoria

Greene's tuctoria *(Tuctoria greenei)* is a federally endangered species and is a listed 1B.1 CRPR species. The nearest CNDDB recorded occurrence (EONDX 64958) of this species is located approximately 9-miles west of the Project site and is presumed extirpated. No Greene's tuctoria was observed on the BSA during surveys. Due to the previously disturbed condition of the Project site it is unlikely for Greene's tuctoria to be present.

Striped adobe lily

Striped adobe lily (*Fritillaria striata*) is a State threatened and is listed 1B.1 CRPR species. The nearest CNDDB recorded occurrence (EONDX 64958) of this species is located approximately 9.8-miles southwest of the Project site and is presumed extirpated. No striped adobe lily was observed on the BSA during the surveys. Due to the previously disturbed condition of the Project site it is unlikely for striped adobe lily to be present.

Calico monkeyflower

Calico monkeyflower (*Diplacus pictus*) is a listed 1B.2 California Rare Plant Rant species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. The nearest CNDDB recorded occurrence (EONDX 64927) of this species is located approximately 5.8-miles southwest of the Project site. No calico monkeyflower was observed on the BSA. Calico monkeyflower is unlikely to occur on the Project site due to the current disturbed conditions of the site.

Kaweah brodiaea

Kaweah brodiaea (*Brodiaea insignis*) is a California endangered species and is a listed 1B.2 CRPR species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. aThe nearest CNDDB recorded occurrence (EONDX 5606) of this species is located approximately .5-miles northwest of the Project site. No Kaweah brodiaea was observed on the BSA during the surveys. Kaweah brodiaea is unlikely to occur on the Project site due to the current disturbed conditions of the site.

Madera leptosiphon

Madera leptosiphon (*Leptosiphon serrulatus*) is a listed 1B.2 California Rare Plant Rant species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. The nearest CNDDB recorded occurrence (EONDX 20487) of this species is located approximately 1.1-miles north of the site. No Madera leptosiphon was observed on the BSA during the surveys. Madera leptosiphon is unlikely to occur on the Project site due to the current disturbed conditions of the site.

Mouse buckwheat

Mouse buckwheat (*Eriogonum nudum* var. *murinum*) is a listed 1B.2 California Rare Plant Rant species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. The nearest CNDDB recorded occurrence (EONDX 20993) of this species is located approximately 0.7-miles northeast of the site. No mouse buckwheat was observed on the BSA. Mouse buckwheat is unlikely to occur on the Project site due to the current disturbed conditions of the site.

Springville clarkia

Springville clarkia (*Clarkia springvillensis*) is a federally threatened species, a state endangered species, and is a listed 1B.2 CRPR species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. The nearest CNDDB recorded occurrence (EONDX 18825) for this species is located approximately 3.7-miles northeast of the site. No Springville clarkia was observed on

the BSA during the surveys. Springville clarkia is unlikely to occur on the Project site due to the current disturbed conditions of the site.

San Joaquin Valley Orcutt Grass

San Joaquin Valley Orcutt grass is a Federally Threatened species, a State Endangered species, and is listed as a 1B.1 California Rare Plant Rant species. The nearest recorded occurrence (EONDX 22389) for this species is located approximately 10-miles northwest of the site. No San Joaquin Orcutt grass was observed on the BSA during the surveys. San Joaquin Valley Orcutt grass is unlikely to occur on the Project site due to the current disturbed conditions of the site.

Sensitive Plant Communities

Big Tree Forest, Central Valley Drainage Hardhead/Squawfish Stream, Northern Claypan Vernal Pool, and Sycamore Alluvial Woodland are sensitive plant communities recorded within 10-miles of the Project site. The nearest CNDDB recorded occurrence (EONDX 12445) for Big Tree Forest is located approximately 6.4-miles east of the Project site. The nearest CNDDB recorded occurrence (EONDX 8927) for Central Valley Drainage Hardhead/Squawfish Stream is located approximately 0.3-miles north of the Project site. The nearest CNDDB recorded occurrence (EONDX 26490) Northern Claypan Vernal Pool is located approximately 9-miles southwest of the Project site. The nearest CNDDB recorded occurrence (EONDX 25711) Sycamore Alluvial Woodland is located approximately 5.8-miles west of the Project site. None of the above listed sensitive communities were observed on the BSA.

Wildlife Candidate, Sensitive/Rare, Special-Status, and Species of Concern

Based on the CNDDB, iPac, and CNPS database search, 36 candidate, rare, and special-status wildlife species have been recorded within the nine-quadrangle search area. Appendix B describes habitat requirements, and the potential for these species to occur on the Project site for candidate, sensitive/rare, species of concern, and special-status wildlife species. Species that were identified in the database search that are not expected to occur on the Project site because the site does not contain suitable habitat, are outside the known range for the species, does not contain suitable nesting, denning or roosting habitat, or have other excluding environmental limitations, are not discussed in depth. No candidate, rare, sensitive and special-status species of invertebrate, fish, amphibian, crustacean, insect, or reptiles were determined to have the necessary habitat requirements to be present on the Project site.

Birds

Based on CNDDB and iPac,database query, 14 candidate, sensitive/rare, and special-status bird species have been identified within the nine quadrangle search area. Of these 14, Four have the potential to nest on or near the Project site; oak titmouse (*Baeolophus inornatus*), wrentit (*Chamaea fasciata*), Nuttall's woodpecker (*Picoides nuttallii*), and California thrasher (*Toxostoma redivivum*). Of these 14, 10 bird species have the potential to occur on or near the Project site as transient foragers; northern goshawk (*Accipiter gentilis*), tricolor blackbird (*Agelaius tricolor*), golden eagle (*Aquila chrysaetos*), black swift (*Cypseloides niger*), common yellowthroat (*Geothlypis trichas sinousa*), California condor (*Gymnogyps californianus*), bald eagle (*Haliaeetus leucocephalus*), song sparrow (*Melospiza melodia*), great blue heron (*Ardea herodias*), and spotted towhee (*Pipelo maculatus clementae*). These species and their detailed descriptions are listed below.

Sensitive/Rare, Special-Status, and Species of Concern- Site Nesting Birds

Oak titmouse

Oak titmouse (*Baeolophus inornatus*), a Bird Species of Conservation Concern, live in a restricted range, from southwest Oregon to northwest Baja California. The species occur in warm, dry oak or oak-pine woodlands using scrub oaks or other brush to forage for seeds, insects and invertebrates. Suitable nesting

and foraging habitat occurs on and near the Project site. No CNDDB occurrences have been recorded within 10-miles of the Project site. No oak titmouse were observed during the surveys.

Wrentit

Wrentit (*Chamaea fasciata*), a Bird Species of Conservation Concern, is a year-round resident that can reside in dense shrublands in the foothills and desert regions in California. It forages on beetles, scale insects, spiders, fruits and seeds. Suitable nesting and foraging habitat occurs on or near the Project site. No CNDDB occurrences have been recorded within 10-miles of the Project site. No Wrentit were observed during the surveys.

Nuttall's woodpecker

Nuttall's woodpecker (*Picoides nuttallii*), a Bird Species of Conservation Concern, is a year-round resident in oak woodlands at elevation ranges between 900 and 5,500 feet. They forage on beetles, ants and termites found in oaks, cottonwood and willow trees. This species nests in holes in dead trunks of trees. There is suitable nesting and foraging habitat on or near the Project site. No CNDDB occurrences have been recorded within 10-miles of the Project site. Nuttall's woodpecker were not observed during the surveys.

California Thrasher

California thrasher (*Toxostoma redivivum*)., a Bird Species of Conservation Concern, occurs in shrubby habitat in California and Baja California. This species forages for insects and other arthropods. They build nests in dense shrubbery. Suitable nesting and forging habitat is present on the BSA. No CNDDB occurrences have been recorded within 10-miles of the Project site. California thrasher were not observed during the surveys.

No nesting birds were observed on the Project site; however, the trees in the area could provide nesting habitat for smaller bird and raptor species.

A pre-construction survey of the Project site and buffer area that includes a nesting bird survey and nesting bird protections as outlined in Biological Mitigation Measures, BIO-1, BIO-2 and BIO-4, will identify any nesting bird species that inhabit the site prior to site disturbance. Setbacks or avoidance will be dependent on the species and proximity to the construction area. If mitigation measures are followed, impacts to nesting birds are expected to be less than significant.

Sensitive/Rare, Special-Status, and Species of Concern- Forging Birds

Northern Goshawk

Northern Goshawk (*Accipiter gentilis*), a Species of Special Concern (SCC), prefers mature and old-growth forests with relatively high canopy closures. This species prefers to perch and scan for prey followed by quick bursts of speed to capture their prey. No suitable nesting habitat is present on the BSA; however, suitable foraging habitat is present. The nearest CNNDB recorded occurrence (EOND 26553) is located 13 miles northeast of the BSA. No Northern Goshawk or their signs were observed during the surveys.

Tricolor blackbird

Tricolor blackbird (*Agelaius tricolor*), a State Threatened Species and Species of Special Concern, prefers freshwater, emergent wetlands with tall, dense cattails or tules, but also thickets of willow, blackberry, wild rose, and tall herbs. The species forages in pastures, grain fields, and similar habitats near breeding areas. No suitable nesting habitat is present on the BSA; however suitable forging habitat is present. The nearest

CNDDB recorded occurrence (EONDX 98857) is located approximately 5.4-miles west of the BSA. No tricolored blackbird or their sign was observed during the surveys.

Golden eagle

The Golden Eagle (*Aquila chrysaetos*), a Bird Species of Conservation Concern, occurs in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower and upper montane coniferous forests, pinon & juniper woodlands, valley and foothill grassland. The species prefers rolling foothills, mountain areas, sage-juniper flats, and desert for foraging. No suitable nesting habitat is present on the BSA; however suitable forging habitat is present. There are no CNDDB recorded occurrences within 10-miles of the BSA. No golden eagle or their sign was observed during surveys.

Black swift

Black swift (*Cypseloides niger*), Special Species of Concern, are documented in California at elevations ranging from sea level to 8,500 feet. Forages for insects in midair in open forests and open areas. No suitable nesting habitat is present on the BSA; however suitable forging habitat is present. The nearest CNDDB recorded occurrence (EONDX 25430) is located approximately 11.8-miles northeast of the BSA. No black swift or their signs was observed during survey.

Common yellowthroat

Common Yellowthroat (*Geothlypis trichas sinousa*), Bird Species of Conservation Concern, is found in open areas with thick, low vegetation, ranging between marsh to grassland to open pine forest. They forage on or near the ground, eating insects and spiders from leaves, branches, flowers, and in low vegetation. No suitable nesting habitat is present on the BSA. The BSA may be used for forging purposes. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.

California condor

The California Condor (*Gymnogyps californianus*), a Federally Threatened, State Endangered, and Federally Protected species, has been documented in southern and northern California, northern Baja California, Oregon, southern British Columbia, Arizona, Utah, and Nevada where the three states come together; and are a rare visitor to the San Joaquin Valley. The species is found at elevation ranges from sea level to 9,000 feet. No suitable nesting habitat is present on the BSA. The BSA may be used for forging purposes. The nearest CNDDB recorded occurrence (EONDX 14754) is located approximately 0.7-miles south of the BSA, indicating that California condor roost in this area. No California condor or their sign was observed during the surveys.

Bald eagle

The Bald Eagle (*Haliaeetus leucocephalus*), a State Endangered and Federally Protected species, is a permanent resident. The species occurs in forested habitats near water. The species feeds primarily on fish by swooping from hunting perches; will wade into shallow water to pursue fish; will pursue displaced small mammals in flooded fields; and will scavenge dead fish and other animals. No suitable nesting habitat is present on the BSA. The BSA may be used for forging purposes. The nearest CNDDB recorded occurrence (EONDX 102175) is located approximately 3.0-miles west of the BSA. No bald eagles or their sign was observed during the surveys.

Song sparrow

The Song Sparrow (*Melospiza melodia*), Bird Species of Conservation Concern, is a year-round resident in California, except for southeastern California. This species is found in a variety of areas including open habitats and deciduous or mixed woodlands. They forage on insects and other invertebrates in the

summer, and seeds and fruit all year around. No nesting habitat is present since the species nests outside of California. Suitable foraging habitat is present in the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.

Great blue heron

The Great Blue Heron (*Ardea herodias*), Special Species of Concern, occurs in shallow estuaries, fresh and saline emergent wetlands, rivers, streams, lake and marine shores, croplands, pastures, and mountains above foothills; primary prey is small fish, but will consume rodents, amphibians, snakes, lizards, invertebrates, and birds; usually nests in colonies in tops of secluded large snags or live trees; and is fairly common year-round throughout most of California. No suitable nesting habitat is present on the BSA; however suitable foraging habitat is present. The nearest CNDDB recorded occurrence (EONDX 25973) is located approximately 5.7-miles west of the BSA. No great blue heron or their sign was observed during the surveys.

Spotted towhee

The Spotted towhee (*Pipelo maculatus clementae)*, Bird Species of Conservation Concern, Is a year-round resident in California, except for southeastern California. This species is found in areas with dense shrub cover and leaf litter such as dry thickets, forest edges, shrubby backyards, chaparral, and canyon bottoms. They forage on leaf litter insects, berries, acorns, seeds, grasshoppers, and spiders. No nesting habitat is present since the species nests outside of California. Suitable foraging habitat is present in the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.

Because the Project site is limited in size, on previously disturbed habitat, and in a residential area, impacts to these potentially foraging species on the Project site is expected to be less than significant and no mitigation measures are warranted.

Mammals

Based on CNDDB, iPac,and CNPS database query, there are eight candidate, sensitive/rare, species of concern, and special-status species of mammals that have been identified within the nine-quadrangle search area. These species include: the pallid bat (*Antozous palidus*), a Species of Special Concern, Townsend's big eared bat (*Corynorhinus townsendii*), a Species of Special Concern , spotted bat (*Euderma maculatum*), a Species of Special Concern, western mastiff bat (*Eumops perotis californicus*), a Species of Special Concern, California wolverine (*Gulo gulo*), a Federally Threatened, State Threatened, and Federally Protected species, Fisher-west coast (*Pekaia pennanti*) a State Threatened and Species of Special Concern, San Joaquin kit fox (*Vulpes macrotis mutica*), a Federally Endangered and State Threatened species and Sierra Nevada red fox (Vulpes *vulpes necator*), a Federal candidate and State Threatened species.

None of these species are likely to occur as residents on or near the Project site (see rationale, Appendix B). There is no suitable roosting or nursery sites near the Project site for any bat species. The Project site is within the known range of the California Wolverine, however no suitable habitat is present on the BSA.

The Project site is outside the range and has no suitable habitat for the Pacific fisher, San Joaquin kit fox, and Sierra Nevada red fox, (see rationale, Appendix B). The construction of the Project will not have an impact on the habitat for these species. None of these species were observed during the survey.

Reptiles

Based on CNDDB and iPac, there are two candidate, sensitive/rare, species of concern, and special-status species of reptiles that have been identified within the nine-quadrangle search area. These species include: the Northern California Legless Lizard *(Anniella pulchra)* a Species of Special Concern and the Western Pond Turtle *(Actinemys marmorata)*, a species of special concern.

Habitat to support these species are absent from the Project site. This species was not observed during the survey.

Amphibians

Based on CNDDB and iPac, there are five candidate, sensitive/rare, species of concern, and special-status species of amphibians that have been identified within the nine-quadrangle search area. These species include: the foothill yellow-legged frog *(Rana boyii)* a state endangered species, the Southern Mountain Yellow Legged Frog *(Rana muscosa)*, a federal endangered and state endangered species, the western spadefoot *(Spea Hammondii)* a Species of Special Concern, the California Red-legged Frog *(Rana draytonii)* a federally threatened species, and the California Tiger Salamander *(Ambysroma Californiense)*, a federally threatened species.

Habitat to support these species are absent from the Project site. None of these species were observed during the survey.

Crustaceans

Based on CNDDB and iPac, there is one candidate, sensitive/rare, species of concern, and special-status species of crustaceans that have been identified within the nine-quadrangle search area. This species include: the Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*, a federally threatened species.

Habitat to support these species are absent from the Project site. This species was not observed during the survey.

Fish

Based on CNDDB and iPac, there is one candidate, sensitive/rare, species of concern, and special-status species of fish that have been identified within the nine-quadrangle search area. This species includes the Delta Smelt *(Hypomesus transpacificus)*, a federally threatened and state endangered species.

Habitat to support this species is absent from the Project site. This species was not observed during the survey.

Insects

Based on CNDDB and iPac, there is one candidate, sensitive/rare, species of concern, and special-status species of insects that have been identified within the nine-quadrangle search area. This species is the Valley Elderberry Longhorn Beetle, *(Democerus californicus dimorhus),* a federally threatened species.

Habitat to support this species is absent from the Project site. This species was not observed during the survey.

Plant and Wildlife Candidate, Sensitive/Rare, Special-Status, and Species of Concern- Survey

No candidate, sensitive/rare, special-status, and species of concern plant or wildlife species were observed on the tank site or the road extension area during the time of the surveys. The tank site and road extension area are located on land that is moderately disturbed with mostly ruderal vegetation. The tank site and road extension area provide low quality, non-suitable habitat unlikely to support habitation of candidate, rare, special-status, and species of concern species with the exception of foraging raptors, and nesting birds. The construction activities that are proposed are relatively low-impact and are unlikely to result in an adverse effect on biological resources.

Best Management Practices for Plants and Wildlife

The following best management practices will be implemented to avoid and minimize plant and wildlife impacts throughout construction of the Project:

- Construction-related vehicles shall observe a daytime speed limit of 15-mph throughout the site in all Project areas, except on County and City roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Off-road traffic outside of designated Project areas shall be prohibited.
- To prevent inadvertent entrapment of special-status species or other wildlife during the construction phase of the Project, all excavated, steep-walled holes or trenches more than two-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly examined for trapped wildlife. If at any time a trapped or injured kit fox is discovered, the USFWS and the CDFW shall be contacted as noted below.
- Some special-status species are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 3-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status species is discovered inside a pipe, that section of pipe shall not be moved until the USFWS and CDFW have been consulted. If necessary, and under the direct supervision of the agency approved biologist, the pipe may be moved once to remove it from the path of activity, until the wildlife has escaped.
- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in securely closed containers and removed at least once a week from the Project site.
- No pets, such as dogs or cats, shall be permitted on the Project site to prevent harassment, mortality of kit foxes, or destruction of dens.
- Use of rodenticides and herbicides in Project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of special-status species and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and federal legislation, as well as additional Project-related restrictions deemed necessary by the USFWS.
- A representative shall be appointed by the Project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a special-status species or who finds a dead, injured or entrapped special-status species. The representative shall be identified during the employee education program and their name and telephone number shall be provided to the USFWS.
- Any person who is responsible for inadvertently killing or injuring a special-status wildlife species shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a dead, injured or entrapped special-status species. The CDFW

contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or wildlife biologist. The USFWS shall be contacted at the number below.

- The Region 8 Sacramento Fish and Wildlife Office and Region 4 CDFW office shall be notified in writing within three working days of the accidental death or injury to a kit fox during Project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured wildlife and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below.

U.S. Fish and Wildlife Service
Region 8 – California and Nevada
2800 Cottage Way
Sacramento, CA 95825
Contact: Tim Ludwick
Phone: (916) 414-6464

California Department of Fish and Wildlife
Region 4
1234 East Shaw Avenue
Fresno, CA 73740
Contact: Craig Baily
Phone (559) 243-4014, ext. 227

The following mitigation measures will be implemented:

BIO-1 Pre-construction Survey: No more than 14 days prior to the start of Project ground disturbance activities in any specific area, a pre-activity clearance survey shall be conducted by a qualified biologist knowledgeable in the identification of listed species. The surveys shall cover the Project site plus a 250-foot buffer. Pedestrian surveys achieving 100% visual coverage shall be conducted. If no evidence of special-status species is detected, no further action is required.

Any observations of federally or state-listed species will be reported to the Service and the CDFW within three (3) working days of the observation. All federally and state-listed species observed will be allowed to leave the project area on their own. The on-site biologist will determine whether activities must cease in order to ensure their protection. A report of survey findings shall be provided to the lead agency to confirm compliance with this measure.

BIO-2: Avoid and Minimize Impacts to Special-status and Migratory Birds.

a) If work is to take place within the general bird nesting season (February 1 through August 31), a qualified biologist will conduct pre-construction surveys and identify active migratory bird nests within 250 feet of the proposed project area no more than 14 days prior to start of construction. If no nests are found, no further mitigation is required. Construction activity that occurs between September 1 and January 31, outside the nesting season, shall not require pre-construction nesting bird surveys. For raptor species (except Swainson's hawk) the survey and avoidance shall be 500-feet.

b) If an active nest is located within 250 feet of construction or 500 feet for raptors, an appropriate non-disturbance buffer zone shall be established around the nest in coordination with CDFW guidelines. Buffer zones shall be determined in consultation with CDFW and will depend on species of bird, site conditions, and type of work proposed in proximity to the nest. No new project activity shall occur within the buffer zone until the young have fledged, until the nest is no longer active, or until a qualified biologist has

determined in consultation with CDFW that reducing the buffer would not result in nest abandonment. Monitoring of the nest by a qualified biologist during construction activities shall be required to ensure that the nest is not jeopardized by construction activities.

BIO-3: Worker Environmental Awareness Training. Prior to the initiation of construction and for the duration of Project construction and maintenance activities that could affect natural habitat, all personnel shall attend a Construction Worker Environmental Awareness Training and Education Program. The program shall be developed and presented by a qualified biologist.

a) The program shall include information on the life history of special status species known to be in the area, Swainson's hawk, migratory birds, and raptors that may be encountered during construction and operations and maintenance activities.
b) The program shall discuss each species' legal protection, status, the definition of "take" under the Endangered Species Act (ESA), measures the Project operator must implement to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the State and federal ESAs.
c) The program shall discuss how some bird species are known to nest on human structures, including construction equipment.
d) The program shall provide information on how and where to bring injured wildlife for treatment in the case any animals are injured on the Project site, and how to document wildlife mortalities and injuries.
e) An attendance form signed by each worker indicating that environmental training has been completed shall be kept on record.

The lack of candidate, sensitive/rare, special-status species, and species of concern within the localized Project impact area and the short duration of activities, coupled with implementation of mitigation measures BIO-1 through BIO-3 would reduce impacts of the Project to special-status wildlife species to a level that would be less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Streams, reservoirs, sloughs, and ponds typically meet the criteria for federal jurisdiction under Section 404 of the Clean Water Act (CWA) and State jurisdiction under the Porter-Cologne Water Quality Control Act. Streams and ponds typically also meet the criteria for State jurisdiction under Section 1602 of the California Fish and Game Code. There are no Project impacts from the widening of the roadway to potential waters or tributaries of State Jurisdictional Waters. The nearest identified water way is the Kaweah River, located approximately ¾ miles to the east and 1.4 miles northwest of the Project site.

There are two culverts at the Project sites. One existing culvert at the tank site and another existing culvert at the roadway site. Widening of the roadway will not impact the existing culvert.

Two swales will be installed at the Tanks site as part of the Project. These drainage methods are installed to help treat and move stormwater on site and are not considered waters of the State or waters of the U.S.

There are no features on the Project site that would meet the criteria for either federal or state jurisdiction. No waters of the U.S. or waters of the State were observed on the Project site or are indicated by the National Hydrologic Database (see Figure 7).

Best Management Practices will be implemented to prevent construction pollutants, including erosion of soils (such as topsoil), from moving offsite, including control measures such as the use of straw-wattle, silt fencing, geotextiles, sandbags and erosion control blankets to minimize the potential that soil will migrate on and off site.

The vegetation on the Project site is common ruderal grassy vegetation; there is no riparian habitat or other sensitive natural communities identified. Big Tree Forest, Central Valley Drainage Hardhead/Squawfish Stream, Northern Claypan Vernal Pool, and Sycamore Alluvial Woodland are sensitive plant communities recorded within 10-miles of the Project site. The nearest CNDDB recorded occurrence (EONDX 12445) for Big Tree Forest is located approximately 6.4-miles east of the Project site. The nearest CNDDB recorded occurrence (EONDX 8927) for Central Valley Drainage Hardhead/Squawfish Stream is located approximately 0.3-miles north of the Project site. The nearest CNDDB recorded occurrence (EONDX 26490) Northern Claypan Vernal Pool is located approximately 9-miles southwest of the Project site. The nearest CNDDB recorded occurrence (EONDX 25711) Sycamore Alluvial Woodland is located approximately 5.8-miles west of the Project site. None of the above listed sensitive communities were observed on the BSA.

The BSA does not overlap critical habitat. The Project is not in an area identified as critical habitat, although approximately 0.8-miles to the south is critical habitat for California condor. The Project would have no significant impacts to riparian habitat or sensitive natural communities identified in local or regional plans, policies, regulations or by the CDFW and USFWS and so no mitigation measures are required.

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 wetlands that meet the criteria for federal jurisdiction under Section 404 of the Clean Water Act (CWA) and State jurisdiction under the Porter-Cologne Water Quality Control Act. No wetlands were observed on the Project site or are indicated by available National Hydrologic database (see Figure 7). The nearest defined wetland (Freshwater Forested/Shrub Wetland) is located approximately ¾ miles northwest of the Project site. Therefore, the Project would not have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the CWA.

The Project proposes to install a 25-foot swale and a 35-foot swale, as well as jute netting, riprap, and a cinderblock retaining wall at the Tank Site to minimize the Project's potential to hydrologically modify or introduce sediment or pollutants to any wetlands offsite. The 25-foot swale near the new retaining wall will drain runoff to an existing v-ditch on the side of the driveway, where it will filter water to groundwater. The 35-foot swale and drainage boxes would convey runoff through an existing drainage line, installed 18 years ago. This drainage line drains to an ephemeral gully between two lots at the bottom of the ridge. The gully flows to the cul-de-sac at the end of Oakridge. From there, stormwater flows in the gutter of Oakridge to an intermittent drainage behind lots for about a half mile, which discharges to the South Fork Kaweah River.

Since overland flow occurs mostly over grass land and through swales, additional pollutant removal will not be necessary. Because the Project proposes to disturb an approximately 0.3-acre area of soil, a Stormwater Pollution Prevision Plan (SWPPP) is not required.

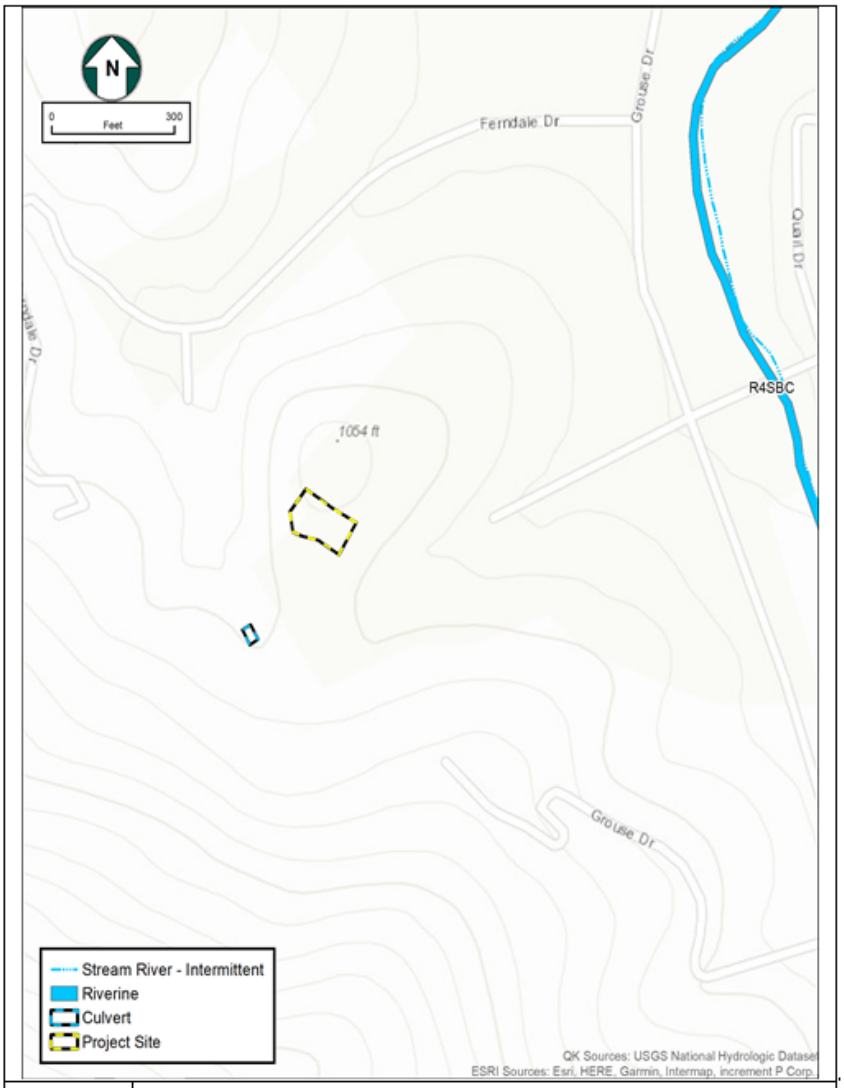

Figure 7
Wetlands/NHD

The proposed tanks' drain and overflow piping will connect to the existing piping that services the existing water tank. The proposed tank has the same capacity and discharge characteristics as the existing tank already on site. This means the existing storm drainage structure will be able to facilitate drainage flows from the proposed tank as the existing tank is removed from service. Site grading has been designed to closely match the existing site drainage paths in order to divert as much water as possible away from both onsite and off-site structures via swales and storm drainage structures.

As proposed, the roadway near the culvert located approximately 260 feet to the south will be widened at a hairpin turn. The soil used to cover the culvert extension will originate from the Project site, primarily from the grading for the new tank base.

The Project will increase the amount of impervious area with the installation of the new water storage tank and widening of the roadway. Best management practices (BMPs) will be implemented to prevent construction pollutants, including erosion of soils (such as topsoil), from moving offsite to state or federally protected wetlands. Implementation of best management practices including control measures, such as the use of straw-wattle, silt fencing, geotextiles, sandbags and erosion control blankets will minimize the potential that soil will migrate on and off site.

The following mitigation measure will be implemented:

BIO-4: Best Management Practices. The Project shall use feasible best management practices and other measures designed to protect surface water and groundwater from the adverse effects of construction activities. The soils used to widen the roadway shall not encroach into any drainage area. Soil erosion and sediment control measures shall be implemented around the backfilled area of the drainage culvert. These measures include but are not limited to the installation of straw-wattle, silt fencing, geotextiles, sandbags, and erosion control blankets

With implementation of BIO-4, impacts 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 would be less than significant.

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 Project site and surrounding area is heavily previously disturbed, and/or developed. There are no known native resident or migratory fish or wildlife species corridors or wildlife nurseries within the Project BSA. The Project is also not anticipated to cause any changes outside the Project footprint. Native nonspecial status species, as well as special status bats and birds may have once used the site and may use the surrounding area, but the Project impacts to movement of these animals will be minimal. The 0.3-acre tank site will be fenced off and the existing 52-foot section of roadway will be extended by 10 feet. The minimal amount of disturbed land will encourage the movement of the native species to find better habitat elsewhere. Impacts to wildlife linkages or movement corridors are unlikely to occur as a result of the Project. Impacts are less than significant.

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

The Project would require the trimming of trees at the Road Extension site to allow for the modification of the roadway and the construction equipment to access the site. The Project would also remove up to five mature oak trees at the Tank site in order to install the new water storage tank.

Tulare County has multiple policies listed in their Three River Community plan that relate to trees that apply to the Project. These policies include:

Table 1. Three Rivers Community Plan Relevant Native Tree Policies
4.3.1 Removing Native Trees Removal or grading around native trees (6" or larger in diameter at breast height (measured at 1.4 m above the ground)) which may disturb the root system shall not be allowed during the construction process unless the County deems it necessary because of road alignment or infrastructure improvements. In the event that mitigation is required resulting from such improvements, it shall be mitigated to the extend feasible.
4.3.2 Removing Native Trees- Exceptions Removal of native trees in designated open space areas or on private property shall not be allowed unless the health, safety or welfare of residents associated with the on-site or adjacent development is endangered. In the event that mitigation is required resulting from such removal, it shall be mitigated to the extend feasible
4.3.4 Establish 1:1 Replacement Standards Establish a replacement standard of 1:1 to the extent feasible and appropriate for the removal and replacement of significant native trees and oak woodland. A replacement standard of 2:1 or 3:1 may be required to the extent feasible and appropriate for the removal and replacement of significant native trees and oak woodlands. A replacement standard of 2:1 or 3:1 may be required to the extent feasible and appropriate based on but not limited to soil, slope, and applicable biological considerations.
4.3.5 Tree Preservation Education Program Implement an educational program for community residents regarding oak woodland and encourage community participation in the preservation efforts.
4.3.6 Control Non-Native Plant Species Limit and control to the extent feasible and appropriate non-native plant species that threaten native oak woodlands.
4.4.1 Unnecessary Removal of Native Trees Prohibit to the extent allowed by law unnecessary removal of native trees on development sites prior to the approval of development plans to control erosion, preserve wildlife habitat, and maintain the natural character of Three Rivers.

The Three Rivers Community Plan definition for oak woodland habitat is based on the Oak Woodlands Conservation Act of 2001 (SB 1334) (Public Resources Code (PRC) Section 21083.4) and PRC 4793(E). The Oak Woodlands Conservation Act of 2001 states lands that contain 10% of oak canopy cover are considered oak woodlands. In the Three Rivers Oak Woodland Management Plan for a Project site to be designated oak woodlands under SB 1334, all of the following must occur: 1) no commercial conifers are growing on the site; 2) the majority of living trees are oaks 3) the Project site must average 10% oak canopy cover per acre. Based on the reconnaissance survey, conducted on March 1, 2019, the Project site may or may not meet the oak woodland criteria depending on the interpretation of the criteria.

The Project site is significantly disturbed with the existing tank yard and residences on either side and downslope. The Project site is at the edge of the residential neighborhood and undisturbed oak woodland lies across the road from the tanks site and surrounds the neighborhood. In and directly adjacent to the tanks site, depicted on the plans on the residential neighborhood side of the road, are 16 mature trees and four young trees; six are conifers, nine are oaks, and the young trees are fruit. The site, would not meet the definition of oak woodland if the planted conifers are commercial conifers. The site would meet the second criteria if only mature trees are included, but not, if the young fruit trees are included. It is also if the conifers planted along the fence of the tank site as a visual screen would meet the criteria for commercial conifers (Criteria 1). If they are, then the site would not be considered oak woodland.

Because the site is on the boarder of the oak woodland, and the status of the site itself is subject to interpretation, the following mitigation measure will be implemented:

BIO-5: Oak Tree Replacement. Replacement native oak trees will be planted at the project site prior to commencement of operations to replace the five oak trees removed for the Project. The new oak trees will be the same species as those removed. New trees will be maintained for seven years and replaced if they become diseased or die.

The Project would not conflict with any local policy or ordinance protecting biological resources. Impacts would be less than significant with mitigation.

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?

There are no adopted habitat conservation plans or natural community conservation plans that would apply to this Project site. The Project site is not located within the boundaries of any adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan or any other local, regional, or State conservation plan. Therefore, implementation of the proposed Project would have no conflict related to an adopted habitat conservation plan or natural community conservation plan. There would be no impact.

Biological Mitigation Measures

BIO-1 Pre-construction Survey

BIO-2: Avoid and Minimize Impacts to Special-status and Migratory Birds.

BIO-3: Worker Environmental Awareness Training.

BIO-4: Best Management Practices.

BIO-5: Oak Tree Replacement.

Biological Summary

Implementation of Mitigation Measure BIO-1 through BIO-5 will reduce impacts to biological resources to a less than significant level.

V. Cultural Resources

Based on the analysis in the Cultural Resources Technical Memo and an intensive Phase 1 cultural resources survey/Class III inventory conducted on the Project site (Appendix C), as well as the Three Rivers Community Plan and other available data, the following significance determinations have been made.

Question-Would the Project:	CEQA Significance Determination for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No Impact

ASM Associates conducted a cultural resources study of the Project area in October 2019. The study includes a records search of files at the Southern San Joaquin Valley Information Center (SSJVIC), a Sacred Lands File (SLF) search at the Native American Heritage Commission (NAHC), Native American outreach, and field inspection. An archaeological literature and records search was also conducted at the SSJVIC, of the California Historical Resources Information System (CHRIS) housed at the California State University, Bakersfield on March 5, 2018 with a half-mile buffer around the Project footprint. The results of this search indicated that no cultural resource studies were completed within the Project footprint and seven studies had been completed within a half-mile radius of the Project. No cultural resources are recorded within the Project footprint. Three prehistoric bedrock milling features are documented within a half-mile of the Project. The California Historical Resources Information System (CHRIS) search also included searching the lists of resources on or determined eligible for the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), California State Historical Landmarks, California Sate Points of Historical Interest.

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

A cultural resources survey was conducted in October 2019 across the Project area. No archaeological or historic resources of any kind were discovered within the Project area. Based on these results, the proposed Project does not have the potential to impact historical resources.

The closest identified historical resources include the Kaweah Post office and Historical Bridges (Tulare County Resource Managmeent Agency, 2018). There are a number of Community Plan policies related to protecting cultural resources in the area. During the preparation of the Three Rivers Community Plan Update, forty-three (43) Native American Tribal representatives, representing twenty-two (22) Tribes were notified. At that time, no responses were received requesting consultation or raising concerns regarding impacts to cultural resources.

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

Given the extremely localized focus of ground disturbance on an existing developed water storage facility, the results of the records search and pedestrian survey, the potential to encounter subsurface historical or archaeological resources is minimal. Additionally, with the exception of land adjacent to the Kaweah River, the Three Rivers area is categorized as being “very low” sensitivity for the potential for buried archaeological resources (Meyer, Jack, et al, 2010).

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

As previously noted, a search of the California NAHC Sacred Lands File search revealed no records of known sacred sites in the vicinity of the Project area. No human remains or indication of a cemetery or burial were observed during the archaeological survey, and the CHRIS records search did not identify any historic or Native American cultural resources on the Project sites.

Cultural Mitigation Measures

No mitigation is required.

Cultural Summary

There are no impacts to Cultural Resources.

VI. Energy

Question-Would the Project:	CEQA Significance Determination for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant Impact

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

The Project's electricity usage is generated by pumps used to fill the water tank. There would be a minimal incremental increase in electricity usage from the use of an additional tank and replacement tank from that of existing tank's current usage; therefore, the increase in energy is negligible, and the Project's potential impact is less than significant.

The construction of the Project would require a maximum of six construction workers to drive to the site, along with trucks bringing in the equipment and construction materials. However, construction of the Project is short term, and the majority of the construction crew will be from the general area. The Project does not propose to increase the facilities staff beyond current levels. Fuel consumption during construction and operation of the Project would be considered less than significant.

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

The Three Rivers Community Plan is consistent with the Tulare County General Plan and includes policy LU-7.15 Energy Conservation and AQ-3.5 Alternative Energy Design, both of which pertain to utilizing energy efficient building design and practices to reduce temperature fluctuations and so reduce heating and cooling energy. The Project does not propose to construct any structures in which temperature fluctuations will need to be minimized, including buildings. The Project will also not be installing new pumps or generators. As noted in Impact III Air Quality, the Project will comply with all SJVAPCD rules and regulations. In addition, there would be a minimal incremental increase in electricity usage over the existing water tank's current electricity usage to fill the tanks. The Project's greenhouse gas (GHG) emissions would also increase minimally from the electricity usage required to fill the water tank. The increase in energy and GHG emissions is considered negligible. The Project will not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The Project's potential impact is less than significant, (See Appendix A).

Energy Mitigation Measures

No mitigation is required.

Energy Summary

Impacts are less than significant.

VII. Geology and Soils

This section is based on a Soil Investigation prepared for the Project (See's Consulting & Testing, inc, 2018), which is included as Appendix D of this document.

Question-Would the Project:	CEQA Significance Determination for Geology and Soils
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 Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?	Less Than Significant Impact
b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant with Mitigation Incorporated
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?	Less Than Significant Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less Than Significant Impact
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?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	No Impact

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 Division of Mines and Geology Special Publication 42

The Official Maps of Earthquake Fault Zones delineated by the California Geological Survey (CGS), State of California Department of Conservation Alquist-Priolo Earthquake Fault Zoning Act, indicate that there are no substantial faults known to occur in Tulare County.

The nearest known faults on the map likely to affect Three Rivers are the San Andreas Fault (approximately 40 miles to the west), and the Owens Valley Fault (approximately 65 miles to the northeast). Other faults in the Central Valley that are not as well defined, some buried by valley sediments, may not appear on the map. The Community Plan contains a number of policies that would minimize impacts to people or structures relating to the rupture of a known fault. The Project would adhere to all required local and State codes, standards and regulations. Given the distance from the known fault lines on the map and that the installed structures will follow the latest building codes, standards, and regulations, impacts from potential rupture on a known earthquake fault, including the risk of loss, injury, or death, is less than significant.

ii) Strong seismic ground shaking?

The General Plan indicates that Tulare County is not a high-risk area for ground shaking. The Three Rivers Community Plan identified ground shaking as the primary seismic hazard in Tulare County because of the county's seismic setting and its record of historical activity. The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground shaking intensities than areas located on hard rock, the Project Site is located on the hard rock portion (Three Rivers Community Plan). A study was done in 1973 for five counties, including Tulare, that determined that with a maximum probable earthquake of the San Andreas fault of 8.5, relatively low levels of shaking would be expected in the eastern and central parts of the Valley, (Three Rivers Community Plan). The eastern portion of the County was also generally split into four Sierran Zones based on effects on the Owens Valley Fault. The Project falls within the first zone. Overall, the effects of the areas on these lands were found to be more project specific, (Three Rivers Community Plan). The Project would adhere to all required local and State codes, standards and regulations. Given the distance from the known fault lines on the map and that the installed structures will follow the latest building codes, standards, and regulations, impacts from potential rupture on a known earthquake fault, including the risk of loss, injury, or death, impacts are less than significant.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground shaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction.

However, soil types in the San Joaquin Valley area are not conducive to liquefaction because they are either too coarse or too high in clay content. The soil is categorized as consisting of sandy clayey silt with rocks, clayey sand, decomposed granite, and bedrock, (see Figure 8). The upper surface soil is soft sandy clayey silt with rocks to depths of one and half- two feet below grade (BG), and underlain by very stiff clayey sand to a depth of three feet BG, with hard clayey sand/decomposed granite to a depth

of five feet BG, and decomposed granite to a depth of seven feet BG, which turns into a very dense decomposed granite until hard rock was encountered at 12 feet BG. The upper five feet of clayey sand has a low expansion index potential of 30-36. Since the site has shallow bedrock, there is no potential for liquefaction (See's Consulting & Testing, inc, 2018). Tulare County is not a high-risk area for liquification (Tulare County Resource Managmeent Agency, 2018). Impacts are less than significant.

iv) Landslides?

As noted in Response (a)(i) above, the Project site and vicinity is not within an identified Alquist-Priolo Earthquake Fault Zone. Tulare County is charcterized as Severity zone “Nil” and “Low” groundshaking with zero (no) declared landslides according to the updated report “State of California Multi Hazard Mitigation Plan Chaper 6- Other Hazards: Risks and Strategies” (published in October 2010) by the California Geological Survey, Department of California, (The Tulare County General Plan). The site is relatively flat, surrounded by hills covered with vegetation. As noted above, there is a low chance for groundshaking that would produce landslides. In addition, construction of the Project would be subject to all applicable ordinances of the Tulare County Building Code, (Chapter 15). California Building Code (CBC) 2016 Edition (CCR Title 24), imposes substantially the same requirements as the International Building Code (IBC), 2012 2016 Edition, with some modifications and amendments. Adherence to all applicable regulations would mitigate any potential impacts associated with the Project. Based on topography of the land, weather conditions, and the Project compliance with applicable ordinances of the CBC, the potential impact of landslides is less than significant

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

The site is on top of a ridge, and that there is no downhill runoff onto the site. The Project would not create erosion or loss of topsoil, as the storm drainage will be conveyed to the existing storm drainage pipe to the ephemeral gully and to the street. The Project will meet local grading requirements.

At the Tank Site finished grades are designed to divert surface runoff to drainage swales that convey stormwater to storm drainage structures. The Project proposes to install a 25-foot swale and a 35-foot swale, as well as jute netting, riprap, and a cinderblock retaining wall at the Tank Site to minimize the Project’s potential for soil erosion or the loss of topsoil.

The 25-foot swale near the new retaining wall will drain runoff to an existing v-ditch on the side of the driveway, where it will filter water to groundwater. The 35-foot swale and drainage boxes would convey runoff through an existing drainage line, installed 18-years ago. Jute netting will be placed along the retaining wall to prevent erosion and will be seeded.

The facility is designed with excess capacity to accommodate increased runoff from storm events. In the unlikely event of overflow, it is anticipated that overflow amount would be negligible. The development of the proposed Project is not expected to subject the site to any extreme erosion problems.

The Project will implement best management practices (bmps) identified in the design documents, as well.

The following mitigation measure will also be implemented to help prevent soil erosion: BIO-4 (See section IV). With BIO-4 impacts would be less than significant.

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 topography of Three Rivers is mostly hilly and there are 35 soil types present in the Three Rivers Community Planning Area. The topography climbs rapidly from around 1,000 feet in Three Rivers to between 3,000 and 5,000 feet on the ridgelines of the local watersheds. The topography of the community serves as a natural resource, as well as a natural constraint to growth and urbanization. The majority of the soils in the Three Rivers area are Loam, Sandy Loam, and Rock Outcrops. The geology of the community consists of igneous and metamorphic bedrock overlain by various types of alluvium on many of the gentler Valley slopes. Plutonic igneous rocks are the predominant bedrock type with metamorphic rocks common only in the South Fork area of the Kaweah River. Depth to bedrock in the area is highly variable, ranging from zero feet in areas of bedrock outcrops to over 70 feet where thick alluvial fan deposits overlie a former stream bed channel. The irregularity in depth is due to the configuration of the bedrock surface combined with relatively thin alluvial deposits with the upper surface at varying elevations.

The road extension area is around 1,000 feet and the tank site is between a 1,000 and 1,050 feet in elevation, (Figure 9). The subsurface soils are generally sandy clayey silt with rocks, clayey sand, decomposed granite and bedrock. These soils have low expansion and liquefaction potential, (See's Consulting & Testing, inc, 2018). It was determined that the site is suitable for the proposed Project, provided the site is graded in accordance with the California Building Code and recommendations be incorporated into site design. Site design features include standard over-excavation of the water tank area to a depth of six inches below final grade and the addition of engineered fill using non-expansive native decomposed granite or import fill and compaction to at least 92 percent of maximum dry density.

The Project proposes to replace an existing but deteriorating water storage tank, construct an additional tank, and widen an existing road. Six hundred sixty-six cubic yards of soil will be removed from the tank site, and 20-cubic yards of soil will be removed from the road site to level the top of the road, totaling 680 yards of cut. The majority of the soil will be used to widen the side of the road. Any remaining dirt will be hauled off by the contractor to an approved disposal site.

The site will be prepared and over-excavated to a minimum depth of six-inches and at least five-feet past the tank perimeter. The top six inches of the tank pad would have non-expansive decomposed gravel or imported fill and compacted. (See's Consulting & Testing, inc, 2018) The proposed tank drain and overflow piping will connect to the existing storm drainage structure that services the existing water tank. The proposed tank has the same capacity and discharge characteristics as the existing tank already on site. This means the existing storm drainage structure will be able to facilitate drainage flows from the proposed tank as the existing tank is removed from service. Site grading has been designed to closely match the existing site drainage paths in order to divert as much water as possible away from both onsite and off-site structures via swales and storm drainage structures. Water captured will be conveyed off site via storm drainage piping facilities. Site finished grades are designed to divert surface runoff to drainage swales that convey stormwater to storm drainage structures.

The subsurface soils have low expansion potential, and since the site has shallow bedrock, there is no potential for liquefaction, and lateral spreading has a very low potential to occur at the site (See's Consulting & Testing, inc, 2018).

The area would not be subject to soil instability caused by unstable soils or the Project, that would result in landslides, lateral spreading, subsidence, liquefaction or collapse. Impacts would be less than significant.

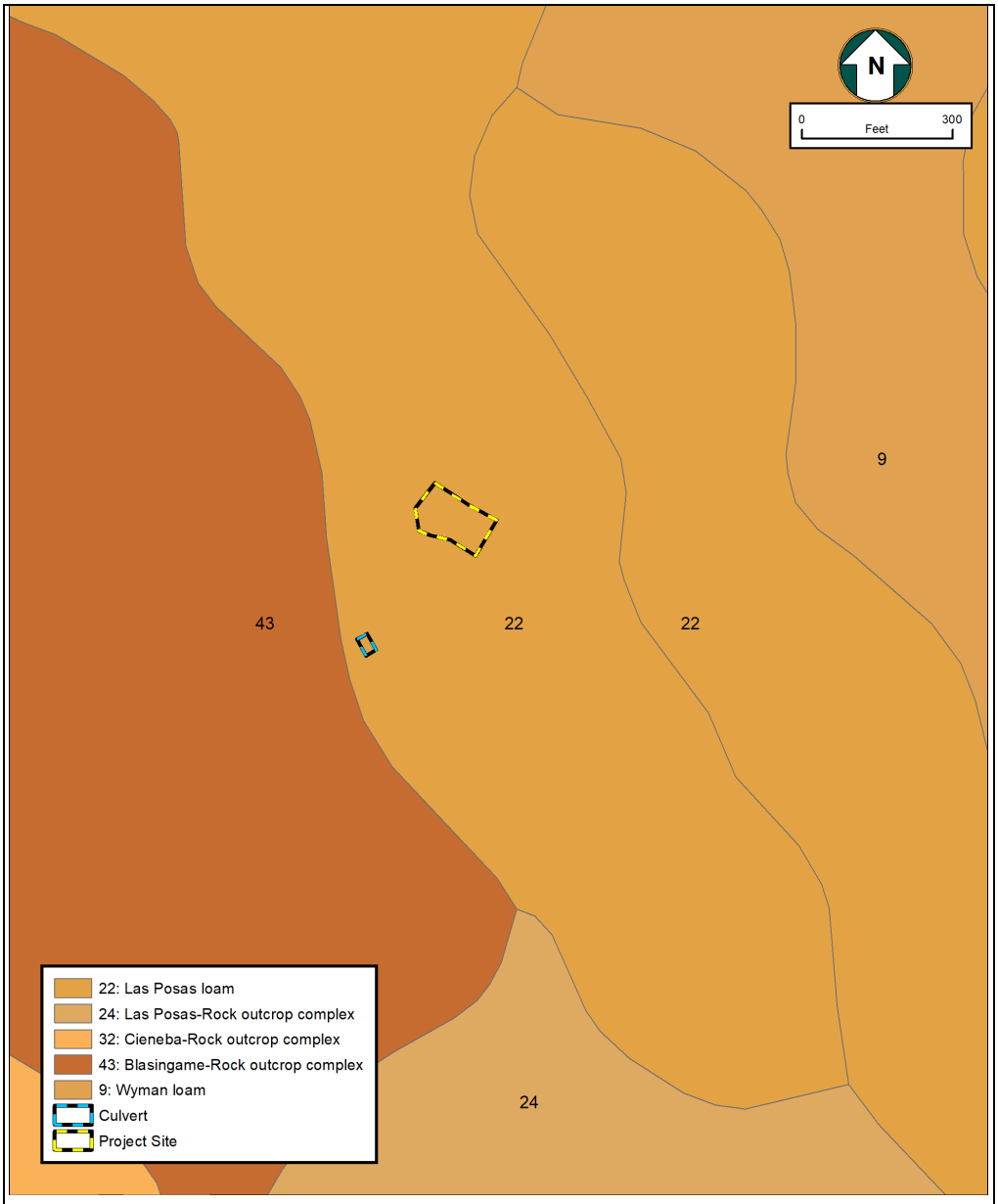

Figure 8
Soils

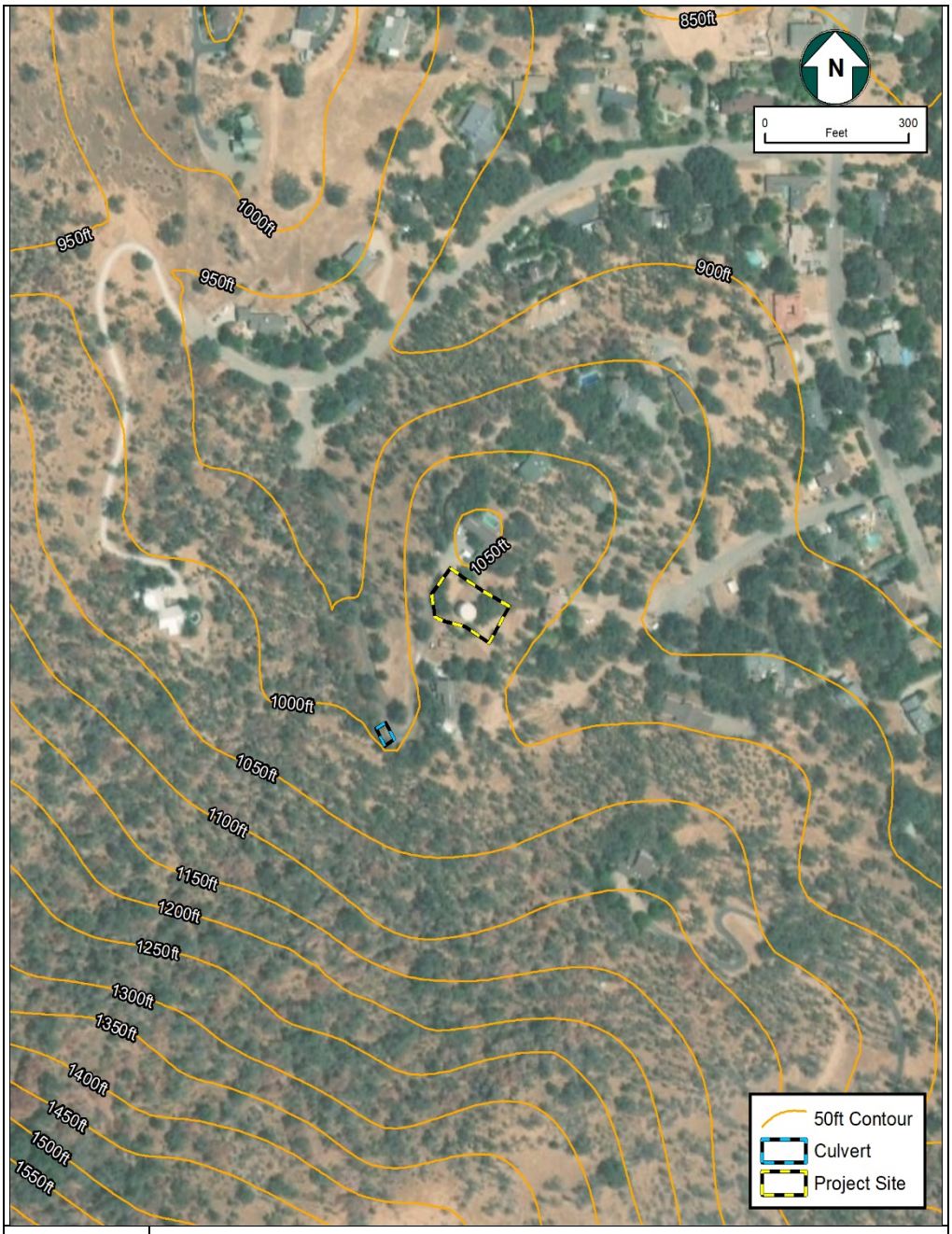

Figure 9
Topography

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

Expansive soils are subject to shrinking and swelling due to changes in moisture content over the seasons. These changes can cause damage or failure of foundations, utilities, and pavements. During periods of high moisture content, expansive soils under foundations can heave and result in structures lifting. In dry periods, the same soils can collapse and result in settlement of structures. The most current Uniform Building Code no longer contains Table 18-1-B, but instead has been superseded by Chapter 18 of the International Building Code. As discussed above, the Project site contains soils that are characterized with having little to no potential for expansion, (See's Consulting & Testing, inc, 2018). This soil is typically suitable for building site development. The Project would comply with all applicable safety regulations and building codes. Impacts would be less than significant.

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 Project does not include the construction of habitable structures or the installation of a septic system. There would be no impact.

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

The Tulare County General Plan EIR indicates that 12 paleontological resources have been recorded in Tulare County. These resources primarily consist of invertebrate, vertebrate, and plant fossils, and are generally located in the valley portion of the county. The igneous geological formations underlying the Project would not have the potential for containing paleontological resources, (i.e. fossils).

The Project is not anticipated to require excavation below three feet in depth or include excessive grading of on-site soils. Therefore, it is unlikely that the Project would uncover paleontological resources. There would be no impact.

Geology and Soils Mitigation Measures

See section IV, BIO-4

Geology and Soils Summary

Implementation of BIO-4 Best Management Practices will reduce impacts to less than significant.

VIII. Greenhouse Gas Emissions

Question-Would the Project:	CEQA Significance Determination for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less Than Significant Impact

VIII. Greenhouse Gas Emissions

In accordance with SJVAPCD's CEQA Greenhouse Gas Guidance, proposed Projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. Projects not complying with BPS would be considered less than significant if operational GHG emissions would be reduced or mitigated by a minimum of 29 percent, in comparison to business-as-usual (year 2004) conditions. In addition, Project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

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

As noted in Impact II Air Quality, the Project will generate 0.06 of ROG, 0.57 NOx, 0.45 CO, 0.0 SOx, 0.004 PM10 and 0.03 PM2.5 for construction of the tanks. Impact VI Energy, The Project's operational greenhouse gas (GHG) emissions are from the electricity usage required to fill the water tank. There are no new engines or pumps associated with this Project that would emit additional GHG What is generated currently is baseline and implementation of the Project will not increase GHG emissions. There would be a minimal incremental increase in electricity usage from the existing tank's current usage when the tank is filled, (Appendix A). The only other GHG emission associated with this project would be short-term construction emissions and those are not considered a GHG impact from a global perspective. The increase in GHG emissions is negligible. Once operational, there is no change from baseline. The Project's potential impact is less than significant, (see also Appendix A).

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

See Impact VIII a, above. As noted in Impact III Air Quality, the Project will comply with all SJVAPCD regional air quality attainment plans, rules, and regulations, including but not limited to: Regulation VIII, Rule 9510 (Indirect Source Review), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations), as applicable. Criteria pollutant emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2, (California Air Pollution Control Officers Association (CAPCOA) 2016). This project would generate short-term construction emissions and negligible long-term operational emissions (Appendix A).Impacts are less than significant.

Greenhouse Gas Mitigation Measures

No mitigation is required.

Greenhouse Gas Summary

Impact of the Project related to GHG is less than significant

IX. Hazards and Hazardous Materials

Question-Would the Project:	CEQA Significance Determination for Hazards and Hazardous Materials
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less Than Significant Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
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?	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less Than Significant Impact

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

PROJECT CONSTRUCTION

Project construction-related activities may involve the use and transport of small amounts of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction-related activities. As such, these materials could expose human health or the environment to undue risks associated with their use.

Transportation, storage, use, and disposal of hazardous materials during construction activities will be required to comply with applicable federal, state, and local statutes and regulations. Transportation of hazardous materials is regulated by Department of Transportation and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, Cal/OSHA is responsible for developing and enforcing workplace safety standards, including the handling and use of hazardous materials. Compliance of applicable federal, state and local regulations would reduce impacts during temporary construction activities to less than significant levels.

PROJECT OPERATION

No transportation of hazardous materials or storage of hazardous materials will occur as a result of the operation of the proposed Project. Operation activities will comply with the California building code, local building codes, and any applicable safety measures.

Project construction and operation are not anticipated to result in significant impacts as a result of the transportation, use, or disposal of hazardous materials. Therefore, impacts would be less than significant.

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

Tulare County Department of Environmental Health Services is the Certified Unified Program Agency (CUPA) for the County. The CUPA unifies and consolidates the various requirements for businesses handling hazardous materials, generating or treating hazardous wastes, or operating aboveground or underground storage tanks, under one roof.

As previously discussed, the Project could involve the transport and use of small amounts of hazardous materials including fuels, oils, mechanical fluids, and other chemicals such as sanitizers, and disinfectants to be used during the construction of the Project. The types and quantities of hazardous materials to be used and stored onsite would not be of a significant amount to create a reasonably foreseeable upset or accident. The handling and transport of all hazardous materials onsite would be performed in accordance with all applicable federal, State, and local laws and regulations.

Construction and operational activities will also be required to comply with the California fire code to reduce the risk of potential release of hazardous materials. All project plans would comply with State and local codes and regulation. The Tulare County Fire Department will be responsible for enforcing provisions of the fire code. Therefore, the Project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant.

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 closest school (Three Rivers Elementary School) is approximately 2.20 miles north of the Project. Students beyond 8th grade are bussed to neighboring schools. The truck route used would be from SR 198 to the west, and would not pass by the school, which is to the northeast. The Project as a whole is not anticipated to emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste that would impact a school. Impacts would be no effect.

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?

Government Code §65962.5 requires the Department of Toxic Substances Control (DTSC), the State Department of Health Services, the SWRCB, and the California Integrated Waste Management Board to compile and annually update lists of hazardous waste sites and land designated as hazardous waste property throughout the state.

Cal/EPA's Cortese List Data Resources records were reviewed to help determine whether hazardous materials have been handled, stored, or generated on the Project sites and/or the adjacent properties and businesses (https://calepa.ca.gov/SiteCleanup/CorteseList/). The list, although mostly covers the requirements of Section 65962.5, has always been incomplete as it does not indicate if a specific site was at one time included in the abandoned site program, as DTSC does not and has never made that information available.

The list is a compilation of five separate websites that include: 1- DTSC's Envirostor that identifies waste or hazardous substances sites, 2- GeoTracker that identifies underground storage tanks for which an unauthorized release report was filed, cleanup sites, and all solid waste disposal facilities from which there is a mitigation of hazardous waste for which a regional board has notified DTSC., 3- a pdf of solid waste disposal sites identified by the Water Board with waste constituents above hazardous waste levels outside the waste management unit, 4- a list of cease and desist orders and clean up and abatement orders, and 5- a list of hazardous waste facilities subject to corrective action.

1. DTSC's Envirostor indicated that that Project site was not identified as a hazardous waste or substances site (Department of Toxic Substances Control, 2019). Additionally, no surrounding sites identified during the search were within a one-mile radius of the Project. (Properties farther than 1 mile from the Project sites were not considered for further analysis because they present a low probability for releases that could affect the Project site.

2. GeoTracker did not identify the site as an underground storage tanks site for which an unauthorized release report was filed, a cleanup site, or a solid waste disposal facility from which there is a mitigation of hazardous waste for which a regional board has notified DTSC. Three Rivers Fire Station was found as a contaminated soil site within a mile of the Project location. The case on this location was closed in 1999.

3. A list of solid waste disposal sites with waste constitutes about hazardous waste levels outside the waste management unit was also checked. No records were listed for the Project site location or in Three Rivers.

4. The list of Cease and Desist Orders and Clean Up and Abatement Orders did not include the Project site location or any location within Three Rivers.

5. The list of hazardous facilities submit to corrective action do not include the Project site location or any location within Three Rivers.

As the Project is not listed on one of the five websites provided to fulfill the Cortese List, and the only hazardous site near it has had the case closed in 1999, the Project will not create a significant hazard to the public or the environment. There will be no impact.

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

The nearest general aviation facility is Woodlake Airport which is located approximately 16 miles west of Three Rivers, southwest of the City of Woodlake. The nearest airport providing commercial air transportation services for residents of the Three Rivers community is Visalia Municipal Airport (VMA), located approximately 35 miles west of Three Rivers. The Ash Mountain Heliport, owned by Sequoia-Kings Canyon National Park, is located approximately 9 miles from the Project Site. The proposed sites are not within an identified Airport Land Use Compatibility Plan zone or any other known airport land use plans. Therefore, the Project would present no safety hazard for people residing or working in the Project area. There will be no impact.

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

The County has an identified number of emergency and evacuation routes, through the Three Rivers Community Plan (Figure 10). The closest evacuation route is SR 198, approximately 0.5 miles north of the Project. Construction of the Project is anticipated to be of short duration. Work will require a backhoe, road grader, concrete cement mixer truck, paver, and a small bulldozer.

The Project will involve approximately six construction crew members that will need to travel to and from the site for work. Hauling of material off-site will involve the removal of construction waste; extra soil will be moved from the tank site to the area where the road widening will occur.

It is anticipated the Project would generate minimal amounts of waste during construction. Solid waste generated can be disposed of at Road 80 Landfill, located at 22466 Road 80, Visalia, California. Currently, the site includes a deteriorating water tank that would require disassembly and removal. As noted in Impact XIII Noise, the existing tank will be disassembled, and either be reused or recycled. Any material that cannot be salvaged will be taken to the appropriate disposal site in Visalia. The existing road pavement will not be removed, just added to on either side.

Materials brought to the Project site would be used to construct the facility, and few residual materials are expected. Non-hazardous construction refuse and solid waste would be either collected and recycled or disposed of at an appropriate landfill or other disposal site. It is estimated that 4-5 trips daily will occur throughout the construction process for hauling of dirt to the road site and hauling of waste to the landfill, within the approximately 80-day construction window.

Like other traffic in the area, the equipment would come in using SR 198 and go directly to the Project site. This increase in traffic is minimal. The minimal number of daily trips, including equipment, would not significantly impact the road or impede evacuation plans laid out in the Three Rivers Community Plan. As a result, the Project would not significantly impact or significantly impede SR 198 and its use as an emergency or evacuation route during an emergency. Impacts would be less than significant.

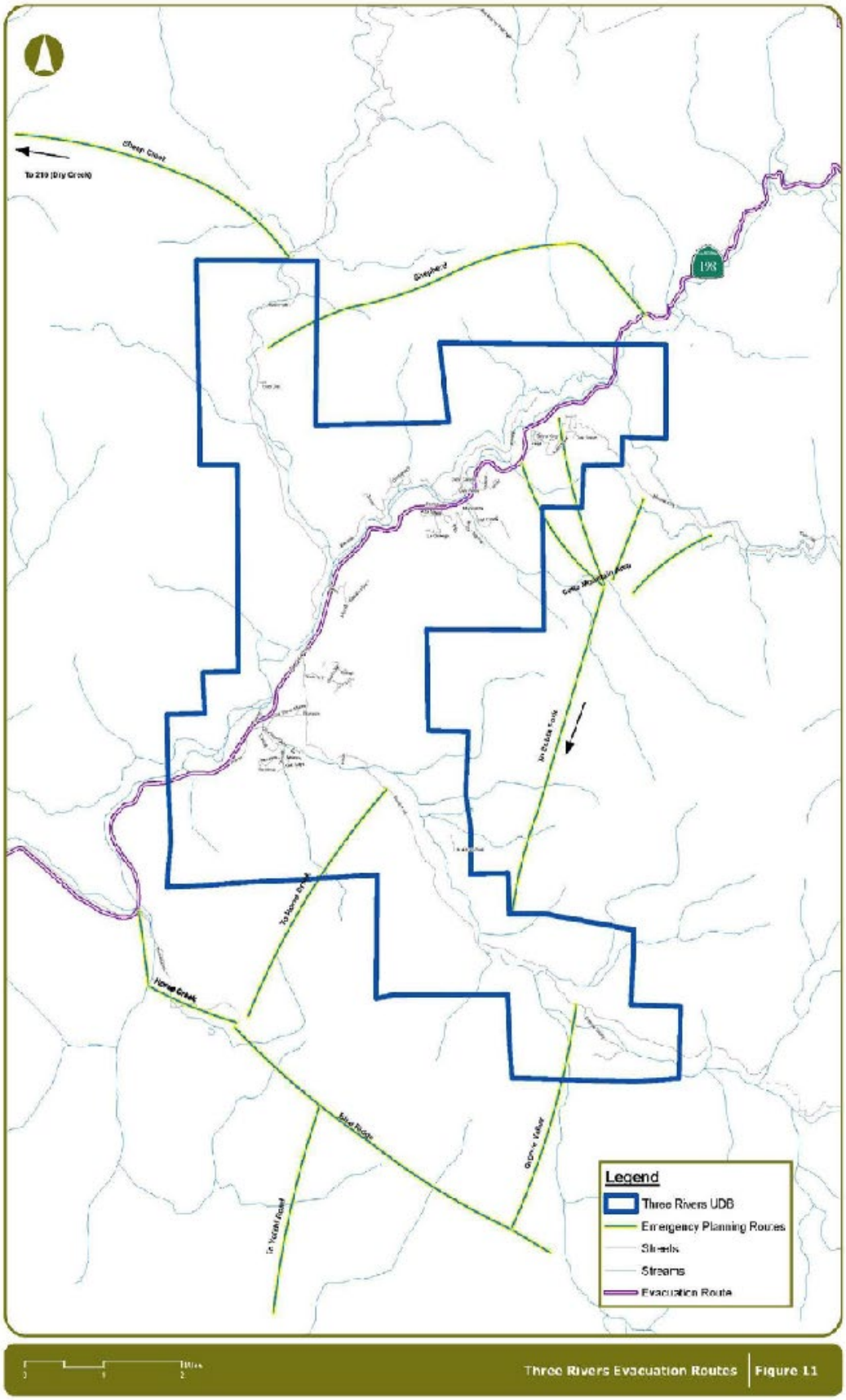

Figure 11: Emergency Access

THREE RIVERS COMMUNITY PLAN UPDATE

Figure 10. Emergency Access, Three Rivers Community Plan-

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

Fire protection and emergency medical services are provided by the Tulare County Fire Department. The community of Three Rivers is served by Tulare County Fire Department Station #14, located approximately one and half miles north of the Project. Patrol 14 and Engine 14 are assigned to this location. Station 14 is presently equipped with a 750-gallon pumper, is staffed by one firefighter, and is supported by 10 volunteers. Station 14 provides a full range of structural fire protection as well as wildland fires. Three Rivers Fire Station 35 also provides fire and emergency services. The station is approximately one mile north of the Project. Community response time varies from one minute on a fairly flat terrain to three minutes on steeper terrain.

The Sequoia & Kings Canyon Fire Station at Hammond is located at 44726 Mineral King Road, near the intersection of Mineral King Road and State Route 198 in Three Rivers. Assigned to this location is Engine 72, a 7-person engine crew, and Crew 91, a 14-person hand crew. This station provides fire protection for both the community of Three Rivers and the park headquarters. This station is equipped with three wildland trucks, one 280-gallon truck, and two 650-gallon trucks. During the summer season, the station is staffed by 8 to 9 firemen and 5 firemen during the winter season.

State Responsibility Area (SRA)

Wildland fire protection in California is the responsibility of either the state government, local government, or the federal government. The State Responsibility Area (SRA) is the area of the state where the State of California is financially responsible for the prevention and suppression of wildfires. The Project is within an area identified as being a High Fire severity zone by CalFire, (Figure 13, Cal Fire, 2007).

Grading and building permits are issued by the County. There will be no increase in the threat of wildfire with the construction and implementation of the Project. However, once completed, the additional water storage capacity of the Project will improve fire protection.

There are a number of SRA Fire Safe Regulations (Title 14- Natural Resources Division 1.5- Department of Forestry Chapter 7- Fire Protection Subchapter 2 SRA Fire Safe Regulations Articles 1-5) that have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRA. These measures provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification (Tulare County Resource Agency, 2018). There are also a number of applicable policies within the Three Rivers Community Plan related to wildfire safety and risk reduction.

The Project will comply with all local and state policies, codes and regulations regarding wildfire protection. This includes SRA Fire Safe Regulations set by the Board of Forestry and Fire Protection for SRA areas under the California Code of Regulations Title 14, Division 1.5, Chapter 7, Subchapter 2, Article 1-5.

The Construction crew for the Project will have and use proper safety and fire prevention equipment when completing the Project. Once the Project is constructed, the Project site will be maintained in such a way to prevent any threat of fire.

In addition, the construction of the second water tank is directly related to maintaining sufficient water supply to meet peak water demined and fire flow requirements. Once operational, the District will be able to meet the water demands of the existing residents and provide fire suppression and protection. The

Project will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Impacts related to wildfires would be less than significant.

Hazards and Hazardous Materials Mitigation Measures

No mitigation is required.

Hazards and Hazardous Materials Summary

Impacts would be less than significant.

X. Hydrology and Water Quality

Question-Would the Project:	CEQA Significance Determination for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant with Mitigation Incorporated
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less Than Significant Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or 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?	Less Than Significant with Mitigation Incorporated
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less Than Significant Impact

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

Project construction would cause a small amount of ground disturbance that could result in soil erosion or siltation and subsequent water quality degradation offsite, which is a potentially significant impact. There will be a small increase of 1,256 square feet of impervious area with the installation of the additional water storage tank, riprap, piping, retaining wall, and the extension of the roadway, resulting in minimal additional storm drainage runoff. Construction-related activities would also involve the use of materials such as vehicle fuels, lubricating fluids, solvents, and other materials that could result in polluted runoff, which is also a potentially significant impact. However, the potential consequences of any spill or release of these

types of materials are generally small due to the localized, short-term nature of such releases because of construction.

The proposed water tanks will be scheduled for routine inspections as required and unscheduled maintenance as needed. Typically, the tanks would not be drained, and underwater divers will conduct maintenance and inspection with the water present. The district will establish written procedures for operating the tanks' draining valve to drain the tanks when required.

The proposed tank drains and overflow piping will connect to the existing storm drainage structure that services the existing water tanks. The proposed tanks will have the same discharge characteristics as the existing tank already on site. The existing storm drainage structure will be able to facilitate drainage flows from both the new tanks when the existing tank is removed from service. Site grading has been designed to closely match the existing site drainage paths in order to divert as much water as possible away to the new onsite swales and storm drainage structures.

Water may be captured by overflow drainage boxes that will be installed next to the two tanks. Water that is not captured by overflow drainage boxes, will be captured by the two swales. The first swale near the new retaining wall will also drain runoff to an existing v-ditch on the side of the driveway, where it will filter water to groundwater. Riprap will be placed at the end of the swale. The retaining wall will keep soil from moving. Jute Netting will also be installed along the retaining wall at the Tank Site to help prevent soil erosion.

The second swale and drainage boxes would convey runoff through an existing drainage line, installed 18 years ago. This drainage line drains to an ephemeral gully between two lots at the bottom of the ridge. The gully flows to the cul-de-sac at the end of Oakridge. From there, stormwater flows in the gutter of Oakridge to an intermittent drainage behind lots for about a half mile, which discharges to the South Fork Kaweah River.

The water tanks will be disinfected per American Water Works Association standards, tested to ensure the system is functioning properly, and a sample for bacteria will be taken prior to being placed online. During operation of the system, water is not treated with chlorine. Prior to discharging, the system is required to ensure discharge compliance under the MS4 permit for which the Tulare County is already covered and enrolled.

The road extension site near an existing culvert located approximately 260-feet to the south will be widened at a hairpin turn. The roadway turn will be slightly widened to improve turning radius and increase safety. There will be no change to drainage, and no new drainage structures such as curbs or gutters are proposed. The soil used for the road will originate from the Project site, primarily from the grading for the new tank base. Site grading has been designed to closely match the existing site drainage paths in order to divert as much water as possible away from the roadway.

The culvert will not be impacted by the Project. As proposed, the road would be widened but the culvert will not be disturbed or extended. As noted in Impact IV Biological Resources, Figure 7, the Project is not in close proximity to a water feature that would be considered a water of the US or State.

Because the Project proposes to disturb approximately 0.3 acres of soil, a Stormwater Pollution Prevision Plan (SWPPP) is not required. Best Management Practices (BMPs) will be implemented at the tank and road extension sites to ensure that the Project will not impact groundwater quality.

The following mitigation will be followed: BIO-4 (See section IV).

BIO-4 requires that the Project will implement best management practices (BMPs) designed to protect surface water and groundwater from the adverse effects of construction activities and will ensure that control measures, such as the use of straw-wattle, silt fencing, geotextiles, sandbags and erosion control blankets be used to minimize the potential that soil will migrate to the culvert. These measures will prevent construction pollutants, including erosion of soils (such as topsoil), from moving offsite. Under BIO-4 the roadwork will not encroach into the natural drainage area, and therefore is not anticipated to create an adverse impact. The Project will also meet the California Building Code, and local grading requirements, and all codes, and all regulations.

The Project would not violate any water quality standards or waste discharge requirements (WDRs) or otherwise substantially degrade surface or ground water during construction or operations. With the implementation of BIO-4 and following NPDES permitting waste discharge requirements, impacts to water features or natural drainages would be less than significant.

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

The primary source of groundwater in the Kaweah River drainage basin is precipitation as rain and snow which percolates downwards through the soil to eventually become groundwater. The remainder of the rain and snow either becomes surface runoff or is retained by the soil where it is later lost to the atmosphere by evaporation and plant transpiration.

Conventional groundwater conditions such as those found in the aquifers on the valley floor do not exist in the Three Rivers area. The upper soil mantle consists of decomposed materials that rarely exceed six feet in thickness. The hardrock underlying this soil provides little, if any, value for water storage other than what is contained in the rock fractures and exfoliation of the granite rock. There are four types of water sources available: river wells, dug wells, hardrock wells, and the flumes. The majority of the wells are hardrock wells, which are drilled to depths ranging from 70 to 600 feet (Tulare County Management Agency, 2018).

Three existing hard rock wells, ranging from 110 to 300 feet in depth, supply the South Kaweah Mutual Water Company system. Two are for fire suppression and one is for everyday use. The Project would use a nominal amount (840 gallons) of water for dust control from the existing well during temporary construction activities that are anticipated to last approximately four months.

The Project proposes to replace an existing water storage tank and the construction of an additional tank. No new connections are proposed that would require the increase in water demand. It will take a total of 200,000-gallons of water from the existing well to fill both tanks. The tanks would be filled over a period of three days. As the new tank is filled, there will be no change in the rate of pumping, since this is limited by pump capacity. The pump currently runs under control from float switches at the tank. The existing tank currently operates in the top half of capacity, (75,000 gallons).

When the two tanks are connected by opening the valve, the pump will operate until 175,000 gallons is pumped, one time, instead of 75,000 gallons. This project does not change the demand for water from the existing subdivision. The Project is proposed to replace a badly deteriorated tank and add an additional tank to provide sufficient water for fire prevention and protection. There is no increase in water demand, just water storage.

According to the Groundwater Ambient Monitoring Program Database and State Water Board, District records, the nearest well is owned by the Deer Meadow Mutual Water Company and is over 1,300 feet away from South Kaweah Mutual Water Company's Well 2, from which the water will be pumped. At this distance, the pumping of water to fill the tanks should not have a significant impact on the Deer Meadow Mutual Water Company well. Once operational, water usage would remain at the current rate.

As previously noted, there will be a small increase in impervious area with the installation of the additional water storage tank and the extension of the roadway. The new tank, riprap, retaining wall, piping, and widened roadway will add only 1,256 square feet of impervious surface to the site, resulting in minimal additional storm drainage runoff that would be redirected to groundwater or to the South Kaweah River.

Therefore, the Project would not negatively impact basin groundwater levels or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts will be less than significant.

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

(i) result in substantial erosion or siltation on- or off site;

See Response (a), above.

The Tank Site will be graded to drain storm water away from the new tanks. Water may be captured by overflow drainage boxes that will be installed next to the two tanks. Water that is not captured by overflow drainage boxes, will be captured by the two swales. The first swale near the new retaining wall will drain runoff to an existing v-ditch on the side of the driveway, where it will filter water to groundwater. The second swale and drainage boxes would help infiltrate and convey runoff to an ephemeral gully between two lots at the bottom of the ridge. The gully flows to the cul de sac at the end of Oakridge. From there, stormwater flows in the gutter of Oakridge to an intermittent drainage behind lots for about a half mile, which discharges to the South Fork Kaweah River. The installation of the additional tank, retaining wall, riprap, piping, and extension of the roadway will add a minimal 1,256 square feet of impervious surfaces.

The Road Extension site includes the installation of 5-feet of new road on each side for 52-feet. The culvert is not an identified water feature, but it will not be disturbed or impacted during construction or operation of the Project. The roadwork will not impact the drainage, and the drainage will be avoided during construction. Equipment will be kept out of the drainage area.

The following mitigation measure will be implemented: BIO-4 (See section IV).

The Project will add a small area (1,256 square feet) of impervious surfaces with the installation of the tank, riprap, piping, retaining wall, and the extension of the roadway. The Project will not substantially alter the existing drainage pattern of the site or area through the addition of impervious surfaces in a manner that could result in substantial erosion or siltation on or off site. BIO-4 requires that the Project will implement best management practices (BMPs) to prevent construction pollutants, including erosion of soils (such as topsoil), from moving offsite. With the implementation of BIO-4 impacts to water features or natural drainages would be less than significant.

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:

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

The Project site is in an area of Minimal Flood Hazard, (Figure 11). The tank site is located near the top of a ridgeline and would not be prone to flooding. The road site is at a lower elevation, but would not be prone to flooding. The Project would include limited grading and during construction would be required to adhere to storm water requirements to control erosion and protect water quality and minimize stormwater runoff.

No modifications will be made to a river or stream. The installation of the additional tank, retaining wall, riprap, piping, and extension of the roadway will add a minimal 1,256 square feet of impervious surfaces.

There are a number of design features and the implementation of BMPs that will minimize impacts of the Project that would result in flooding either on- or off-site. These include soil erosion and sediment control measures that would be implemented around the backfilled area of the drainage culvert. These measures include but are not limited to the installation of straw-wattle, silt fencing, geotextiles, sandbags, and erosion control blankets. These features will slow the storm water runoff to allow the water to infiltrate.

The Project is not anticipated to 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site. There would be no impact.

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:

(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

Please see Responses (a) through (c), above. The Project would comply with all applicable state and local codes and regulations. Site finished grades are designed to divert surface runoff to drainage boxes and swales that convey stormwater to storm drainage structures.

The existing drainage line installed 18 years ago drains to an ephemeral gully between two lots, with Tulare County Environmental Health Department approval (drinking water overflow and storm drainage), then into the cul de sac at the upper end of Oakdale.

No modifications will be made to a river or stream. The installation of the additional tank, retaining wall, riprap, piping, and extension of the roadway will add a minimal 1,256 square feet of impervious surfaces. This amount of impervious surface will add a minimal amount of additional run-off to the existing system.

The Project would not 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 create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

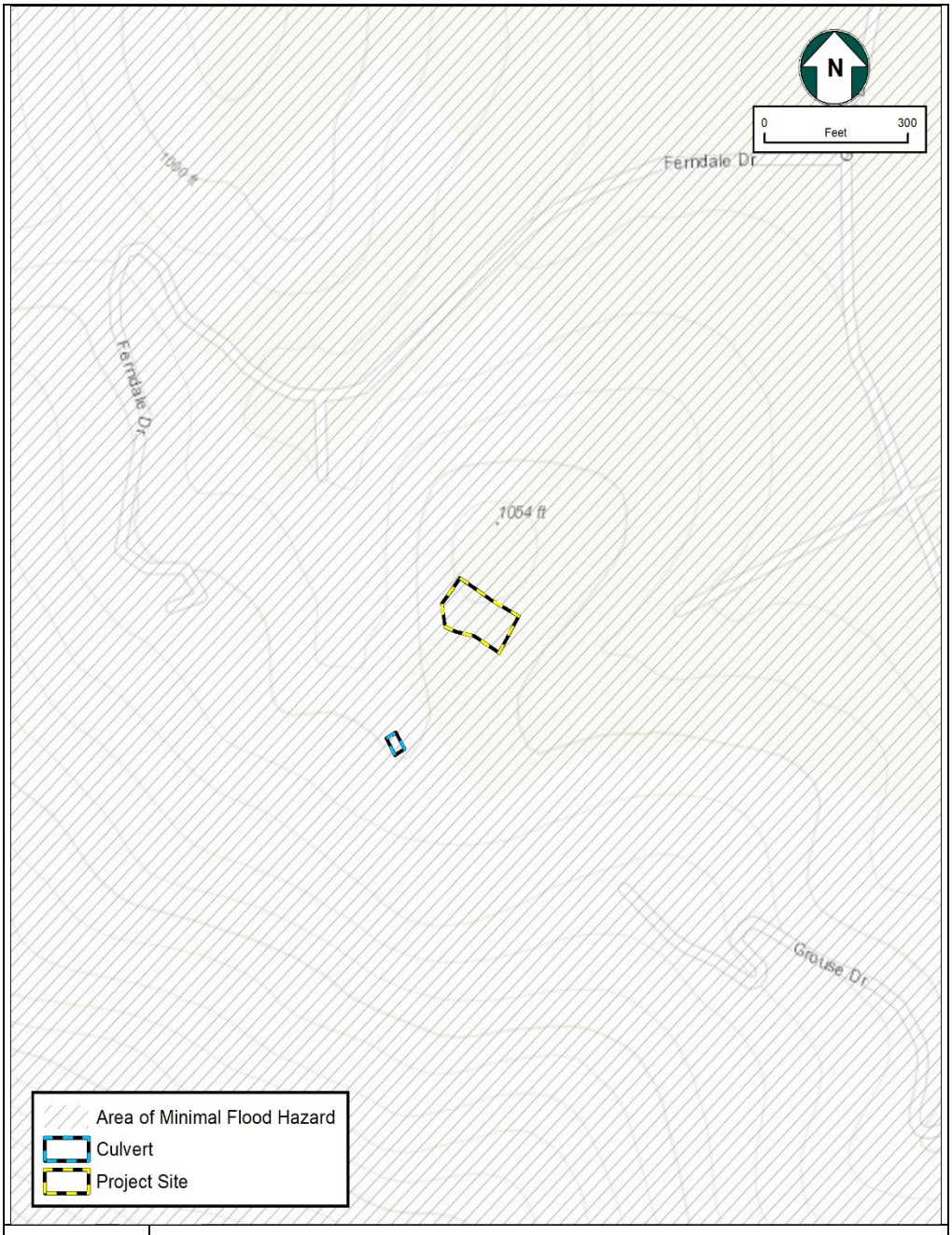

Figure 11
Federal Emergency Management Agency
Flood Hazard Areas

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:

(iv) impede or redirect flood flows?

See Responses (a), (b), and (c [i- iii]), above. As shown in Figure 11, the Project site is within an area of minimal flood hazard, (Federal Emergency Management Agency (FEMA), 2009).

No modifications will be made to a river or stream. The installation of the additional tank, retaining wall, riprap, road widening, piping, and extension of the roadway will add a minimal 1,256 square feet of impervious surfaces.

There are no FEMA development restrictions associated since these are areas determined to be outside the 0.2 percent annual chance floodplain. The site drainage would direct any water from uphill of the Tank Site to drainage boxes and two swales. Water that is not capture by overflow drainage boxes, will be captured by the two swales. The first swale near the new retaining wall will drain runoff to an existing v-ditch on the side of the driveway, where it will filter water to groundwater The second swale and drainage boxes would help infiltrate and convey runoff to piping that drains to an ephemeral gully between two lots at the bottom of the ridge. The gully flows to the cul de sac at the end of Oakridge. From there, stormwater flows in the gutter of Oakridge to an intermittent drainage behind lots for about a half mile, which discharges to the South Fork Kaweah River.

The Project is not anticipated to substantially alter the 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, impede, or redirect flood flows. Impacts would be less than significant.

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

The Project site is not located near the ocean. Therefore, there is no potential for the site to be inundated by tsunami. The Project is in an area identified by FEMA as having a minimal risk of flood hazard. Additionally, there is no body of water within the vicinity of the Project site. There is no potential for inundation of the Project site by seiche. The Project site does not store any chemicals on the site. Water stored in the tanks consists of raw well water.

The site drainage at the Tank site would direct any water from uphill of the Tank site to the two swales and drainage boxes. The first swale near the new retaining wall would drain runoff to an existing v-ditch on the side of the driveway, where it will filter water to groundwater. The second swale and drainage boxes would help infiltrate and convey runoff to an ephemeral gully between two lots at the bottom of the ridge. The gully flows to the cul-de-sac at the end of Oakridge. From there, stormwater flows in the gutter of Oakridge to an intermittent drainage behind lots for about a half mile, which discharges to the South Fork Kaweah River. The Road Extension Site would direct water away from the road.

Therefore, the Project is not at risk of releasing pollutants due to inundation of a tsumani or seihe zone. The Project in a flood hazard, also would not risk release significant pollutants due to Project inundation. Impacts would be less than significant.

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

The Three Rivers Community Plan includes policy LU-7.16 Water Conservation related to implementing water conservation measures for residential, commercial and industrial development. The Policy mentions, “The County shall encourage the inclusion of “extra ordinary” water conservation and demand

management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development." The Project would be consistent with this policy.

The Project falls under the Tulare Lake Basin, with Grouse being the nearest waterway draining to the South Fork of the Kaweah River. The Central Valley Water Quality Control Plan dictates the requirements of the Tulare Lake Basin. Best management practices will help ensure that water quality standards are met.

The Project falls within an undefined groundwater basin. The basin is not identified by Department of Water Resources as an adjudicated or over drafted basin. The Sustainable Groundwater Management Act (SGMA) creates a framework for sustainable, local groundwater management. Tulare County is participating in the development of a Groundwater Sustainably Plan (GSP) for this undefined groundwater basin. As noted previously, the Project will not cause an increase in the overall water demand from the existing wells. The current water usage is baseline and will not obstruct the implementation of the GSP.

The Project will not conflict with or obstruct implementation of any water quality control plan or sustainable groundwater management plan. Impacts are less than significant.

Hydrology and Water Quality Mitigation Measures

See section IV, BIO-4

Hydrology and Water Quality Summary

Implementation of BIO-4 Best Management Practices will reduce impacts to less than significant.

XI. Land Use and Planning

Question-Would the Project:	CEQA Significance Determination for Land Use and Planning
a) Physically divide an established community?	No Impact
b) Cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact

XI. Land Use Planning

a) Physically divide an established community?

The Project is in a residential and agricultural area surrounded by houses and woods. There are lands zoned for agriculture adjacent, but none of the land is used for agriculture since it is on a hillside and ridgeline. The Project proposes to construct a replacement water storage tank, a new tank on an existing water storage facility site and widening a small portion of an existing road. The Project will add to existing structures already in place. The Project would not result in any change in existing zoning and the changes in the landscape will be minor. The Project will occur on private property on a private road and will not change any public access. Therefore, there would be no impact.

b) Cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to, the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. The Project is a permitted use under R-1-20 and AE-80 zone district pursuant to the Tulare County zoning ordinance (Figure 12). The Project will comply with all applicable local and State regulations, policies and codes. There will be no impact.

Land Use Planning Mitigation Measures

No mitigation required.

Land Use Planning Summary

There will be no impact.

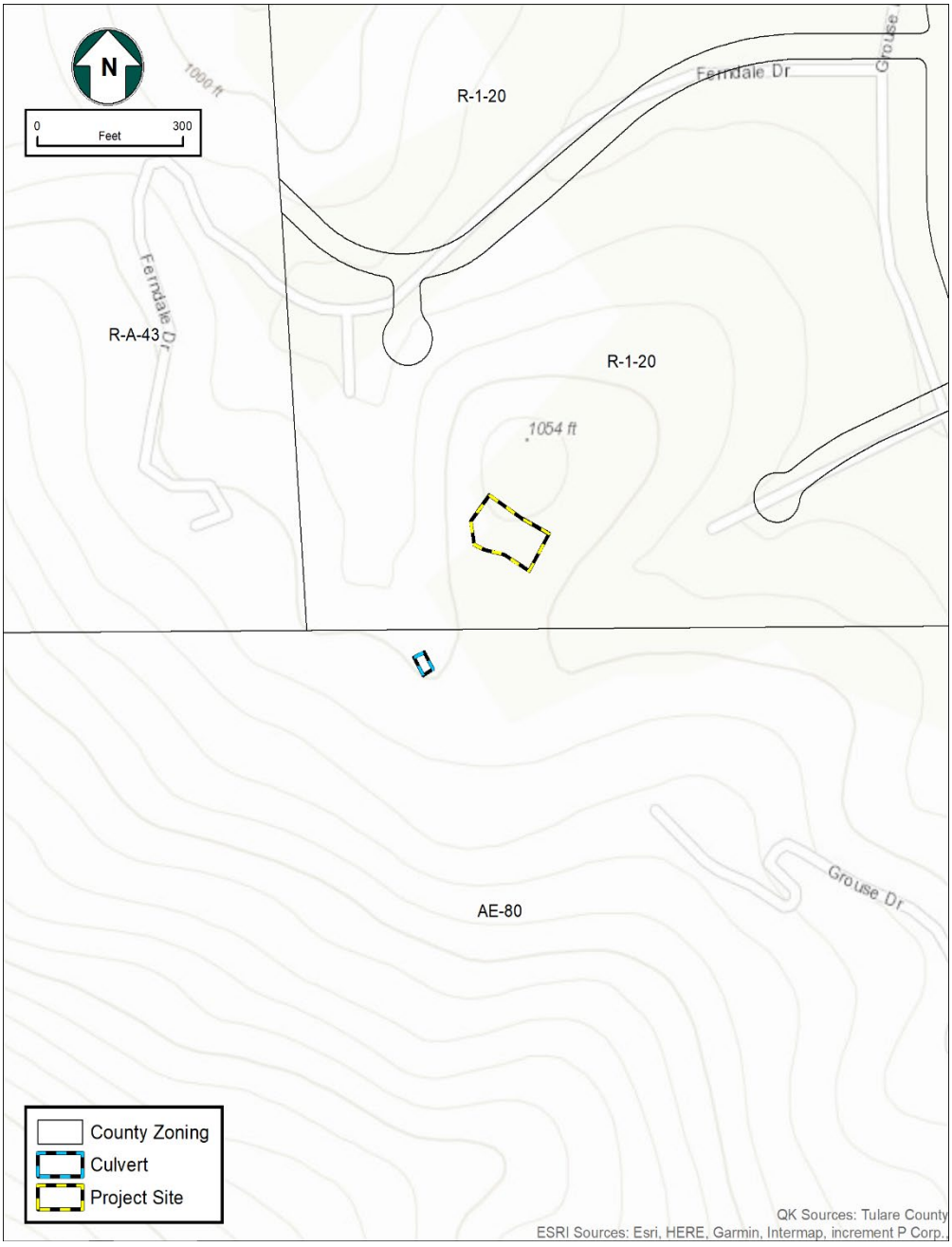

Figure 12. Zoning

XII. Mineral Resources

Question-Would the Project:	CEQA Significance Determination for Mineral Resources
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?	No Impact
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?	No Impact

XII. Mineral Resources

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?

In 1975, the California Surface Mining and Reclamation Act (SMARA) mapped areas around the State using the California Mineral Land Classification System. All mineral commodities are mapped at one time according to the jurisdictional boundaries which may include "counties, groups of counties, or major parts of counties." Important mapped mineral lands are further classified under the designation Mineral Resource Zones (MRZ). The MRZs are established based upon a geologic appraisal of the mineral resource potential of the land. A "resource" is a concentration of naturally occurring solid, liquid, or gaseous material in such form and amount that economic extraction of a commodity from the concentrations is currently potentially feasible.

Under the California Department of Conservation, Division of Mines and Geology, Guidelines for Classification of and Designation of Mineral Lands: Publications of the SMARA Mineral Land Classification Project Dealing with Mineral Resources in California - Index Map, this Project area was not included within any study of the areas looked at, (California Department of Conservation , 2000).

"Economically the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. Other minerals that could be mined commercially include tungsten and relatively small amount of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica" (Tulare County General Plan).

"Aggregate resources are the most valuable mineral sources in the County because it is a major component of the Portland Cement Concrete (PCC) and Asphaltic Concrete (AC). PCC and AC are essential to construction roads, buildings and providing for other infrastructure needs." The Kaweah River provides the highest quality sand and gravel and deposits in Tulare County. Other sources of construction material are also mined in the hard rock deposits of the foothills, (Tulare County General Plan).

The General Plan and Three Rivers Community Plan did not identify the Project area within a mineral resource zone. The proposed Project site is also not identified as a locally important mineral resource recovery site by the Three Rivers Community Plan of Tulare County General Plan. The closest area identified in the Three Rivers Community Plan with known minerals is in the Mineral King area,

approximately six miles east. The Geotechnical report prepared for this Project did not indicate the existence of any valuable minerals on the site.

Therefore, there would be no impact.

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?

See Response (a), above. There would be no impact.

Mineral Resources Mitigation Measures

No mitigation is required.

Mineral Resources Summary

No Impact.

XIII. Noise

Question-Would the Project:	CEQA Significance Determination for Noise
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less Than Significant Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	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?	No Impact

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Under LU-3.6 of the Community Plan, the County shall require residential Project design to consider noise exposure of residents. Under Noise Standards 1.3.3 the plan requires applying the noise standards found in the Tulare County Health and Safety Element (Part 1 Section 10.8).and utilizing recommendations included in the community plan EIR to address and develop feasible noise standards to the extent feasible reflective of a foothill canyon environment. Under the Part 1 Section 10.8 of the County General Plan, Utilities noise exposure levels up to 75 L_{dn} or CNEL dB are considered normally acceptable for utilities and agriculture.

Under HS-8.6 The County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC).

Construction of the Project is anticipated to last up to four months (80 working days). A construction crew of a maximum six people will be on site to complete the work. Construction equipment will include a backhoe, road grader, concrete/cement mixer truck, paver, and a small bulldozer.

Construction activities will mostly consist of site preparation, site excavation, grading, disassembly of the existing tank, and equipment installation. No pile-driving will occur during the construction phase of the Project. The existing tank will be disassembled by removing the roof, and either removing the bolts to separate the pieces of the structure or using an acetylene torch to cut apart the wall into pieces. The disassembly of the tank will take approximately two weeks. The tank will either be reused or recycled.

According to the Federal Highway Administration (2006) Highway Noise Handlbook, the maximum noise levels at 50 feet is 80 dba for backhoes and 85 dba for road graders, cement mixer trucks, and pavers. Small bulldozers are not included, but are assumed to be within a similar range to backhoes and the other equipment used on this Project.

Construction noise is temporary and there are no thresholds established by the General Plan or Community Plan. The only thing restricted are the hours the equipment can run during construction. The Community Plan Policy HS-8.11 Peak Noise Generators limits construction activities to the hours between 7:00 a.m. to 7:00 p.m. The Project would comply with this policy during the approximately four months of construction.

There are scattered residences located within the surrounding Project area. However, the parcels are relatively large, and there is an abundance of vegetation, trees, shrubs, etc, as well as outbuildings, that will act as a buffer to block construction noise. The houses closest to the road may experience noise during the one day of repaving, but it will be of minimal duration. This work does not include the removal of the existing pavement, only the addition of new paving. The nearest home is approximately 114 feet from the tank site. Given the distance, the sound impacts would be less than the noise levels indicated for the equipment mentioned above.

Land uses deemed sensitive to noise by the State of California include schools, hospitals, rest homes, and long-term care and mental care facilities, which are considered to be more sensitive to ambient noise levels than others. There are none of these types of facilities in the vicinity of the Project. The closest school, Three Rivers Union School, is three miles away. The closest hospital, Kaweah Delta Medical Center is 28 miles away, in Visalia. The closest medical clinic, Family HealthCare Network, is 2.6 miles away. And the closest nursing home, Indian Oaks Residential Care, is 1.4 miles away.

The Project site is developed within and near an existing water storage tank and associated equipment site, and noise generated by these uses are considered baseline. Operation of the facility would not generate noise levels significantly higher than the existing levels in the Project area, as minimal new equipment would be utilized. No new generators or pumps are being proposed in this Project. Given the heavily wooded area of the surrounding properties, operational noise levels are not anticipated to increase beyond a perceptible level. Therefore, the increases in noise during construction and minimal increase in noise during operation is considered less than significant.

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

According to the U.S. Department of Transportation, Federal Railroad Administration, vibration is sound radiated through the ground. The rumbling sound caused by the vibration is called ground-borne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB). The background vibration velocity level in residential areas is usually around 50 VdB. Typical vibration-generating equipment such as, pile drivers, vibratory rollers and other equipment have varying levels of vibration velocity. The Project does not propose to use equipment with high vibration velocity levels. According to the Federal Highway Administration Noise Handbook the backhoe, road grader, paver, and concrete/cement mixer truck are not impact devices that cause high levels of vibration.

Because construction equipment are not impact devices and activities would be limited to 7:00 am to 7:00 pm, groundborne vibration impacts resulting from Project construction would be less than significant.

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 Project is within a heavily wooded and hilly area. The project is not within a private airstrip or airport land use plan and there is no private airstrip or public airport within two miles of the site. The nearest private airstrip, the Ash Mountain Heliport, owned by Sequoia-Kings Canyon National Park, is located approximately nine miles from the Project Site. The nearest general aviation facility is Woodlake Airport and is located approximately 16 miles west of Three Rivers, southwest of the City of Woodlake. The nearest airport providing commercial air transportation services for residents of the Three Rivers community is Visalia Municipal Airport (VMA), located approximately 35 miles west of Three Rivers. There is no impact.

Noise Mitigation Measures

No mitigation is required.

Noise Summary

Impacts would be less than significant.

XIV. Population and Housing

Question-Would the Project:	CEQA Significance Determination for Population and Housing
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)?	Less Than Significant Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

As proposed, the Project includes the replacement of the deteriorating water tank and the addition of a new tank. The goal is to have sufficient potable water for the existing residents and also to provide water to meet the fire protection and suppression requirements. The service area includes 138 existing connections. The Project will not increase water supply capacity or induce additional unplanned population growth. Impacts are less than significant.

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

The Project is located on an unimproved portion of a residential lot in Three Rivers. The expansion will occur on the undeveloped portion and will not displace any existing people or houses. There is no impact.

Population and Housing Mitigation Measures

No mitigation is required.

Population and Housing Summary

Impacts would be less than significant.

XV. Public Services

Question:	CEQA Significance Determination for Public Services
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?	Less Than Significant Impact
Police protection?	Less Than Significant Impact
Schools?	No Impact
Parks?	No Impact
Other public facilities?	No Impact

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

Fire protection?

As noted in *IX. Hazards and Hazardous Materials*- Response (f), fire protection and emergency medical services are provided by the Tulare County Fire Department. The community of Three Rivers is served by Tulare County Fire Department Station #14, located approximately 1.5 miles north of the Project and Station 35, approximately 1 mile from the Project. The community is also served by Sequoia & Kings Canyon Fire Station Engine 72.

Due to the scope and nature of the proposed Project, the implementation would not create a need for new or physically altered fire protection facilities. Fire services are already provided for the site. The water tanks will actually improve the ability of fire personnel to respond to fires; it will not affect response time or other service performance. Accordingly, the proposed Project will not result in substantial adverse physical impacts associated with the provision of a new or physically altered government facility, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection. Impacts would be less than significant.

Police protection?

Police protection services are provided in Three Rivers by the Tulare County Sheriff's Department located at 2404 W. Burrel Avenue, in Visalia, approximately 30 miles west of Three Rivers (Tulare County Resource Managmeent Agency, 2018). The Tulare County Sheriff's Department does not maintain a substation in Three Rivers, but has a resident deputy serving the rural population. After hours law enforcement response to the community is dependent on request for service. Response times from the Valley floor are dependent on officer availability, call volume, and physical distance.

The nature of the proposed Project does not lend itself or generally require substantial amounts of additional police protection. The Project site is already enclosed by a fence and locked gate; access is limited to district staff. Construction activities may temporarily increase traffic volumes along SR 198 and local roadways. However, it is anticipated that a small number of construction personnel would be needed for this Project, and they would probably live in the vicinity of the Project site. The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection. Impacts would be less than significant.

Schools?

The proposed Project would not require the addition of new staff or generate the enrollment of new students into the existing school system. The existing District staff would monitor and provide maintenance for the facility. This person lives in the area, and any school age children would likely attend nearby schools. As noted above, temporary construction employees would most likely live nearby, and would not relocate to the Three Rivers community. Consequently, the general distribution of students throughout the area schools would remain the same. Therefore, the Project would not require new or altered educational resources or facilities, the construction of which could cause significant environmental impacts, to meet performance objectives. No impacts are anticipated.

Parks?

There are no County owned/operated public parks in Three Rivers. The primary public park is the Three Rivers Elementary School (Tulare County Resource Managmeent Agency, 2018). The community also has access to the Sequoia and Kings Canyon National Parks. The proposed Project does not create any demand for public recreational facilities and so no new or altered parks will need to be created, the construction of which could cause significant impacts to meet performance objectives. No impacts are anticipated.

Other public facilities?

There is a medical clinic serving medical patients, but there are no hospitals in the Three Rivers community. The community is served by medical service provided in Exeter, Visalia, and elsewhere on the valley floor.

Other governmental facilities that would serve the proposed Project such as libraries are adequate. The proposed Project would not result in population growth that would affect public facilities services. The proposed Project would not require new or altered other government facilities, the construction of which could cause significant impacts in order to maintain acceptable service ratios, response times or other performance objectives for any of the public service. No impacts are anticipated.

Public Services Mitigation Measures

No mitigation is required.

Public Services Summary

Impacts would be less than significant.

XVI. Recreation

Question:	CEQA Significance Determination for Recreation
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No Impact

XVI. Recreation

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

The proposed Project does not include the construction of new housing or businesses. Construction activities related to the proposed Project are temporary in nature and the majority of construction employees would come from the surrounding area. The existing District staff would operate and monitor the facility; no new staff is anticipated for the long-term operation of the Project.

The closest public park to the proposed Project sites is at the elementary school, which is two miles north of the Project. The community also has access to the Sequoia and Kings Canyon National Parks. However, as mentioned previously, due to the nature of the proposed Project, the use would not result in an increase in population or impact public parks. Therefore, Project activities are not expected to adversely affect recreational resources in the area. No impacts are anticipated.

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

See Response (a), above. The Project will not affect any sports fields and facilities, community center/recreational buildings, children's play areas, bike trails, multiuse areas, or other recreational facilities. The Project will not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No impacts are anticipated.

Recreation Mitigation Measures

No mitigation is required.

Recreation Summary

There would be no impacts.

XVII. Transportation

Question-Would the Project:	CEQA Significance Determination for Transportation
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less Than Significant Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact
d) Result in inadequate emergency access?	Less Than Significant Impact

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

The Project will construct two water storage tanks to provide sufficient drinking water and the required fire suppression capability to protect the residence of the SKMWD. Under the Community Plan, bike paths and complete streets that allow for multimodal uses are planned along the 198 and North Fork of the Kaweah River. Sidewalks are mostly not present, but there are some in commercial areas and near businesses, (Community Plan). A small number of construction workers and delivery trucks would be driving on local roads to access the facility for up to four months. During construction of the roadway widening, which is anticipated to take approximately one month, a portion of the road would be open to allow for access. No road closures are expected. As such, this increase in traffic would not conflict with any transportation or alternative transportation program, plan, ordinance or facility. No impacts are anticipated.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Section 15064.3 Subdivision (b) of the CEQA guidelines specify for Land Use Projects “Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, Projects within one-half mile of either an existing major traffic stop or a stop along an existing high-quality transit corridor shall be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the Project area compared to existing conditions shall be presumed to have a less than significant transportation impact.”

Guidelines also specify, “Quantitative Analysis. If existing models or methods are not available to estimate the vehicles miles traveled for the particular project being considered, a lead agency may analyze the project vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

No models or methods are available for use of this Project. Instead the Project will be evaluated qualitatively.

As discussed in Response (a), above, the proposed Project would require a maximum six construction workers on site during the four months of construction. That small number of additional vehicular trips would not result in degrading the current level of service on the local roadways. There would be a minimal increase in Average Daily Traffic (ADT) during short-term construction and no increase in ADT during ongoing operations activities. The proposed Project would not conflict with an applicable congestion management program or other standards established by the county congestion management agency for designated roads or highways. The Project is located along a private road and tank site less than 800-feet from a major roadway stop or high-quality public transit corridor stop. This Project does not include components that relate to public transit. Therefore, the impact would be less than significant.

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 roadways around the Project site are somewhat curved due to the hilly topography of the area. The site is already developed with an existing water tank, roadway, and associated infrastructure, as well as a residence. No new incompatible uses will be introduced. No new road design features that would introduce a sharp or dangerous curve or intersection is proposed. The Project proposes to improve and slightly widen the curve in the road leading to the site in order to allow for large vehicles carrying construction equipment to more easily access the site. Improvement to the road would be considered a long-term benefit to the residents. No Impact.

d) Result in inadequate emergency access?

Construction and operation of the proposed Project would not substantially interfere with access for emergency vehicles or nearby uses. The existing facility has adequate space for emergency vehicles, and the widening of the roadway will allow for easier access of the site and area in the event of an emergency. The additional widening of five feet on either side of the road at the turn has been determined by a licensed engineer to be sufficient to allow for emergency vehicles such as fire trucks to access the area.

During road widening, a portion of the road will be open to allow for vehicular travel. The roadwork will not cause traffic congestion nor create inadequate emergency access. Improvement of the access road to the site, will be a benefit to the residents and employees of the facility. Once the tanks are built and the roadway is upgraded, emergency access will be improved. The Project would result in minimal effects to emergency access during construction and no effects to emergency access during implementation. The Project would therefore result in less than significant impacts

Transportation Mitigation Measures

No mitigation is required.

Transportation Summary

Impacts would be less than significant.

XVIII. Tribal Cultural Resources

Question:	CEQA Significance Determination for Tribal Cultural Resources
a)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: i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	No Impact
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No Impact

a) 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:

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

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. 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.

On July 19, 2019, a Project notification letter with an invitation to consult on the Project was sent by certified mail and email to the designated representative of the one tribe on the State Water Board's Assembly Bill (AB) 52 list for Tulare County: the Santa Rosa Rancheria Tachi. The Santa Rosa Rancheria did not request consultation. Additional efforts to identify tribal cultural resources in the Project area included a Sacred Lands File records search at the Native American Heritage Commission, a records search of the California Historical Resource Information System, and a pedestrian survey of the Project area. No sacred sites or Native American archaeological sites were found. Please see response to Impact V Cultural Resources.

Tribal Cultural Resources Mitigation Measures

No mitigation is required.

Tribal Cultural Resources Summary

No Impacts

XIX. Utilities and Service Systems

Question- Would the project:	CEQA Significance Determination for Utilities and Service Systems
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less Than Significant with Mitigation Incorporated
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less Than Significant Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact
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?	Less Than Significant Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant Impact

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

The Project would allow the SKMWD to provide clean drinking water to their members; no increase in water connections or service capacity is proposed. The additional water storage tank is to provide sufficient water as required by the Fire Department for fire suppression. Storm water drainage will also be added to tie into the existing infrastructure. There will be no increase in water usage. No habitable structures or facilities that would require new wastewater treatment, natural gas or communications facilities are proposed. As noted previously, there will be an incremental increase in electricity usage to run the water pump, but the increase would be negligible and not require the construction of a new electrical generation facility. (See Biological Resources BIO-1 to BIO-5 Mitigation Measure.) Given the mitigation measures incorporated into the document, Impacts of the Project are less than significant.

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

See Response (a), above. There is no communitywide water provider in the Three Rivers Community area. Domestic water is provided by individual wells or private water companies, such as the SKMWD. (Tulare County Resource Managmeent Agency, 2018). No increase in water connections or service capacity is proposed. Approximately 840-gallons of water may be used during construction for best management practices implementation. Approximately 200,000-gallons of water will also be used to fill the tanks over a three-day period. Once filled the water will provide for the existing demand of the system. Sufficient water supply will be available to serve the construction and operation of the Project. Impacts would be less than significant.

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

The Project does not propose to construct any habitable structures that would require bathroom facilities or generate wastewater. There is no impact.

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?

It is anticipated the Project would generate minimal amounts of waste during construction. Currently, the site includes a deteriorating water tank that would require disassembly and removal. As noted in Impact XIII Noise, the existing tank will be disassembled, and either be reused or recycled. Any material that cannot be salvaged will be taken to the appropriate disposal site.

Materials brought to the Project site would be used to construct the facility, and few residual materials are expected. Non-hazardous construction refuse and solid waste would be either collected and recycled or disposed of at an appropriate landfill or other disposal site.

Any hazardous waste generated during construction would be disposed of at an approved location. Transportation, storage, use, and disposal of hazardous materials during construction activities will be required to comply with applicable federal, state, and local statutes and regulations. Transportation of hazardous materials is regulated by Department of Transportation and Caltrans. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release. In addition, Cal/OSHA is responsible for developing and enforcing workplace safety standards, including the handling and use of hazardous materials.

The small amount of solid waste generated by construction activities is not expected to exceed the capacity of a landfill. Once operational the amount of waste generated will be similar to current levels. Impacts would be less than significant.

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

The proposed Project would generate solid waste during construction, thus requiring the consideration of waste reduction and recycling measures. The 1989 California Integrated Waste Management Act (AB 939) requires City of Tulare to attain specific waste diversion goals. In addition, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development Projects to incorporate storage areas for recycling bins into the proposed Project design. On January 24, 2006 The Tulare County Board of Supervisors adopted the Construction and Demolition Ordinance establishing regulations for the recycling and diversion of construction and demolition debris within the unincorporated areas of the county. The ordinance became effective March 1, 2006. Prior to any issuance of a permit,

every applicant for a building permit involving any covered Project shall submit a properly completed construction and debris recycle and reuse final plan to the Tulare County Resources Management Agency's Permit Center. A construction and debris recycling and reuse final compliance report will also be required 30 days after Project completion

A covered project includes the construction or demolition of a structure or building. Since the proposed Project does not include a structure as defined by the county, it is considered not be a covered project type by Tulare County RMA. A building permit has already been issued by the Tulare County RMA, and not such plan has been requested. The proposed Project would comply with all federal, state, and local statutes and regulations related to the handling and disposal of solid waste. Therefore, implementation of the proposed Project would result in less than significant impacts.

Utilities and Services Mitigation Measures

See section IV, BIO-1 to BIO-5

Utilities and Services Summary

Implementation of BIO-1 to BIO-5 Best Management Practices will reduce impacts to less than significant.

XX. Wildfire

Considering the information included in the Fire Hazard Severity Zone Maps (Figure 13) dated 2007, the following significance determinations have been made:

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

Question- Would the project:	CEQA Significance Determination for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
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 wildfire?	Less Than Significant Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less Than Significant Impact
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?	Less Than Significant with Mitigation Incorporated

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

The Project is located in a High Fire Hazard Severity Zone in a State Responsible Area, (See Figure 13). See Impact IX Hazards and Hazardous Materials, Response (f). The County has an identified number of emergency and evacuation routes, through the Three Rivers Community Plan (Figure 10). The closest evacuation route is SR 198, approximately 0.5 miles north of the Project. Like other traffic in the area, the equipment would come in using SR 198 and go directly to the Project site. Construction of the Project is anticipated to be of short duration, Work will require a backhoe, road grader, concrete cement mixer truck, paver, and a small bulldozer, The Project will involve approximately six construction crew members that will need to travel to and from the site for work. Hauling of material off-site will involve the removal of construction waste; extra soil will be moved from the tank site to the area where the road widening will occur. It is estimated that four-five trips daily will occur throughout the construction process, within the approximately 80-day construction window. Minimal construction equipment will be used; a backhoe, grader, a cement truck, a paver, and a small bulldozer will be used, but it is highly unlikely all the equipment would be on the site simultaneously. This increase in traffic is minimal and will not interfere with any identified evacuation routes, as previously noted in Impact XVII Transportation (b). The Project would not impact or in any impede SR 198 and its use as an emergency or evacuation route during an emergency. Impacts would be less than significant.

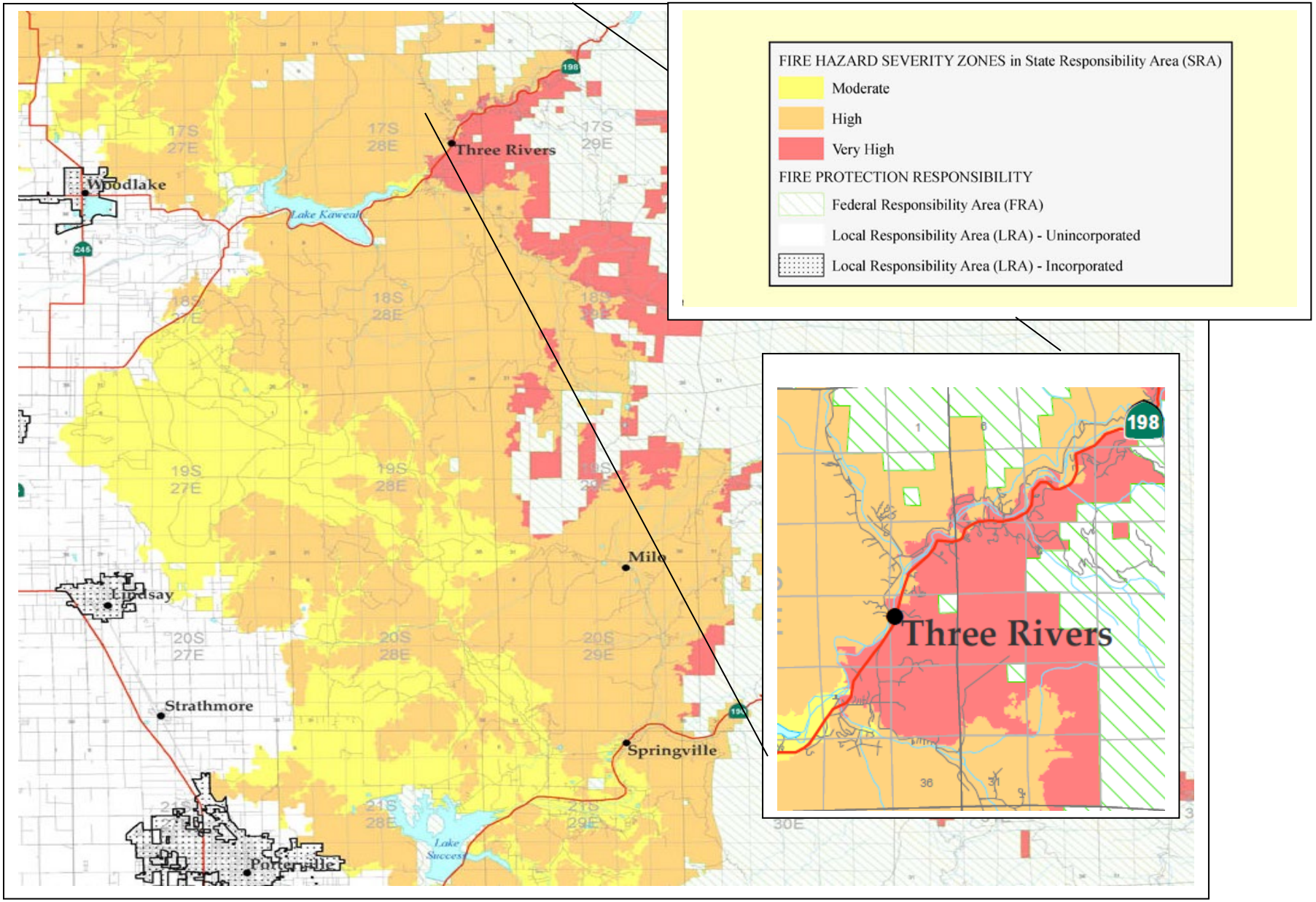

Figure 13 Fire Hazard Severity Zone in a State Designated Area
(CalFire Office of State Fire Marshall, Adopted by Calfire on November 7, 2007)

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 wildfire?

See Impact IX Hazards and Hazardous Materials, Response (g). The Project is located in an area that is wooded. The Project will comply with all local and State policies, codes and regulations regarding wildfire protection. The Project will not include any residents. Water System staff will only be present as needed for regular maintenance or if repairs are necessary, making trips on average less than one day a week. In addition, the construction of the tanks is directly related to maintaining sufficient water supply to meet peak water demined and fire flow requirements. Once operational, the District will be able to meet the water demands of the existing residents and provide fire suppression and protection. There are no permanent staff on the site. Due to slope, prevailing winds, and other factors, the Project will not exacerbate wildfire risks and thereby expose Project occupants to pollutants concentrations from a wildfire or the noncontrolled spread of wildfire. Impacts would be less than significant.

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

The majority of work conducted will be conducted at the existing tank facility. One tank will be replaced and a new tank installed. The only work that is not on the existing tank site will be performed at the roadway site near the existing culvert. There the roadway will be widened. Roadwork will also occur on the existing roadway. During construction temporary impacts to the environment will occur, but they are short duration. Additionally, Project construction would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of materials, and cleanup of spills of potentially flammable materials. The Project would also comply with all local and State regulations related to fire precautions.

The 50,000-gallon increase in water storage capacity is intended to provide sufficient potable water to the existing SKMWD clients. No increase in the number of connections or pumping capacity is proposed. The increased storage capacity will ensure compliance with Three Rivers Fire Department requirements for fire suppression. Maintenance will be required on all the infrastructure by current staff. The roads, fuel breaks, and new storage for community water will require the installation and maintenance of infrastructure. During operation, this infrastructure, when properly maintained, will not exacerbate fire risk or result in ongoing impacts to the environment. Impacts would be less than significant.

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 road will be widened at the hairpin turn approximately 260 feet south of the Tank site. The soil used to widen the road will originate from the Tank site, primarily from the grading for the new tank base. The rest will come from the road site. The road widening will not encroach into the culvert drainage area. The Tank Site will be graded to drain storm water away from the new tanks. Water may be captured by overflow drainage boxes that will be installed next to the two tanks. Water that is not captured by overflow drainage boxes, will be captured by the two swales.

The first swale near the new retaining wall will drain runoff to an existing v-ditch on the side of the driveway, where it will filter water to groundwater. The second swale and drainage boxes would help infiltrate and convey runoff to an ephemeral gully between two lots at the bottom of the ridge. The gully flows to the cul-de-sac at the end of Oakridge. From there, stormwater flows in the gutter of Oakridge to an intermittent drainage behind lots for about a half mile, which discharges to the South Fork Kaweah River. The retaining wall will have jute netting to prevent erosion and will be seeded.

The installation on the tank, retaining wall, riprap, piping, and extension of the roadway will add a minimal 1,256 square feet of impervious surfaces.

The Project would comply with all applicable State and local codes and regulations. The Project will implement best management practices, as well as design features such as: a swale and a new drainage pipeline. The Project will meet local grading requirements. The design features and the implementation of best management practices will minimize impacts of the Project that would result in flooding either on- or off-site.

Mitigation measure BIO-4 Best Management Practices will be implemented to help prevent soil erosion.

Wildfire Mitigation Measures

See section IV, BIO-4

Wildfire Summary

Implementation of Mitigation Measure BIO-4 Best Management Practices will reduce impacts to less than significant.

XXI. Mandatory Findings of Significance

Questions:	CEQA Significance Determinations for 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Less Than Significant with Mitigation Incorporated
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)?	No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Less Than Significant with Mitigation Incorporated

XXI. 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than significant impact with mitigation incorporated. As noted in section IV Biological Resources, the proposed Project would not substantially degrade the quality of the environment or substantially reduce the habitat of a fish or wildlife species. There are no rare plants on the Project site and with the proposed mitigation BIO-1 through BIO-5 outlined in section IV Biological Resources , the proposed Project would not cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. Regarding Cultural Resources and Tribal Cultural Resources, the Project will not impact 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)?

No impact. The impacts of the proposed project are individually limited and not cumulatively considerable. All environmental impacts that could occur as a result of the proposed project would be reduced to a less than significant level through implementation of the mitigation measures recommended in this Initial Study/MND and, when viewed in conjunction with other closely related past, present or reasonably foreseeable future projects, there would be no impact.

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

Less than significant impact with mitigation incorporated. All of the Project's impacts on human beings, both direct and indirect, that are attributable to the Project were identified and mitigated with the proposed mitigation BIO-4 outlined in section IV Biological Resources, and referred to in sections VII Geology and Soils, X Hydrology and Water Quality, XIX Utilities and Service Systems and XX Wildfire. Therefore, the proposed Project would not either directly or indirectly cause substantial adverse effects on human beings because all potentially adverse direct and indirect impacts of the proposed Project are identified as having no impact, less than significant impact, or less than significant impact with mitigation.

Mandatory Findings of Significance Summary

Implementation of Mitigation Measures BIO-1 through BIO-5, would reduce impacts to less than significant levels.

Note: Authority cited: Sections 21083 and 21083.05, 21083.09 Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21073, 21074 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21080.3.1, 21080.3.2,21082.3, 21084.2, 21084.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino,*(1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors,* (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

References

Cal Fire. (2006), *California Wildland Hazard Severity Zone Map Update.* Retrieved from Local Responsibility Area (LRA) Map: http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_statewide

California Department of Fish and Wildlife, https://wildlife.ca.gov/Conservation/CESA/FESA

California Department of Fish and Wildlife, https://wildlife.ca.gov/Conservation/CESA/Listing

California Department of Fish and Wildlife, https://wildlife.ca.gov/Conservation/Plants/Laws

California Department of Fish and Wildlife, https://wildlife.ca.gov/Conservation/SSC#394871316-what-is-a-species-of-special-concern

California Department of Fish and Wildlife https://www.dfw.state.or.us/wildlife/diversity/species/sensitive_species.asp

California Department of Transportation (2011), *California Scenic Highway Mapping System.*

California Department of Transportation (n.d.), *Officially Designated State Scenic Highways*. Retrieved March 2016, from http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/

Department of Conservation (2016), *California Important Farmland Finder*. Retrieved from California Department of Conservation: http://maps.conservation.ca.gov/ciff/ciff.html

Department of Conservation Division of Oil, Gas & Geothermal Resources. (2019, April), *Division of Oil, Gas & Geothermal Resources (DOGGR).* Retrieved March 11, 2016, from Well Finder: https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-119.48296/36.28405/14Federal Emergency Management Agency. (2009, June). *FEMA Flood Map Service Center- Hanford, CA*. Retrieved from FEMA Flood Map Service Center- Tulare County, CA: https://msc.fema.gov/portal/search?AddressQuery=%20hanford%20ca#searchresultsanchor

Meyer, Jack et al. (2010), *Volume 1: A Geoarchaeolgoical Overview and Assessment of Caltrans District 6 and 9.* California Department of Transportation.

Quad Knopf, Inc. (2015), *South Kaweah MWC Water Storage Tank Evaluation.*

San Joaquin Valley Air Pollution Control District, 2015. *San Joaquin Valley Air Quality District Guidance for Assessing and Mitigating Air Quality Impacts*

Tulare County. (2012), Tulare County General Plan.

Tulare County Resource Managmeent Agency. (2018), *Three Rivers Community Plan 2018 Update.*

US Department of Agriculture. (n.d.). *Soils Series*. Retrieved from https://soilseries.sc.egov.usda.gov/OSD_Docs/L/htm

U.S. Department of Transportation, F. R. (2005). High-Speed Ground Transportation Noise and Vibration Impact Assessment.

US Fish and Wildlife Service, https://www.fws.gov/endangered/esa-library/pdf/ESAall.pdf

US Fish and Wildlife Service, https://www.fws.gov/midwest/endangered/glossary/index.htmlUS Fish and Wildlife Services, https://www.fws.gov/endangered/about/listing-status-codes.html

US Fish and Wildlife Services, http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?division=2.&chapter=10.&lawCode=FGC

Appendix A
Air Quality
Small Project Analysis Level (SPAL)

Small Project Analysis Level Assessment

Three Rivers Water Tanks Project
40707 Terminus Court
Three Rivers, CA 93271
APN 068-230-003-000

Prepared by:

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April 2019

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EXECUTIVE SUMMARY

Insight Environmental Consultants, Inc., *a Trinity Consultants Company*, has completed a limited air quality assessment for a light industrial project to be located on APN 068-230-003-000 (Project). The Project includes the demolition of one 150,000 gallon water storage tank and the site grading and construction of a 100,000 gallon replacement tank and one additional 100,000 gallon water tank for the South Kaweah Mutual Water Company. The Project site is located within the southwestern portion of the incorporated limits of Three Rivers, California southeast of the intersection of Ferndale Drive and Terminus Court.

This limited air quality assessment uses the San Joaquin Valley Air Pollution Control District's (SJVAPCD) screening tool, Small Project Analysis Level (SPAL) (SJVAPCD 2012). This SPAL assessment was prepared pursuant to the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD 2015), the California Environmental Quality Act (CEQA) (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

STATEMENT OF FINDING

Based on the SPAL established by the SJVAPCD's GAMAQI, the emissions estimates prepared pursuant to this SPAL assessment do not exceed the SJVAPCD's established emissions thresholds and significance thresholds for all CEQA air quality determinations; this Project would therefore *not pose a significant impact* to the San Joaquin Valley Air Basin and would have a *less than significant air quality impact*.

1.0 INTRODUCTION

The proposed Project includes the demolition of one 150,000 gallon water storage tank and the site grading and construction of a 100,000 gallon replacement tank and one additional 100,000 gallon water tank for the South Kaweah Mutual Water Company.

The Project site is located within the southwestern portion of the incorporated limits of Three Rivers, California southeast of the intersection of Ferndale Drive and Terminus Court. The parcel is currently approved for use by the South Kaweah Mutual Water Company for water storage. The Project was assessed as if it would be developed in one phase. This assessment examines the projected gross impacts to air quality posed by this Project to the San Joaquin Valley Air Basin to determine whether or not the Project remains below established air quality thresholds of significance.

2.0 GENERAL PROJECT DESCRIPTION

The Project is located in the incorporated area of Three Rivers, California southeast of the intersection of Ferndale Drive and Terminus Court. **Figure 2-1** depicts the Project location.

Figure 2-1 –Location in Three Rivers, CA

3.0 SMALL PROJECT ANALYSIS LEVEL QUALIFICATION

This assessment was prepared pursuant to the SJVAPCD's GAMAQI (SJVAPCD 2015), the CEQA (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division

6, Chapter 3, Sections 15000 – 15387). The SJVAPCD created the screening tool, SPAL, to streamline air quality assessments of commonly encountered projects. According to GAMAQI, the SJVAPCD "pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding emissions thresholds"[1].

The SJVAPCD SPAL process established review parameters to determine whether a project qualifies as a "small project." A project that is found to be "less than" the established parameters, according to the SPAL review parameters, has "no possibility of exceeding criteria pollutant emissions thresholds." **Table 3-1** presents the SPAL size parameters for industrial projects.

Table 3-1 Small Project Analysis Level in Square Feet for Industrial

Land Use Category - Industrial	**Project Size (SF)***
General Light Industry	510,000
Heavy Industry	920,000
Industrial Park	370,000
Manufacturing	400,000
Proposed Project	**1,300**
SPAL Exceeded?	**No**
Notes: * Project size based on SPAL Table 5-3(d), as posted on SJVAPCD webpage: https://www.valleyair.org/transportation/CEQA%20Rules/SPALTables61912.pdf	

As shown in **Table 3-1**, the proposed Project would not exceed the established SPAL limits for a General Light Industrial project. The Project would consist of 0.3 acres, or 1,300 SF, of general light industrial land use compared to the allowable project size for a general light industrial project which is 510,000 SF. Based on the above information, this Project qualifies for a limited air quality analysis applying the SPAL guidance to determine air quality impacts.

Table 3-2 presents the SPAL vehicle trip parameters for projects.

Table 3-2 Small Project Analysis Level in Vehicle Trips

Land Use Category	**Project Size (trips/day)***
Residential Housing	1,453
Commercial	1,673
Office	1,628
Institutional	1,707
Industrial	1,506
Proposed Project	**< 1**
SPAL Exceeded?	**No**
Notes: * Project size based on SPAL Table 5-3(d), as posted on SJVAPCD webpage: https://www.valleyair.org/transportation/CEQA%20Rules/SPALTables61912.pdf	

As shown in **Table 3-2**, the proposed Project would not exceed the established SPAL vehicle trip limits for General Light Industrial project. The Project would generate 1 average weekly trip, which is less than 1 average daily trip, compared to the allowable project vehicle trips for a general light industrial project which is 1,506 average daily trips. Based on the above information, this Project qualifies for a limited air quality analysis applying the SPAL guidance to determine air quality impacts.

[1] SJVAPCD GAMAQI, Section 8.3.4, Page 85.

4.0 AIR QUALITY IMPACTS AND EVALUATION

Significance thresholds are based on the CEQA Appendix G Environmental Checklist Form (not included herein) and SJVAPCD air quality thresholds (SJVAPCD 2015). A potentially significant impact to air quality, as defined by the CEQA Checklist, would occur if the project caused one or more of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violation of any air quality standard or substantial contribution to an existing or projected air quality standard;
- A cumulatively considerable net increase of any criteria pollutant for which the project region is designated non-attainment under an applicable Federal or state ambient air quality standard (including emissions which exceed quantitative thresholds for ozone precursors);
- Exposure of sensitive receptors to substantial pollutant concentrations; and/or
- The creation of objectionable odors affecting a substantial number of people.

The SJVAPCD has identified quantitative emission thresholds to determine whether the potential air quality impacts of a project require analysis in an Environmental Impact Report. The SJVAPCD air quality thresholds from the GAMAQI are presented in **Table 4-1** (SJVAPCD 2015). The SJVAPCD separates construction emissions from operational emissions for determining significance thresholds for air pollutant emissions.

Table 4-1 SJVAPCD Air Quality Thresholds of Significance – Criteria Pollutants

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Source: SJVAPCD 2015

Criteria pollutant) emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (California Air Pollution Control Officers Association (CAPCOA) 2016). This project would generate short-term construction emissions and negligible long-term operational emissions.

An air quality evaluation also considers: 1) exposure of sensitive receptors to substantial pollutant concentrations; and 2) the creation of objectionable odors affecting a substantial number of people. The criteria for this evaluation are based on the Lead Agency's determination of the proximity of the proposed Project and the sensitive receptors. A sensitive receptor is a location where human populations, especially children, senior citizens and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, i.e. the 24-hour, 8-hour or 1-hour standards. Commercial and industrial sources are not considered sensitive receptors.

5.0 PROJECT-RELATED EMISSIONS

This document was prepared pursuant to the SJVAPCD's GAMAQI and SPAL guidelines and provides a cursory review of the Project emissions to demonstrate that it would not exceed established air quality emissions thresholds.

5.1 Short-Term Emissions

Table 5-1 shows the construction emission levels using default CalEEMod equipment, schedule and factors for construction of a 1,300 SF light industrial building and demolition of 800 SF which would be a conservative estimate for estimating emissions for the construction of the two new tanks and demolition project (see **Attachment A**). The following was the only change to CalEEMod defaults:

- Project site acres was changed from the default to the actual acreage of the Project site.

Construction emission estimates also included the following SJVAPCD's required measures for all projects:

- Water exposed area 3 times per day; and
- Reduce vehicle speed to less than 15 miles per hour.

Based on these anticipated activity levels, the Project construction activities would not exceed construction thresholds (**Table 4-1**). Construction emissions therefore were found to be *less than significan*t and no further evaluation is required.

Table 5-1 – Construction Emission Levels

Emissions Source	Pollutant					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
	(tons/year)					
2019 Construction Emissions	0.06	0.57	0.45	0.00	0.04	0.03
SJVAPCD Construction Emissions Thresholds	10	10	100	27	15	15
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

5.2 Long-Term Emissions

Long term emissions are caused by operational mobile, area, and stationary sources. The only long term emissions from this Project would be from a maximum of one vehicle trip per week for maintenance and electricity usage to fill the water tanks. The Project is allowing for an increase in capacity for an existing water tank, which already required the weekly maintenance trip. In addition, there would be a minimal incremental increase in electricity usage from the existing water tank's current electricity usage. Therefore, the proposed Project's long-term air quality emissions are expected to be negligible, and would *not pose a significant impact to criteria air pollutants*. This finding is consistent with the SPAL screening thresholds.

5.3 Greenhouse Gas Emissions

The Project's greenhouse gas (GHG) emissions are from the electricity usage required to fill the water tank. As mentioned in Section 5.2, there would be a minimal incremental increase in electricity usage from the existing tank's current usage; therefore, the increase in GHG emissions is negligible, and the Project's potential impact is *less than significant*.

5.4 Potential Impact on Sensitive Receptors

The proposed Project is located at the southeast corner of Ferndale Drive and Terminus Court. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and daycare centers are locations where sensitive receptors would likely reside. There are no known schools, hospitals, or nursing homes within a two mile radius of the Project.

Based on the predicted operational emissions and activity types, the proposed Project is not expected to affect sensitive receptors and is *not expected to have any adverse impacts on any known sensitive receptor*.

5.5 Potential Impacts to Visibility to Nearby Class 1 Areas

It should be noted that visibility impact analyses are not usually conducted for area sources. The recommended analysis methodology was initially intended for stationary sources of emissions which were subject to the Prevention of Significant Deterioration (PSD) requirements in 40 CFR Part 60. Since the Project's emissions are predicted to be significantly less than the PSD threshold levels, an impact at either the Dome Land Wilderness or the Sequoia National Park Areas (the two nearest Class 1 areas to the Project) is extremely unlikely. Therefore, based on the Project's predicted emissions, the Project is *not expected to have any adverse impact to visibility at any Class 1 Area*.

5.6 Potential Odor Impacts

The proposed Project is located near residential neighborhoods. Expected uses are not known to be a source of nuisance odors and are not listed in Table 6 of the SJVAPCD's GAMAQI. The Project is therefore not anticipated to have substantial odor impacts. The Project is therefore anticipated to have a *less than significant odor impact*.

5.7 Ambient Air Quality Impacts

In Table 4 of GAMAQI (2015, p 95), SJVAPCD has developed SPAL screening thresholds for Ambient Air Quality Analyses (AAQA). GAMAQI lists 25,000 SF as the ambient air quality exemption level for light industrial projects, however, it further states that "All projects on the exemption list emit less than 2 tons per year of either PM10 or NOx". The proposed Project emits a negligible amount of PM10 and NOx. GAMAQI concludes that Projects with less than 2 tons per year of PM10 and NOx will have a less than significant impact on air quality and no AAQA is required. The proposed Project's AAQA impacts would therefore be *less than significant* and no further impact analysis is required.

5.8 Toxic Air Contaminant (TAC) Impacts

TACs, as defined by the California Health & Safety Code (CH&SC) §44321, are listed in Appendices AI and AII in AB 2588 Air Toxic "Hot Spots" and Assessment Act's Emissions Inventory Criteria and Guideline Regulation document. SJVAPCD's risk management objectives for permitting and CEQA are as follows:

- Minimize health risks from new and modified sources of air pollution.
- Health risks from new and modified sources shall not be significant relative to the background risk levels and other risk levels that are typically accepted throughout the community.
- Avoid unreasonable restrictions on permitting.

The proposed Project is not expected to generate any TAC emissions. The Project would therefore not generate a health risk impact due to TAC emissions. Its potential health risk impacts would therefore be considered *less than significant* and no further health risk assessment is required.

6.0 CONCLUSIONS

Based on the criteria established by the SJVAPCD's GAMAQI and SPAL guidelines, the proposed Project does not meet the minimum standards to require a full Air Quality Impact Analysis. Furthermore, the Project as proposed would not exceed the SJVAPCD's criteria air pollutant emission levels and would generate *less than significant air quality impacts*.

7.0 ATTACHMENTS

A. CalEEMod Emissions Estimates Output Files

8.0 REFERENCES

California Environmental Protection Agency, Air Toxics Hot Spots Program Risk Assessment Guidelines – The Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments, August 2003.

California Environmental Quality Act (CEQA). 2012. (Public Resources Code 21000 to 21177) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

---------. 2009. CEQA, Appendix G – Environmental Checklist Form, Final Text.

California Air Pollution Control Officers Association (CAPCOA). 2013. California Emissions Estimator Model tm (CalEEMod), version 2016.3.2.

----------. 1997. "Air Toxics Hot Spots" Program Risk Assessment Guidelines, Revised 1992.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17, 2009.

----------. 2017. *Small Project Analysis Level*. March 2017.

----------. 2015. Guide for Assessing and Mitigating Air Quality Impacts.

ATTACHMENT A - CalEEMod Emissions Estimates Output Files

Three Rivers SPAL

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.30	1000sqft	0.03	1,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Demolition - demolition of exisiting tank

Grading - Material exported - four 15" diameter trees and one 24" diameter tree
Grading equation in Appendix A

Vehicle Trips - Construction Emissions Only

Area Coating - Construction Emissions Only

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Fleet Mix -

Consumer Products - Construction Emissions Only

Landscape Equipment - Construction Emissions Only

Energy Use - Construction Emissions Only

Water And Wastewater - Construction Emissions Only

Solid Waste - Construction Emissions Only

Three Rivers SPAL - Tulare County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	0.65	0.00
tblEnergyUse	NT24E	1.31	0.00
tblEnergyUse	NT24NG	0.12	0.00
tblEnergyUse	T24E	0.40	0.00
tblEnergyUse	T24NG	16.68	0.00
tblGrading	AcresOfGrading	0.00	0.20
tblGrading	MaterialExported	0.00	97.00
tblSolidWaste	SolidWasteGenerationRate	1.61	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	300,625.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0569	0.5697	0.4494	6.9000e-004	2.9100e-003	0.0348	0.0377	8.9000e-004	0.0321	0.0330	0.0000	62.0195	62.0195	0.0183	0.0000	62.4762
Maximum	**0.0569**	**0.5697**	**0.4494**	**6.9000e-004**	**2.9100e-003**	**0.0348**	**0.0377**	**8.9000e-004**	**0.0321**	**0.0330**	**0.0000**	**62.0195**	**62.0195**	**0.0183**	**0.0000**	**62.4762**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0569	0.5697	0.4494	6.9000e-004	1.9900e-003	0.0348	0.0368	5.7000e-004	0.0321	0.0327	0.0000	62.0194	62.0194	0.0183	0.0000	62.4762
Maximum	**0.0569**	**0.5697**	**0.4494**	**6.9000e-004**	**1.9900e-003**	**0.0348**	**0.0368**	**5.7000e-004**	**0.0321**	**0.0327**	**0.0000**	**62.0194**	**62.0194**	**0.0183**	**0.0000**	**62.4762**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**31.62**	**0.00**	**2.44**	**35.96**	**0.00**	**0.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2019	9-2-2019	0.3520	0.3520
2	9-3-2019	9-30-2019	0.1079	0.1079
		Highest	0.3520	0.3520

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/3/2019	6/14/2019	5	10	
2	Site Preparation	Site Preparation	6/15/2019	6/17/2019	5	1	
3	Grading	Grading	6/18/2019	6/19/2019	5	2	
4	Building Construction	Building Construction	6/20/2019	11/6/2019	5	100	
5	Paving	Paving	11/7/2019	11/13/2019	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0.2

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	12.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.9000e-004	0.0000	3.9000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	**4.7700e-003**	**0.0430**	**0.0385**	**6.0000e-005**	**3.9000e-004**	**2.6900e-003**	**3.0800e-003**	**6.0000e-005**	**2.5600e-003**	**2.6200e-003**	**0.0000**	**5.2601**	**5.2601**	**1.0000e-003**	**0.0000**	**5.2852**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.0000e-004	1.0000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1536	0.1536	1.0000e-005	0.0000	0.1537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.8000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3530	0.3530	1.0000e-005	0.0000	0.3533
Total	**2.8000e-004**	**7.8000e-004**	**1.9200e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.5066**	**0.5066**	**2.0000e-005**	**0.0000**	**0.5070**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5000e-004	0.0000	1.5000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7700e-003	0.0430	0.0385	6.0000e-005		2.6900e-003	2.6900e-003		2.5600e-003	2.5600e-003	0.0000	5.2601	5.2601	1.0000e-003	0.0000	5.2852
Total	**4.7700e-003**	**0.0430**	**0.0385**	**6.0000e-005**	**1.5000e-004**	**2.6900e-003**	**2.8400e-003**	**2.0000e-005**	**2.5600e-003**	**2.5800e-003**	**0.0000**	**5.2601**	**5.2601**	**1.0000e-003**	**0.0000**	**5.2852**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.0000e-004	1.0000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1536	0.1536	1.0000e-005	0.0000	0.1537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.8000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3530	0.3530	1.0000e-005	0.0000	0.3533
Total	**2.8000e-004**	**7.8000e-004**	**1.9200e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.5066**	**0.5066**	**2.0000e-005**	**0.0000**	**0.5070**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**2.7000e-004**	**1.8000e-004**	**4.5000e-004**	**3.0000e-005**	**1.7000e-004**	**2.0000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.8000e-003	3.0000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4607	0.4607	2.0000e-005	0.0000	0.4611
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0177	0.0177	0.0000	0.0000	0.0177
Total	**6.0000e-005**	**1.8100e-003**	**3.9000e-004**	**0.0000**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.4783**	**0.4783**	**2.0000e-005**	**0.0000**	**0.4787**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**1.1000e-004**	**1.8000e-004**	**2.9000e-004**	**1.0000e-005**	**1.7000e-004**	**1.8000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.8000e-003	3.0000e-004	0.0000	1.0000e-004	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4607	0.4607	2.0000e-005	0.0000	0.4611
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0177	0.0177	0.0000	0.0000	0.0177
Total	**6.0000e-005**	**1.8100e-003**	**3.9000e-004**	**0.0000**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**4.0000e-005**	**1.0000e-005**	**5.0000e-005**	**0.0000**	**0.4783**	**0.4783**	**2.0000e-005**	**0.0000**	**0.4787**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.6000e-004	0.0000	8.6000e-004	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**8.6000e-004**	**5.4000e-004**	**1.4000e-003**	**4.3000e-004**	**5.1000e-004**	**9.4000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0706	0.0706	0.0000	0.0000	0.0707
Total	**5.0000e-005**	**4.0000e-005**	**3.6000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0706**	**0.0706**	**0.0000**	**0.0000**	**0.0707**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3000e-004	0.0000	3.3000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**3.3000e-004**	**5.4000e-004**	**8.7000e-004**	**1.7000e-004**	**5.1000e-004**	**6.8000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	3.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0706	0.0706	0.0000	0.0000	0.0707
Total	**5.0000e-005**	**4.0000e-005**	**3.6000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0706**	**0.0706**	**0.0000**	**0.0000**	**0.0707**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	**0.0479**	**0.4910**	**0.3772**	**5.7000e-004**		**0.0303**	**0.0303**		**0.0279**	**0.0279**	**0.0000**	**51.1502**	**51.1502**	**0.0162**	**0.0000**	**51.5548**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.8000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3530	0.3530	1.0000e-005	0.0000	0.3533
Total	**2.6000e-004**	**1.8000e-004**	**1.8200e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3530**	**0.3530**	**1.0000e-005**	**0.0000**	**0.3533**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0479	0.4910	0.3772	5.7000e-004		0.0303	0.0303		0.0279	0.0279	0.0000	51.1502	51.1502	0.0162	0.0000	51.5548
Total	**0.0479**	**0.4910**	**0.3772**	**5.7000e-004**		**0.0303**	**0.0303**		**0.0279**	**0.0279**	**0.0000**	**51.1502**	**51.1502**	**0.0162**	**0.0000**	**51.5548**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.8000e-004	1.8200e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3530	0.3530	1.0000e-005	0.0000	0.3533
Total	**2.6000e-004**	**1.8000e-004**	**1.8200e-003**	**0.0000**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3530**	**0.3530**	**1.0000e-005**	**0.0000**	**0.3533**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0700e-003**	**0.0196**	**0.0179**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	1.6400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3177	0.3177	1.0000e-005	0.0000	0.3180
Total	**2.4000e-004**	**1.6000e-004**	**1.6400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3177**	**0.3177**	**1.0000e-005**	**0.0000**	**0.3180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.0700e-003	0.0196	0.0179	3.0000e-005		1.1100e-003	1.1100e-003		1.0300e-003	1.0300e-003	0.0000	2.3931	2.3931	6.8000e-004	0.0000	2.4102
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0700e-003**	**0.0196**	**0.0179**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**2.3931**	**2.3931**	**6.8000e-004**	**0.0000**	**2.4102**

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.6000e-004	1.6400e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3177	0.3177	1.0000e-005	0.0000	0.3180
Total	**2.4000e-004**	**1.6000e-004**	**1.6400e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3177**	**0.3177**	**1.0000e-005**	**0.0000**	**0.3180**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	0.00	0.00	0.00	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.496227	0.035864	0.170091	0.158035	0.026569	0.006201	0.020975	0.076251	0.001816	0.001427	0.004483	0.001181	0.000880

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**					**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**					**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B
Biological Report

5080 California Avenue, Ste. 220 | Bakersfield, CA 93309

March 18, 2020

Bryan Elkington
South Kaweah Mutual Water Company
P.O. Box 191
Three Rivers, CA 93271

RE: Biological Reconnaissance Survey Results for the Three Rivers Water Tank Replacement Project and Nearby Drainage Culvert, Three Rivers, Tulare County, California.

Dear Mr. Elkington:

This letter provides the results of the two biological reconnaissance surveys conducted on March 1, 2019, and June 4, 2019, for the proposed South Kaweah Mutual Water Company (SKMWC) Three Rivers Water Tank Replacement Project (Project).

The Project is located on an undeveloped 0.3-acre portion of at a residential lot located at 40707 Terminus Drive in Three Rivers, California (APN 068-230-003-000). The Project site is approximately 10-miles east of Woodlake, California, on previously disturbed property owned by SKMWC, which is surrounded by a residential neighborhood. The project will include the replacement of a 150,000-gallon water tank with the installation of two, 100,000-gallon water storage tanks. The installation of one water storage tank will be in adjacent to an existing tank, which will be subsequently demolished and replaced with a new tank.

The roadway at a hairpin turn will also be widened by 10 feet (five feet on either side of road, but within the existing road right of way), for approximately 52 linear feet 260-feet south of the Project site. Five oak trees will be removed at the tank site to allow for excavation. Two hundred feet of additional 6-feet tall chain link fence will be installed for security. An approximately 80 feet of swale will also be also installed. The dirt used for the road widening will originate from the Project site, primarily from the grading for the new tank footing base.

The Project is located in Tulare County, California (Attachment A, Figure 1). The Project site is within Section 35, Township 17 South, Range 28 East, Mount Diablo Base and Meridian, and the *Kaweah* U.S. Geological Survey (USGS) 7.5- minute topographic quadrangle (Figure 2).

Quad Knopf, Inc. (dba QK) was retained by SKMWC to conduct a survey to identify the presence or absence of special-status species or their habitat within the proposed Project site to comply with the State Water Control Board requirements. Results of the both surveys are provided herein. Representative photographs of the Project site were taken to document existing conditions and to provide a visual perspective of the Project site (Attachment B, Representative Photographs).

METHODOLOGY

Two biological reconnaissance surveys were conducted. QK Environmental Scientists Karissa Denney and Laura Schneider conducted the initial biological reconnaissance survey on March 1, 2019, and a subsequent survey of the culvert area was conducted on June 4, 2019, by QK Environmental Scientists Karissa Denney and Julie Hausknecht. The primary focus of the survey was to detect the presence of State and federally listed plant and wildlife species, other sensitive species and nesting birds herein known as special-status species, observed or expected to occur at the Project site. Special-status species are those that have specified protection or other actions by State and federal wildlife agencies. The survey area includes the Project site, the drainage culvert area and a 250-foot buffer (Biological Survey Area or BSA), where feasible (Attachment A, Figure 2). The survey was conducted by meandering pedestrian transects which included 100% visual coverage of the BSA. The survey was conducted during the daytime, during which there is a high probability of detecting special-status species including sign (e.g. tracks, scat, prey remains, dens, etc.).

All data was recorded using ESRI Collector for ArcGIS software installed on an iPad. Representation photographs of the sites were taken to document site conditions at the time of the survey.

SURVEY RESULTS

General Site Conditions

The proposed Project site consists of a previously disturbed property that is adjacent to two residential homes. Vegetation present on the Project site consists of common ruderal grassy vegetation that is found locally, and five oak trees (*Quercus* sp.) that are to be removed to allow for the installation of the water storage tanks (Attachment A, Figure 3). The drainage culvert area primarily consists of common ruderal grasses and poison oak (*Toxicodendron diversilobum*) (Attachment B; Representative Photographs 1-12). Several oak and fir (*Abies* sp.) trees may require pruning along the access route to allow large vehicle access. Plant and wildlife species identified on the Project site both surveys include 19 plant species and 14 wildlife species (Table 1).

Table-1
Plant and Wildlife Species Observed,
Three Rivers Water Tank Replacement Project, Tulare County, California

Scientific Name	Common Name
Plants	
Abies sp.	fir tree
Aesculus californica	California buckeye
Amsinckia eastwoodiae	Eastwood's fiddleneck
Avena fatua	wildoat
Bromus diandrus	ripgut brome
Bromus madritensis ssp. *rubens*	red brome
Bryophyta sp.	moss
Capsella bursa-pastoris	Shepard's purse

Cirsium sp.	thistle
Claytonia perfoliata	Miner's lettuce
Erodium cicutarium	common stork's-bill
Mimulus sp.	monkeyflower
Phoradendron sp.	mistletoe
Poaceae sp.	grasses
Quercus sp.	oak tree
Senecio vulgaris	common groundsel
Stellaria media	common chickweed
Toxicodendron diversilobum	poison oak
Trifolium sp.	clover
Wildlife	
Aphelocoma californica	scrub jay*
Baeolophus inornatus	oak titmouse
Buteo jamaicensis	red-tailed hawk
Callipepla californica	California quail
Canis lupus familiaris	domestic dog*
Cathartes aura	turkey vulture
Corvus corax	raven
Cyanocitta stelleri	Steller's jay
Gallus gallus domesticus	rooster*
Mimus polyglottos	northern mockingbird
Picidae sp.	woodpecker*
Poecile gambeli	mountain chickadee
Tachycineta bicolor	tree swallow
Zenaida macroura	mourning dove*

*Indicates that only sign (e.g., scat, prey remains, tracks, feathers, dens/burrows, vocalizations) of the species was observed.

Presence/Absence of Special-status Species

Special-status species are those given State and federal protection that may affect Project development. QK conducted a desktop analysis for special-status species of the Project site. A California Natural Diversity Database (CNDDB) review encompassing a 10-mile radius around the Project site and federal IPaC Resource (IPaC) nine surrounding quadrangle query was conducted prior to the initial site visit (Attachment C). Both CNDDB and IPaC presents historical occurrences for special-status plant species, invertebrate, reptile, amphibian, and mammal species, and sensitive status bird species. The species obtained by the database search focuses the on-site biological resource survey and targets special-status plant and wildlife species that may occur or have occurred in the general vicinity of the BSA.

Special-Status Plant Species

The desktop analysis identified 26 sensitive plant species by the CNDDB and IPac database search. Of the 26 species only nine have either State or federal special-status classification and have the habitat requirements, known ranges or other environmental components to support the occurrence on the BSA. The species without State or federal protection are not included in this analysis. Species with the potential to occur on the BSA are listed below. See also Species Table, Attachment C.

San Joaquin adobe sunburst

San Joaquin adobe sunburst (*Pseudobahia peirsonii*) is a federally threatened (FT) and State endangered (SE) species and is categorized as 1B.1 California Rare Plant Rank (CRPR) species. A 1B.1 species is seriously threatened in California and is rare throughout the species range and primarily endemic to California. The nearest CNDDB recorded occurrence (EONDX 32159) of this species is located approximately 6.6-miles west of the BSA. No San Joaquin adobe sunburst was observed within the BSA during the surveys. Due to the previously disturbed condition of the site it is unlikely for San Joaquin adobe sunburst to be present.

Springville clarkia

Springville clarkia (*Clarkia springvillensis*) is a FT and SE species and is categorized as 1B.2 CRPR species. The nearest CNDDB recorded occurrence (EONDX 18825) of this species is located approximately 3.7-miles northeast of the BSA. No Springville clarkia was observed within the BSA during the surveys. Due to the previously disturbed condition of the site it is unlikely for Springville clarkia to be present.

Kaweah brodiaea

Kaweah brodiaea (*Brodiaea insignis*) is a SE species and is categorized as 1B.2 CRPR species. The nearest CNDDB recorded occurrence (EONDX 5606) of this species is located approximately 0.5-miles northeast of the BSA. No Kaweah brodiaea was observed within the BSA during the surveys. Due to the previously disturbed condition of the Project site it is unlikely for Kaweah brodiaea to be present.

Greene's tuctoria

Greene's tuctoria (*Tuctoria greenei*) is a FE species and is categorized as 1B.1 CRPR species. The nearest CNDDB recorded occurrence (EONDX 2397) of this species is located approximately 9-miles west of the BSA and is presumed extirpated. No Greene's tuctoria was observed within the BSA during the surveys. Due to the previously disturbed condition of the site it is unlikely for Greene's tuctoria to be present.

Striped adobe lily

Striped adobe lily (*Fritillaria striata*) is a State threatened (ST) and is categorized as 1B.1 CRPR species. There is one CNDDB recorded occurrence (EONDX 64958) within a 10-mile radius which is located approximately 9.8-miles southwest of the BSA and is presumed extirpated. No striped adobe lily was observed within the BSA during the surveys. Due to the previously disturbed condition of the Project site it is unlikely for striped adobe lily to be present.

Madera leptosiphon

Madera leptosiphon (*Leptosiphon serrulatus*) is listed 1B.2 CRPR species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. The nearest CNDDB recorded occurrence (EONDX 20487) of this species is located approximately 1.1-miles north of the site. No Madera leptosiphon was observed on the BSA during the surveys. Madera leptosiphon is unlikely to occur on the Project site due to the current disturbed conditions of the site.

Mouse buckwheat

Mouse buckwheat (*Eriogonum nudum* var. *murinum*) is listed 1B.2 CRPR species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. The nearest CNDDB recorded occurrence (EONDX 20993) of this species is located approximately 0.7-miles northeast of the site. No mouse buckwheat was observed on the BSA. Mouse buckwheat is unlikely to occur on the Project site due to the current disturbed conditions of the site.

Calico monkeyflower

Calico monkeyflower (*Diplacus pictus*) is listed 1B.2 California Rare Plant Rant (CRPR) species. A 1B.2 species is a rare species throughout their range with the majority of them endemic to California. The nearest CNDDB recorded occurrence (EONDX 64927) of this species is located approximately 5.8-miles southwest of the Project site. No calico monkeyflower was observed on the BSA. Calico monkeyflower is unlikely to occur on the Project site due to the current disturbed conditions of the site.

San Joaquin Valley Orcutt grass

San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*) is a FT and SE species and is categorized as 1B.1 CRPR species. The only CNDDB recorded occurrence (EONDX 22389) within a 10-mile radius is located approximately 10-miles northwest of the BSA and is presumed extirpated. No San Joaquin Valley Orcutt grass was observed within the BSA during the surveys. Due to the previously disturbed condition of the Project site it is unlikely for San Joaquin Valley Orcutt grass to be present.

Sensitive Plant Communities

Big Tree Forest, Central Valley Drainage Hardhead/Squawfish Stream, Northern Claypan Vernal Pool, and Sycamore Alluvial Woodland are sensitive plant communities recorded within 10-miles of the BSA. The nearest CNDDB recorded occurrence (EONDX 12445) for Big Tree Forest is located approximately 6.4-miles east of the BSA. The nearest CNDDB recorded occurrence (EONDX 8927) for Central Valley Drainage Hardhead/Squawfish Stream is located approximately 0.3-miles north of the BSA. The nearest CNDDB recorded occurrence (EONDX 26490) Northern Claypan Vernal Pool is located approximately 9-miles southwest

of the BSA. The nearest CNDDB recorded occurrence (EONDX 25711) Sycamore Alluvial Woodland is located approximately 5.8-miles west of the BSA. None of the above listed sensitive communities were observed within the BSA.

Special-Status Wildlife Species

The desktop analysis identified 59 special-status wildlife species within a 10-mile radius around the BSA. Of the identified 36 species only 14 have either State or federal protection and have the habitat, known range or other environmental potential to occur on the BSA. The species without State or federal protection are not included in this analysis. Below are special-status wildlife species that have or may occur within the BSA. See Species Table, Attachment C.

Invertebrates

Vernal pool fairy shrimp (*Branchinecta lynchi*) and Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) are FT species that have recorded occurrences within 10-miles of the BSA. Neither of these species were observed within the BSA. Table 4 provides the nearest recorded occurrence for each species and the distance from the BSA. There is no suitable habitat for these species on the Project site.

Table-2
Federally and State Listed Special-Status Invertebrates

Species	Recorded Occurrence (EONDX #)	Direction from Project Site
Valley elderberry longhorn beetle	34485	3.0 miles north
Vernal pool fairy shrimp	17097	8.8 miles southwest

Fish

The Delta smelt (*Hypomesus transpacificus*), a FT and SE species, was listed on IPaC but did not have CNDDB recorded occurrences within 10-miles of the BSA. There is no suitable habitat for Delta smelt on the Project site.

Amphibians and Reptiles

The southern mountain yellow-legged frog (*Rana muscosa*), a FE and SE species, and the western spadefoot (*Spea hammondii*), a California Species of Special Concern (SSC), have recorded occurrences within 10-miles of the BSA. The foothill yellow-legged frog (*Rana boylii*), which was recently designated ST in its Northern Sierra range and SE in its Southern Sierra range, also has recorded occurrences within the 10-mile radius. None of the species listed above were observed within the BSA during the surveys. Table 5 provides the nearest recorded occurrence for the species and distance from the Project site. It is unlikely that any of these species would be present on the Project site due to lack of suitable habitat.

Other amphibians that were listed on IPaC but did not have CNDDB recorded occurrences within 10-miles of the BSA included California red-legged frog (*Rana draytonii*) and California tiger salamander (*Ambystoma californiense*). Neither of these species were observed during the time of the surveys. It is unlikely that either of these two species would be present on the Project site due to the lack of suitable habitat.

Western pond turtle (*Emys marmorata*) and Northern California legless lizard (*Anniella pulchra*) have recorded occurrences within 10-miles of the BSA. No Western pond turtle or Northern California legless lizard were observed within the BSA during the surveys. Table 5 provides the nearest recorded occurrence for the species and distance from the Project site. It is unlikely that Western pond turtle or Northern California legless lizard would be present on the Project site due to a lack of suitable habitat on the Project site.

Table-5
Federally and State Special-Status Amphibians and Reptiles

Species	Recorded Occurrence (EONDX #)	Direction from Project Site
foothill yellow-legged frog	111553	1.1 miles northeast
Northern California legless lizard	107009	3.0 miles north
Southern mountain yellow-legged frog	76567	5.9 miles northeast
Western pond turtle	647	3.9 miles west
Western spadefoot	2656	5.8 miles west

Birds

Special-status bird species identified during the database search included the California condor (*Gymnogyps californianus*) which is listed as a FT and SE and is considered a California Department of Fish and Wildlife (CDFW) fully protected species. The bald eagle (*Haliaeetus leucocephalus*) has been federally delisted but is listed as a SE species. The Tricolored blackbird is listed as a ST species. No bird species listed above, or their sign were observed on the BSA during the surveys. Both surveys were conducted during the nesting bird season (February 1 to September 15), and although no nests were observed, several bird species were seen on or in the vicinity of the BSA. No suitable nesting habitat for California condor and tricolored blackbird exist within the BSA. However, suitable nesting habitat exists within the BSA for nesting native bird species large trees exist in the immediate vicinity which provides suitable nesting habitat for raptors. Prey, including small mammals, smaller birds, insects, and carrion may be present on the BSA, therefore, it is possible that the California condor, bald eagle, raptors and tricolored blackbird may be present on the Project site as transient foragers. Table 6 provides the nearest recorded occurrence for each species and the distance from the Project site.

Table-6
Federally and State Special-Status Mammals

Species	Recorded Occurrence (EONDX #)	Direction from Project Site
California condor	14754	0.7 miles south
bald eagle	102175	3.2 miles east
tricolored blackbird	98857	5.4 miles west

Mammals

Special-status bat species identified in the database search included the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorthinus townsendii*), and Western mastiff bat (*Eumops perotis californicus*). These species are all SSC and have recorded occurrences within 10-miles of the BSA. None of the species listed above were observed within the BSA during the surveys. Table 7 provides the nearest recorded occurrence for these species and the distance from the BSA. The pallid bat and Townsend's big-eared bat have been documented roosting under tree bark or in tree cavities, therefore, these species may roost within the BSA. It is also possible that these bat species could be present from time to time foraging for insects on the Project site.

Special-status furbearing species identified during the database search included the California wolverine (*Gulo gulo*), a federally proposed threatened and ST species, the fisher (*Pekania pennanti*), a West Coast Distinct Population Segment and a ST species, and the San Joaquin kit fox (*Vulpes macrotis mutica*), a FE and ST species. The California wolverine, fisher, and San Joaquin kit fox were not observed during the surveys. Suitable habitation is not present within the BSA, however, these species may be present as transient foragers. Table 7 provides the nearest recorded occurrence for the species and distance from the BSA.

Table-7
Federally and State Special-Status Mammals

Species	Recorded Occurrence (EONDX #)	Direction from Project Site
California wolverine	23269	7.0 miles southeast
fisher – West Coast DPS	72520	5.5 miles east
pallid bat	66778	9.7 miles southeast
San Joaquin kit fox	70610	9.0 miles west
Townsend's big-eared bat	94344	7.4 miles northeast
Western mastiff bat	66508	1.9 miles north

CONCLUSION

QK conducted two biological reconnaissance surveys on the BSA for the tank site, existing roadway and culvert area. No special-status plant or wildlife species or nesting birds were observed on the tank site or the culvert area during the time of the surveys. The Project site and culvert area are located on land that is moderately disturbed with mostly ruderal vegetation. Five oak trees are located on the tank site that would have to be removed for the new tank installation. No special-status plant species were observed within the BSA. No nesting birds or nest sites were observed within the BSA during the time of the surveys but may occur at any time during the nesting season. The BSA provides low quality, or non-suitable habitat unlikely to support habitation of fur bearing special-status species and no burrows for these species were observed during the surveys. The BSA does support suitable habitat for foraging or roosting bats.

RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES

It is recommended that the following avoidance and minimization measures be implemented during Project construction to reduce the potential for direct and indirect impacts to nesting raptors and other birds, as well as other special-status species:

- Project construction activities should be limited to daylight hours.
- All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers.
- Pets should not be permitted on the Project site during construction.
- Prior to the initiation of ground disturbing activities, a qualified biologist should conduct a species-specific awareness training session with all personnel that will be working on the Project site. The training session should consist of a brief presentation by persons knowledgeable in biology of sensitive species that may be present and legislative protection to explain endangered species concerns to personnel involved in the Project. The training session should include the following: a description of the species that could potential be found on the Project site and their

habitat needs; an explanation of the status of the species and their protection under the Endangered Species Act(s); and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the Project site.

- A pre-construction survey should be conducted 14 to 30 days prior to ground breaking to ensure that no special-status species have moved onto the Project site and could be subject to Project-related impacts.

- Project-related vehicles should observe a daytime speed limit of 15-mph throughout the Project site.

- It is highly recommended that all equipment staged at the Project site be checked every morning to ensure no special-status species have taken refuge in the equipment over night.

- To prevent inadvertent entrapment of special-status species or other animals during construction of the Project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed.

- Some special-status species are attracted to den-like structures such as pipes and may enter stored pipes becoming trapped or injured. All pipes, culverts, or similar structures with a diameter of 3-inches or greater that are stored at the Project site for one or more overnight periods shall be thoroughly inspected for special-status species before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status species is discovered inside a pipe, that section of pipe shall not be moved until the USFWS and CDFW have been consulted. If necessary, and under the direct supervision of the agency approved biologist, the pipe may be moved once to remove it from the path of activity, until the wildlife has escaped.

- If Project actives such as removal of tree or tree pruning occur during nesting bird season (February 1 through September 15), a biological monitor is present to monitor these nests when work is conducted within the respective standard avoidance buffer areas.

- If migratory or raptor nesting behavior is observed, avoidance measures may be required to ensure that nest abandonment does not occur. Typically, avoidance buffers are required by CDFW and USFWS include the following:

    - up to 500-feet for raptor nests
    - up to 250-feet for other bird nests to avoid “take” (i.e., disturbance causing nest abandonment, or death).

- Soil erosion and sediment control measures are recommended around the backfilled area of the drainage culvert. These measures include but are not limited to straw-wattle, silt fencing, geotextiles, sandbags and erosion control blankets.

With the implementation of the above referenced avoidance and minimization measures there will be a less than significant impact to any sensitive species.

If you have any questions regarding this report or require additional information, please contact Jaymie Brauer (QK Project Manager), Ms. Denney, or Ms. Hausknecht at (661) 616-2600.

Sincerely,

Karissa Denney
Associate Environmental Scientist

Julie Hausknecht
Associate Environmental Scientist

Attachments:

A. Project Figures
B. Representative Photographs
C. Special Plant and Wildlife Species Table

cc: file
190157

ATTACHMENT A
PROJECT FIGURES

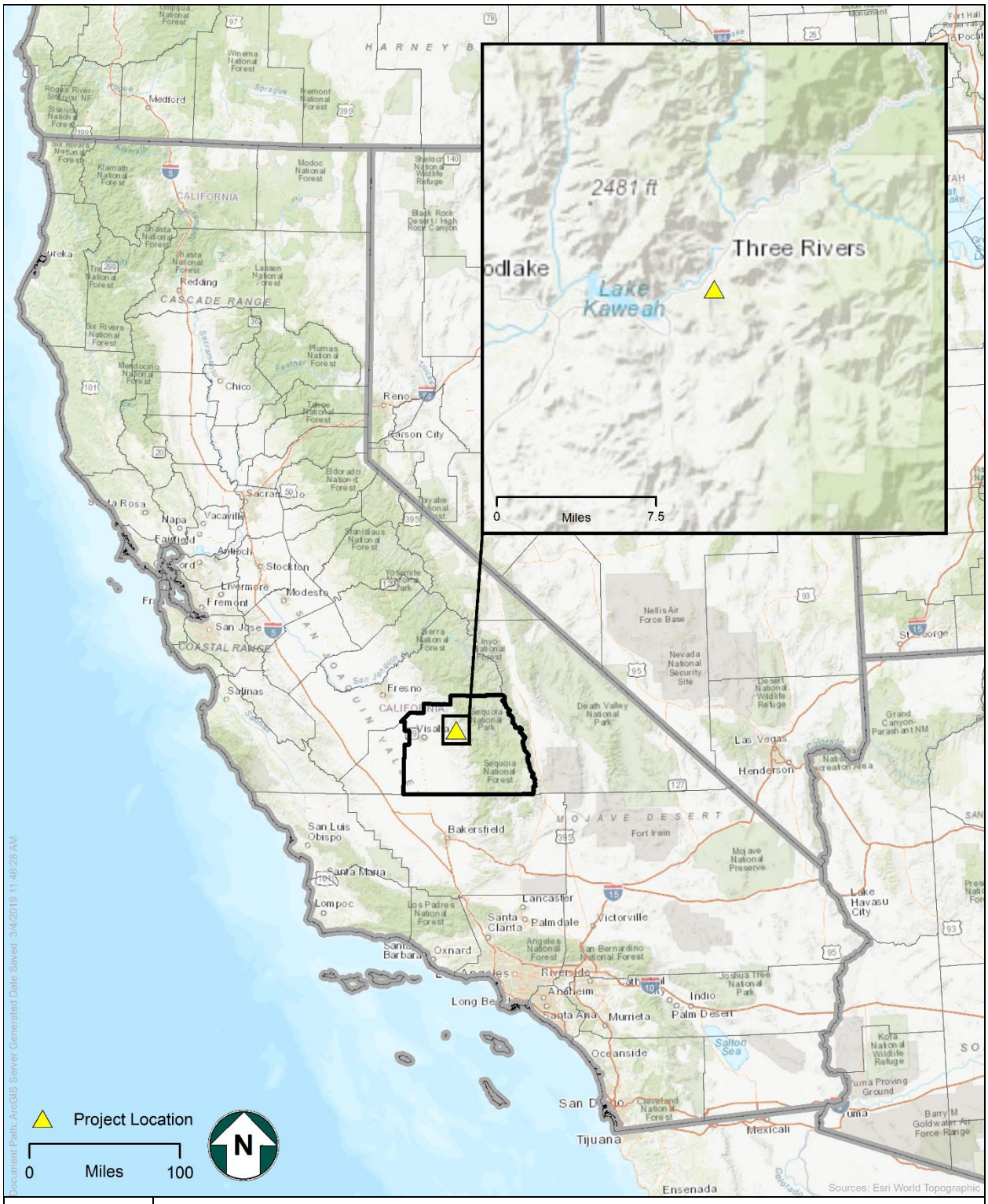


Figure 1
Regional Location
Three Rivers Water Tank Replacement Project
Tulare County, California

Figure -2
Project Site
Three Rivers Water Tank Replacement Project
Tulare County, California

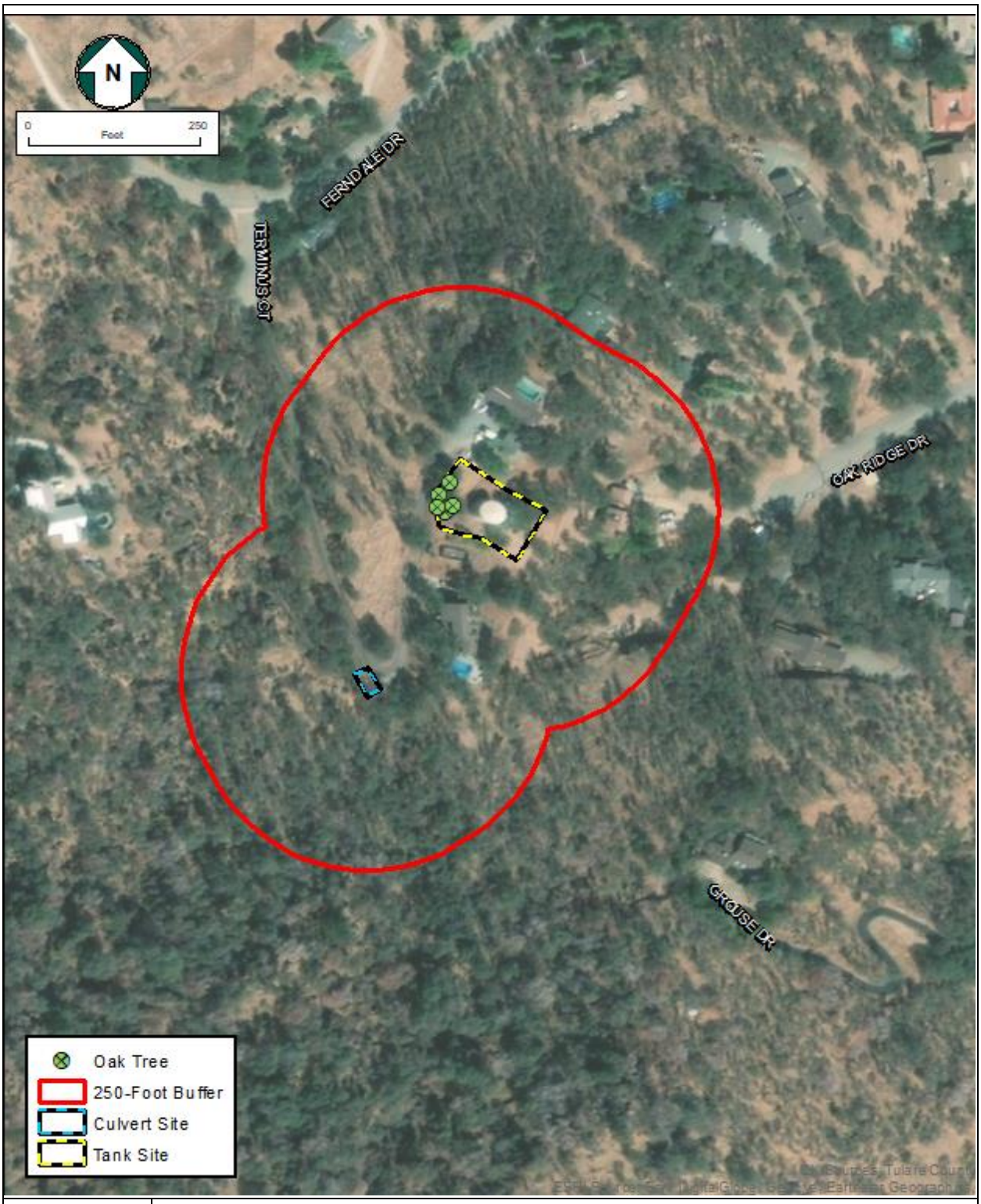


Figure -3
Biological Resources
Three Rivers Water Tank Replacement Project
Tulare County, California

ATTACHMENT B
REPRESENTATIVE PHOTOGRAPHS

Photograph 1: Three Rivers Water Tank Replacement Project site from east boundary, facing west.
GPS Coordinates: 36.4118, -118.9167.
Photograph taken by Karissa Denney on March 1, 2019.

Photograph 2: Three Rivers Water Tank Replacement Project site from west boundary, facing east.
GPS Coordinates: 36.4117, -118.9167.
Photograph taken by Karissa Denney on March 1, 2019.

Representative Photographs

Photograph 3: Three Rivers Water Tank Replacement Project site from west boundary, facing east.
GPS Coordinates: 36.4117, -118.9169.
Photograph taken by Karissa Denney on March 1, 2019.

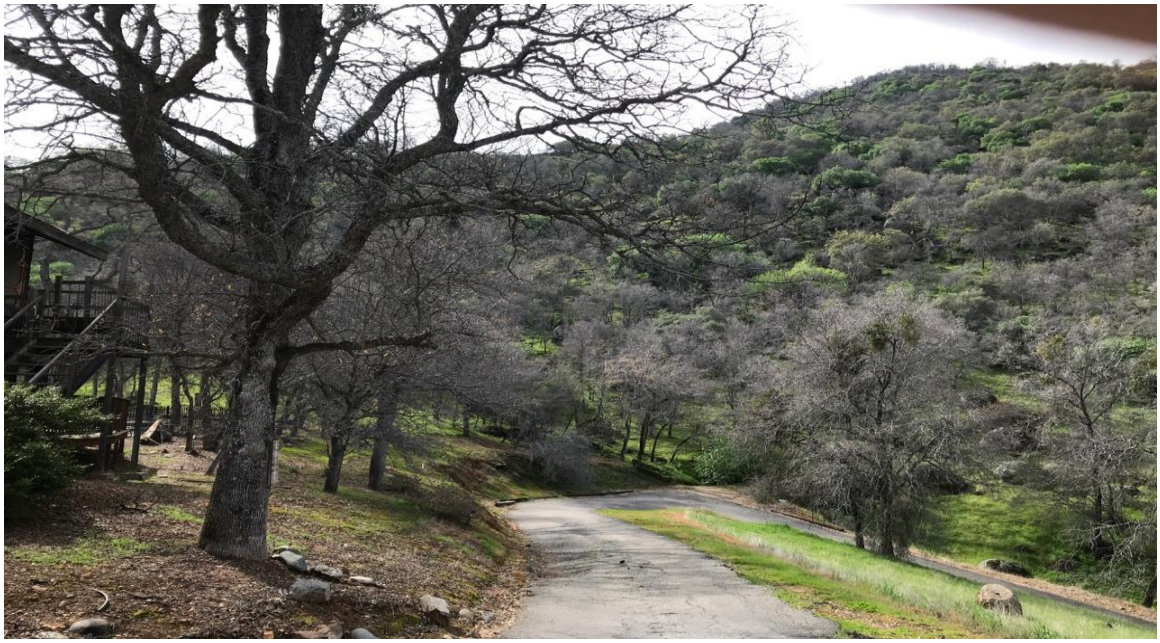
Photograph 4: Three Rivers Water Tank Replacement Project site from the east boundary, facing south.
GPS Coordinates: 36.4119, -118.9167.
Photograph taken by Karissa Denney on March 1, 2019.

Representative Photographs

Photograph 5: Three Rivers Water Tank Replacement Project site from the east boundary, facing west.
GPS Coordinates: 36.4119, -118.9167.
Photograph taken by Karissa Denney on March 1, 2019.

Photograph 6: Three Rivers Water Tank Replacement Project site from northwest corner, facing east.
GPS Coordinates: 36.4117, -118.9170.
Photograph taken by Karissa Denney on March 1, 2019.

Representative Photographs



Photograph 7: Three Rivers Water Tank Replacement Project site access road, facing west.
GPS Coordinates: 36.4115, -118.9171.
Photograph taken by Karissa Denney on March 1, 2019.

Photograph 8: Three Rivers Water Tank Replacement Project access road and overhanging oak, facing north.
GPS Coordinates: 36.4115, -118.9171.
Photograph taken by Karissa Denney on March 1, 2019.

Representative Photographs

Photograph 9: Three Rivers Water Tank Replacement Project site access road, facing east.
GPS Coordinates: 36.4117, -118.9170.
Photograph taken by Karissa Denney on March 1, 2019.

Photograph 10: Three Rivers Water Tank Replacement Project site access road, facing north.
GPS Coordinates: 36.4117, -118.9170.
Photograph taken by Karissa Denney on March 1, 2019.

Representative Photographs

Photograph 11: Three Rivers Water Tank Replacement Project, drainage culvert area, facing south.
GPS Coordinates: 36.4111, -118.9173.
Photograph taken by Karissa Denney on June 4, 2019.

Photograph 12: Three Rivers Water Tank Replacement Project, drainage culvert area, facing east.
GPS Coordinates: 36.4111, -118.9174.
Photograph taken by Karissa Denney on June 4, 2019.

Representative Photographs

ATTACHMENT C
SPECIAL-STATUS PLANT AND WILDLIFE SPECIES

Table Error! No text of specified style in document.**-1**
Special-Status Plant and Wildlife Species in the Regional Vicinity of the Project Site
Three Rivers Water Tank Replacement Project and nearby Drainage Culvert, Three Rivers, Tulare County, California

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Plants				
Allium abramsii Abram's onion	-/- 1B.2/-	Perennial bulbiferous herb; grows in granitic sand in the lower montane and upper montane coniferous forest; blooms from May to July; ranges in elevation from 2,903 to 10,006 feet.	No	The BSA is outside of the known elevation range for the species. The nearest CNDDB recorded occurrence (EONDX 86695) is located approximately 9.2-miles east of the BSA. This species was not observed during the surveys.
Brodiaea insignis Kaweah brodiaea	-/SE 1B.2/-	Perennial herb; occurs in cismontane woodland, meadows and seeps, valley and foothill grassland in granitic or clay soil; blooms from April to June; ranges in elevation from 492 to 4,593 feet.	Yes	Suitable habitat for this species is present in the BSA. The nearest CNDDB recorded occurrence (EONDX 5606) is located approximately 0.5-miles northeast of the BSA. This species was not observed during the surveys.
Calochortus coeruleus var. *westonii* Shirley Meadow's star tulip	-/- 1B.2/-	Perennial bulbiferous herb; occurs in granitic broadleafed upland forest, lower montane coniferous forest, and meadows and seeps; blooms from May to June; ranges in elevation from 4,921 to 6,906 feet.	No	The BSA is outside of the known elevation range for the species. The nearest CNDDB recorded occurrence (EONDX 12607) is located approximately 6.0-miles east of the BSA. This

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
				species was not observed during the surveys.
Calystegia malacophylla var. *berryi* Berry's morning glory	-/- 3.3/-	Perennial rhizomatous herb, occurs in chaparral and lower montane coniferous forests, blooms from July to August; ranges in elevation from 2,001 to 8,005 feet.	No	The BSA is outside of the known elevation range for the species. The nearest CNDDB recorded occurrence (EONDX 80271) is located approximately 6.5-miles southeast of the BSA. This species was not observed during the surveys.
Cinna bolanderi Bolander's woodreed	-/- 1B.2/-	Perennial herb; occurs in mesic soils, stream sides, wetlands, meadows and seeps in upper montane coniferous forest; blooms from July to September; ranges in elevation from ~5,479 – 8,005 feet.	No	The BSA is outside of the known elevation range for the species. The nearest CNDDB recorded occurrence (EONDX 44672) is located approximately 13.3-miles northeast of the BSA. This species was not observed during the surveys.
Clarkia springvillensis Springville clarkia	FT/SE 1B.2/-	Annual herb; occurs in granitic soils of chaparral, cismontane woodland, and valley and foothill grasslands; blooms from May to June; ranges in elevation from 800 to 4,000 feet.	Yes	Suitable habitat for this species is present in the BSA. The nearest CNDDB recorded occurrence (EONDX 18825) is located approximately 3.7-miles northeast of the BSA. This species was not observed during the surveys.
Cuscuta jepsonii Jepson's dodder	-/- 1B.2/-	Annual vine (parasitic); host species are *Ceanothus diversifolius and C. prostrates;* occurs in broad-leafed upland forest, lower	No	The BSA is outside of the known elevation range for the species. The nearest

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		and upper montane coniferous forest; California endemic; blooms (June) July to September; ranges in elevation from ~3,937 to 7,546 feet.		CNDDB recorded occurrence (EONDX 98659) is located approximately 9.0-miles east of the BSA. This species was not observed during the surveys.
Delphnium purpusii rose-flowered larkspur	-/- 1B.3/-	Annual herb; occurs in chaparral, cismontane woodland and pinyon/juniper woodland, often on rocky, and carbonate substrates; blooms from April to May; ranges in elevation from 984 to 4,396 feet.	No	Suitable habitat for this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 80458) is located approximately 13.7-miles east of the BSA. This species was not observed during the surveys.
Delphnium recurvatum recurved larkspur	-/- 1B.2/-	Perennial herb; occurs in alkaline conditions in chenopod scrub, cismontane woodland, and valley and foothill grassland; occurs throughout Central Valley and Coast Ranges from Butte County south; few occurrences in Antelope Valley; blooms from March to June; ranges in elevation ~10 to 2,591 feet; threatened by agriculture and competition from non-native plants.	No	Suitable habitat for this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 117097) is located approximately 5.8-miles southwest of the BSA. This species was not observed during the surveys.
Diplacus pictus Calico monkeyflower	-/- 1B.2/-	Annual herb; occurs in broadleafed upland forest and cismontane woodlands in bare, sunny, shrubby areas around granite outcrops and disturbed areas; blooms from March to May; ranges in elevation from 443 to ~4,101 feet.	Yes	Marginal habitat for this species is present from the BSA. The nearest CNDDB recorded occurrence (EONDX 64927) is located approximately 5.8-miles southwest of the BSA. This species was not observed during the surveys.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Dudleya cymosa ssp. *coastatifolia* Pierpoint Springs dudleya	-/- 1B.2/-	Perennial herb; occurs in carbonate chaparral and cismontane woodland; blooms from May to July; ranges in elevation from 4,708 to 5,249 feet.	No	The BSA is outside of the known elevation range for the species. The nearest CNDDB recorded occurrence (EONDX 20432) is located approximately 7.9-miles northeast of the BSA. This species was not observed during the surveys.
Eriogonum nudum var. *murinum* mouse buckwheat	-/- 1B.2/-	Perennial herb; occurs in chaparral, cismontane woodland, valley and foothill grassland; micro-habitat includes dry sandy loam slopes in the Kaweah drainage; blooms from June to November; ranges in elevation from 1,200-3,700 feet.	Yes	Suitable habitat for this species is present in the BSA. The nearest CNDDB recorded occurrence (EONDX 20993) is located approximately 0.7-miles northeast of the BSA. This species was not observed during the surveys.
Eryngium spinosepalum spiny-sealed button-celery	-/- 1B.2/-	Annual or perennial herb; blooms April-June; occurs in vernal pools and moist areas in valley and foothill grasslands; elevation ~260-3200 feet; threatened by development, grazing, road maintenance, hydrological alterations, and agriculture; documented primarily in foothills of Sierra Nevada with scattered occurrences on Central Valley floor and western foothills and lower mountains.	No	Suitable habitat for this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 29004) is located approximately 1.0-mile northwest of the BSA. This species was not observed during the surveys.
Erythranthe norrisii Kaweah monkey flower	-/- 1B.3/-	Annual herb; blooms March to May; occurs in chaparral and cismontane woodlands with limestone-based soils; specifically, marble outcrops, near seeps, and areas of cliff covered with calcium carbonate, generally in shade; ranges in elevation from 1,965 to 4,265 feet.	No	The BSA is outside of the known range elevation for the species. The nearest CNDDB recorded occurrence (EONDX 17498) is located

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
				approximately 0.7-miles northeast of the BSA. This species was not observed during the surveys.
Fritillaria striata Striped adobe lily	-/ST 1B.1/-	Perennial herb; blooms from February to April; occurs in cismontane woodland and valley and foothill grassland on adobe soil; ranges in elevation from 442 and 4,773 feet.	Yes	Suitable habitat for this species is present in the BSA. The nearest CNDDB recorded occurrence (EONDX 64958) is located approximately 9.8-miles southwest of the BSA and is presumed extirpated. This species was not observed during the surveys.
Gyceria grandis American manna grass	-/- 2B.3/-	Perennial rhizomatous herb; blooms from June to August; occurs in bogs and fens, meadows and seeps, and marshes and swamps (streambank and lake margins); ranges in elevation from 49 to 6,496 feet.	No	Suitable habitat for this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 81386) is located approximately 13.3-miles north of the BSA. This species was not observed during the surveys.
Helianthus winteri Winter's sunflower	-/- 1B.2/-	Perennial herb; blooms from January to December; occurs in openings on relatively steep south-facing slopes, granitic, often rocky, often roadsides, cismontane woodland, valley and foothill grassland; ranges in elevation 410 to 8,415 feet.	No	Suitable habitat for this species is absent from the BSA. The nearest CNDDB recorded occurrence 110868) is located approximately 10.0-miles northwest of the BSA. This species was not observed during the surveys.
Iris munzii Munz's iris	-/- 1B.3/-	Perennial rhizomatous herb; occurs in cismontane woodland; blooms from (March)	No	Suitable habitat for this species is absent from the

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		April to May; ranges in elevation from 1,000 to 2,624 feet.		BSA. The nearest CNDDB recorded occurrence (EONDX 111310) is located approximately 4.0-miles northeast of the BSA. This species was not observed during the surveys.
Leptosiphon serrulatus Madera leptosiphon	-/- 1B.2/-	Annual herb; occurs in cismontane woodland and lower montane coniferous forest; blooms from April to May; ranges in elevation from 984 to 4,265 feet.	Yes	The nearest CNDDB recorded occurrence (EONDX 20487) is located approximately 1.1-miles north of the BSA. This species was not observed during the surveys.
Mielichhoferia elongata elongate copper moss	-/- 4.3/-	Moss; occurs on metaphoric rock, usually vernal mesic areas, often on roadsides, broad-leafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, and subalpine coniferous forest; ranges in elevation from 0 to 6,430 feet.	No	Suitable habitat for this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 71748) is located 10.0-miles northeast of the BSA. This species was not observed during the surveys.
Orcuttia inaequalis San Joaquin Valley Orcutt grass	FT/SE 1B.1/-	Annual herb; blooms April to September; occurs in vernal pools; elevation ~32-2,500 feet; threatened by agricultural, development, overgrazing, channelization, and non-native plants; documented primarily on eastern Central Valley floor and foothills from Visalia north.	Yes	Suitable habitat for this species is present in the BSA. The nearest CNDDB recorded occurrence (EONDX 22389) is located approximately 10-miles northwest of the BSA. This species was not observed during the surveys.
Orthotrichum holzingeri	-/- 1B.3/-	Moss; occurs on rock in and along streams in cismontane woodland, lower montane	No	The BSA is outside of the known elevation range for

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Holzinger's orthotrichum moss		coniferous forest, pinyon and juniper woodland, and upper montane coniferous forest; ranges in elevation from 2,345 to 5,905 feet.		the species. The nearest CNDDB recorded occurrence (EONDX 94913) is located approximately 13.3-miles northeast of the BSA. This species was not observed during the surveys.
Pseudobahia peirsonii San Joaquin adobe sunburst	FT/SE 1B.1/-	Annual herb; blooms March-April; occurs in cismontane woodland, valley and foothill grasslands, and usually adobe clay; elevation from ~295-2,625 feet; more than half of known occurrences are very small; seriously threatened by agriculture, grazing, development, non-native plants, road construction and maintenance, and flood control activities; possibly threatened by road maintenance.	Yes	Suitable habitat for this species is present in the BSA. The nearest CNDDB recorded occurrence (EONDX 32159) is located approximately 6.6-miles west of the BSA. This species was not observed during the surveys.
Ribes menziesii var. *ixoderme* aromatic canyon gooseberry	-/- 1B.2/-	Perennial deciduous shrub; occurs in chaparral and cismontane woodland; blooms in April; ranges in elevation from 2,000 to 3,805 feet.	No	The BSA is outside of the known elevation range for the species. The nearest CNDDB recorded occurrence (EONDX 47181) is located approximately 8.5-miles east of the BSA. This species was not observed during the surveys.
Ribes tularense Sequoia gooseberry	-/- 1B.3/-	Perennial deciduous shrub; occurs in lower and upper montane coniferous forest; blooms in May; ranges in elevation from 4,921 to 6,807 feet.	No	The BSA is outside of the known elevation for the species. The nearest CNDDB recorded occurrence (EONDX 13925) is located

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
				approximately 5.6-miles east of the BSA. This species was not observed during the surveys.
Tuctoria greenei Greene's tuctoria	FT/- 1B.1/-	Annual herb; blooms May-July, sometimes September; occurs in small or shallow vernal pools, primarily on Anita clay and Tuscan loam soils; elevation ~100 to 3510 feet; threatened by agriculture, urbanization, overgrazing, and habitat fragmentation; documented on Central Valley floor and surrounding foothills; many occurrences presumed extirpated.	Yes	Suitable habitat for this species is present in the BSA. The nearest CNDDB recorded occurrence (EONDX 64958) is located approximately 9.0-miles west of the BSA and is presumed extirpated. This species was not observed during the surveys.
Invertebrates				
Branchinecta lynchi Vernal pool fairy shrimp	-/FT -/-	Occur a variety of vernal pool habitats that range from small, clear pools to large, turbid and alkaline pools; more common in pools less than 0.05 acre, typically as part of larger vernal pool complexes; adults active from early December to early May; pools must hold water for at least 18 days, the minimum to complete the life cycle if temperatures are optimal; eggs laid in spring and persist through dry season as cysts; current California distribution includes the Central Valley and coast ranges; threatened by habitat loss, degradation, and fragmentation, and interference with vernal pool hydrology.	No	Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 17097) is located approximately 8.7-miles southwest of the BSA.
Desmocerus californicus dimorhus Valley elderberry longhorn beetle	FT/- -/-	Closely associated with elderberry shrubs (*Sambucus* sp.) for food and reproduction; usually along rivers and streams; eggs laid on bark, and larvae hatch and burrow into the stems; adults each elderberry leaves and	No	Habitat to support this species is absent from the BSA. No elderberry shrubs were present on site during the surveys. Nearest

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		flowers; stem diameter must be minimum one inch; exit holes in stems are most common methods for identification; ranges from southern Shasta County to Fresno County.		recorded CNDDB occurrence, possibly extirpated, (EONDX 64451) is approximately 3.0-miles north of the BSA.
Fish				
Hypomesus transpacificus Delta smelt	FT/SE -/-	Small fish endemic to the San Francisco Estuary and the larger Sacramento-San Joaquin Delta; moves between freshwater and low salinity water throughout year; most spawning happens in tidally influenced backwater sloughs and channel edgewaters; historical distribution did not extend beyond Mossdale on the San Joaquin River and Sacramento on the Sacramento River.	No	Habitat to support this species is absent from the BSA. There is no recorded CNDDB occurrence for this species within 10-miles of the BSA.
Amphibians				
Ambystoma californiense California tiger salamander	FT/- -/-	Occurs in ephemeral pools or ponds that mimic them, and that remain inundated for 12 weeks or more; can occupy artificial ponds (ranch stock ponds) if ponds are allowed to go dry in the summer; requires nearby upland habitat containing small mammal burrows or crevices that provide refugia; restricted to grasslands and low foothills; lives underground most of the year.	No	Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 408) is located approximately 18.3-miles northwest of the BSA.
Rana boylii Foothill yellow-legged frog (Southern Sierra Clade)	-/SE -/-	Found in streams and rivers with rocky substrates and open, sunny banks, and sometimes isolated pools, vegetation backwaters, and deep, shaded spring-fed pools; forests, chaparral, woodlands; lays eggs on downstream side of rocks in shallow, slow-moving water; current distribution includes north coast, northern Sierra Nevada, foothills	No	Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 98967) is located approximately 1.0-mile northeast of the BSA.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		of southern Sierra Nevada mountains (almost extinct); elevation from sea level to 6,000 feet.		
Rana draytonii California red-legged frog	FT/- -/-	Occurs primarily in and near ponds in forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover; mostly in lower elevations; breeding habitat may be permanent or ephemeral; estivates in animal burrows or other moist refuges when ephemeral habitat is dry; endemic to California and northern Baja California; found throughout coastal California from Mendocino County south; inland distribution includes northern Sacramento Valley and foothills of Sierra Nevada south to Tulare County (possibly Kern County); elevation from sea level to 5,000 feet.	No	Habitat to support this species is absent from the BSA. There are no CNDDB recorded occurrences within 10-miles of the BSA.
Rana muscosa Southern mountain yellow-legged frog	FE/SE -/-	This species occurs in lakes, ponds, meadow streams, isolated pools, sunny riverbanks in the southern Sierra Nevada Mountains. It inhabits rocky streams in narrow canyons and in the chaparral belt in the mountains of southern California. It can be found in elevation ranges from 984 to over 12,000 feet in elevation.	No	Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 76567) is located approximately 6.0-miles northeast of the BSA.
Spea hammondii Western spadefoot	-/- -/SSC	Species relies on vernal pools for breeding where predators cannot become established; open areas with sand or gravelly soils in a variety of habitats: grasslands, coastal scrub, woodlands, chaparral, sandy washes, lowland river floodplains, alkali flats, foothills, and mountains; endemic to California and northern Baja California; distribution from Redding south throughout Central Valley and foothills,	No	Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 117554) is located approximately 5.7-miles northwest of the BSA.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		throughout South Coast Ranges into coastal southern California to Transverse mountains and Peninsular mountains; elevation from sea level to 4,500 feet.		
Reptiles				
Anniella pulchra Northern California legless lizard	-/- -/SSC	This species occurs in moist warm loose soils with vegetative cover. Is found in beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces. This species requires moisture in the soil.	No	Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 107009) is located approximately 3.0-miles north of the BSA.
Actinemys [=Emys] marmorata Western pond turtle	-/- -/SSC	Highly aquatic and diurnally active; found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with vegetation and rocky/muddy bottoms; wide variety of habitats; need basking areas near water (logs, rocks, vegetation mats, banks); may enter brackish water and even seawater; digs nest on land near water; range from north of San Francisco Bay area south, including Central Valley.	No	Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 647) is located approximately 4.0-miles northwest of the BSA.
Birds				
Accipiter gentilis Northern goshawk	-/- -/SSC	Prefers mature and old-growth forests with relatively high canopy closures; favors large trees to moderate slopes with open understories for nesting; builds nests in either coniferous, deciduous, or mixed-pine forests; preferring to perch and scan for prey followed by quick bursts of speed to capture their prey.	No – Nesting Yes - Foraging	No suitable nesting habitat is present on the BSA; however, suitable foraging habitat is present. The nearest CNDDB recorded occurrence (EONDX 26553) is located 13.0-

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
				miles northeast of the BSA. No Northern goshawk or their sign was observed during the surveys.
Aechmophorus clarkii Clark's grebe	-/- -/BCC	A large waterbird that is rarely found away from aquatic habitats. Most of California, except for the coast, can be a breeding ground for the species if freshwater is nearby. Creates floating nests in large freshwater lakes and marshes with emergent vegetation (i.e. reeds and rushes). Forages for fish, salamanders, crustaceans, marine worms, and aquatic insects and larvae.	No	No suitable nesting or foraging habitat is present on the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. No Clark's grebe or their sign was observed during the surveys.
Agelaius tricolor tricolor blackbird	-/ST -/SSC	Colonial breeder that prefers freshwater, emergent wetlands with tall, dense cattails or tules, but also thickets of willow, blackberry, wild rose, and tall herbs; breeding colonies are minimum ~50 pairs; forages in pastures, grain fields, and similar habitats near breeding areas.	No – Nesting Yes - Foraging	No suitable nesting habitat is present on the BSA; however, suitable foraging habitat is present. The nearest CNDDB recorded occurrence (EONDX 98857) is located approximately 5.4-miles west of the BSA. No tricolored blackbird or their sign was observed during the surveys.
Aquila chrysaetos Golden eagle	-/- -/BCC	Occurs in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower and upper montane coniferous forests, pinon &	No – Nesting Yes - Foraging	No suitable nesting habitat is present on the BSA; however, suitable foraging habitat is

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		juniper woodlands, valley & foothill grassland; prefers rolling foothills, mountain areas, sage-juniper flats, and desert for foraging; nests in cliff-walled canyons and isolated large trees in open areas; elevational range from sea level to 11,500 feet; may desert nest early in incubation phase if disturbed by humans.		present. There are no CNDDB recorded occurrences within 10-miles of the BSA. No golden eagle or their sign was observed during the surveys.
Ardea herodias great blue heron	-/- -/SSC	Occurs in shallow estuaries, fresh and saline emergent wetlands, rivers, streams, lake and marine shores, croplands, pastures, and mountains above foothills; primary prey is small fish, but will consume rodents, amphibians, snakes, lizards, invertebrates, and birds; usually nests in colonies in tops of secluded large snags or live trees; fairly common year-round throughout most of California.	No – Nesting Yes - Foraging	No suitable nesting habitat is present on the BSA; however, suitable foraging habitat is present. The nearest CNDDB recorded occurrence (EONDX 25973) is located approximately 5.7-miles west of the BSA. No great blue heron or their sign was observed during the surveys.
Baeolophus inornatus oak titmouse	-/- -/BCC	They live in a restricted range, from southwest Oregon to northwest Baja California. They occur in warm, open, dry oak or oak-pine woodlands using scrub oaks or other brush within distance of woodlands. They eat seeds, other plant materials, insects, and invertebrates. The nest is built in a tree cavity up to40-feet off the ground, occasionally they will use a nest box.	Yes	Suitable nesting and foraging habitat is present within the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.
Calpte costae Costa's hummingbird	-/- -/BCC	Occurs in Sonoran and Mojave Desert scrub, coastal California chaparral and sage scrub,	No	No suitable foraging or nesting habitat is

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		and deciduous forest and desert scrub in Baja California, Mexico. Breeding occurs east of the Sierras. Feeds on nectar and small flying insects. Nests are built in relatively open areas without much vegetation cover approximately 3-7 feet above the ground.		present on the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.
Carduelis lawrencei Lawrence's goldfinch	-/- -/BCC	Occurs in dry grassy slopes with weed patches, chaparral, and open woodlands; prefers to nest and forage in coastal scrub, pinyon pine-juniper woodlands, and streambed habitats; primarily feeds on plant seeds and only rarely eats insects.	No	No suitable nesting or foraging habitat is present on the BSA. There are no CNDDB recorded occurrences within 10-miles of the BSA. No Lawrence's goldfinch or their sign was observed during the surveys.
Chamaea fasciata wrentit	-/- -/BCC	Is a year-round resident in coastal scrub and chaparral along the West Coast and lives in dense shrublands in the foothills and desert regions of California. Forage on beetles, scale insects, spiders, fruits, and seeds (i.e. elderberry, snowberry, blackberry, and twinberry). Nests are built in dense vegetation approximately 1 to 9 feet above the ground.	Yes	Suitable foraging and nesting habitat is present in the vicinity of the BSA. There are no CNDDB recorded occurrences within 10-miles of the BSA. No wrentit or their sign was observed during the surveys.
Cypseloides niger black swift	-/- -/SSC	Documented in California at elevations ranging from sea level to 8,500 feet. Can nest singly or in colonies on cliff ledges and behind	No – Nesting Yes - Foraging	No suitable nesting habitat is present on the BSA; however, suitable foraging habitat is

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		waterfalls. Forages for insects in midair in open forests and open areas.		present. The nearest CNDDB recorded occurrence (EONDX 25430) is located approximately 11.8-miles northeast of the BSA. No black swift of their sign was observed during the surveys.
Geothlypis trichas sinuosa common yellowthroat	-/- -/BCC	This species is found in open areas with thick, low vegetation, ranging between marsh to grassland to open pine forest. Nesting habitat is found throughout most of California except for the central and southern coastline and southeastern California where nesting is scarce. Nests are built in marshy areas and are found on or near the ground and supported sedges, grasses, reeds, or cattails. They forage on or near the ground eating insects and spiders from leaves, branches, flowers, and in low vegetation.	No – Nesting Yes - Foraging	No suitable nesting habitat is present in the BSA. The BSA may be used for foraging purposes. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.
Gmnogyps californianus California condor	FT/CE -/FP	Documented in southern and northern California, northern Baja California, Oregon, southern British Columbia, Arizona, Utah, and Nevada where the three states come together; rare visitor to the San Joaquin Valley; found at elevation ranges from sea level to 9,000 feet; main characteristics sought for a nest site are 1)partially sheltered from the weather and 2) located on a cliff, steep slope, or tall tree; nest are located between 2,000 to 6,500 feet in elevation; threatened by lead poisoning, microtrash ingestion, collisions, electrocution	No – Nesting Yes - Foraging	No suitable nesting habitat is present in the BSA. The BSA may be used for foraging purposes. The nearest CNDDB recorded occurrence (EONDX 14754) is located approximately 0.7-miles south of the BSA, indicating that California

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		by powerlines, drownings, and predation; more recent threats have been from shootings.		condor roost in this area. No California condor or their sign was observed during the surveys.
Haliaeetus leucocephalus Bald eagle	-/CE -/FP	Permanent resident; occurs in forested habitats near water; restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity counties; other scattered breeding occurrences throughout California; not found in high Sierra Nevada; common winter migrant near inland waters in southern California; feeds primarily on fish by swooping from hunting perches; will wade into shallow water to pursue fish; will pursue displaced small mammals in flooded fields; scavenges dead fish and other animals; nests in large, old-growth, or dominant live tree with open branch work near open water; nests most often in stands with less than 40% canopy, usually in largest tree in stand.	No – Nesting Yes – Foraging	No suitable nesting habitat is present in the BSA. The BSA may be used for foraging purposes. The nearest CNDDB recorded occurrence (EONDX 102175) is located approximately 3.0-miles west of the BSA. No bald eagles or their sign was observed during the surveys.
Melanerpes lewis Lewis's woodpecker	-/- -/BCC	Occurs in open woodlands and breeds in open ponderosa pine forests or burned forests with dead trees (snags). They forage on insects, nuts, and fruits. Nest in crevices or holes that were created by other woodpeckers or created naturally in snags (i.e. cottonwood, ponderosa, pine, white pine).	No	No nesting or foraging habitat is present on the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. No Lewis's woodpecker or their sign was observed during the surveys.
Melospiza melodia song sparrow	-/- -/BCC	Is a year-round resident in California, except for southeastern California. This species is found in a variety of areas including open habitats and deciduous or mixed woodlands.	No – Nesting Yes - Foraging	No nesting habitat is present since the species nests outside of

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		They forage on insects and other invertebrates in the summer, and seeds and fruit all year around. Nest sites are typically hidden in grasses or weeds either on the ground or can be up placed up to 15-feet above the ground often near a source of water.		California. Suitable foraging habitat is present in the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.
Picoides nuttallii Nuttall's woodpecker	-/- -/BCC	A California year-round resident in oak woodlands at elevation ranges between 900-5,500 feet. They forage on beetles, beetle larvae, ants, termites found on oaks, cottonwood, and willow. Occasionally, eating fruit from poison oak, blackberry, and elderberry. Nests are created in holes of dead trucks or limbs of willows, cottonwoods, sycamores, oaks, and alder.	Yes	There is suitable nesting and foraging habitat present within the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.
Pipilo maculatus clementae spotted towhee	-/- -/BCC	Is a year-round resident in California, except for southeastern California. This species is found in areas with dense shrub cover and leaf litter such as dry thickets, forest edges, shrubby backyards, chaparral, and canyon bottoms. They forage on leaf litter insects, berries, acorns, seeds, grasshoppers, and spiders. Nesting occurs outside of California. The nest is built on the ground or near it in areas where there is fair exposure over areas with dense shrub cover.	No – Nesting Yes - Foraging	No nesting habitat is present since the species nests outside of California. Suitable foraging habitat is present in the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Toxostoma redivivum California thrasher	-/- -/BCC	Occurs in shrubby habitat only found in California and a small part of Baja California. In Key plant species include coffeeberry, manzanita, coyotebrush, California buckwheat, California sage, holly-leaved cherry, and toyon. Forage mostly for insects and other arthropods. They build nests in dense shrubbery approximately 7-feet above the ground.	Yes	Suitable nesting and foraging habitat is present on the BSA. There are no CNDDB recorded occurrence within 10-miles of the BSA. This species was not observed during the surveys
Mammals				
Antozous palidus pallid bat	-/- -/SSC	Occurs throughout California in wide variety of habitats: grasslands, shrublands, woodlands, forests up through mixed conifer; most common in open, dry habitats with rocky areas for roosting; yearlong resident; feeds mainly on insects and arachnids on the ground or by gleaning; day roosts in caves, crevices, mines, and occasionally hollow trees and buildings, including bridges; night roosts in more open sites; maternity colonies form early April with young flying by July or August; needs water; very sensitive to disturbance of roosting sites.	No	No roosting or foraging habitat is present on the BSA. The nearest CNDDB recorded occurrence (EONDX 66778) is located approximately 9.3-miles southeast of the BSA. No pallid bat or their sign was observed during the surveys.
Corynorhinus townsendii Townsend's big eared bat	-/- -/SSC	This species occurs in coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Distribution is correlated with the availability of caves and cave-like roosting habitat, occurring in areas dominated by exposed, cavity forming rock and/or historic mining districts. It prefers open roosting areas in large areas and do not tuck themselves into cracks and crevices like many bat species do.	No	No roosting or foraging habitat is present on the BSA. The nearest CNDDB recorded occurrence (EONDX 94344) is located approximately 7.1-miles northeast of the BSA. No Townsend's big-eared bat or their

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
				sign was observed during the surveys.
Euderma maculatum spotted bat	-/- -/SSC	This species occurs in a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. It feeds over water and along washes. It also feeds almost entirely on moths. This species needs rock crevices in cliffs or caves for roosting.	No	No roosting or foraging habitat is present on the BSA. The nearest CNDDB recorded occurrence (EONDX 66365) is located approximately 13.0-miles northeast of the BSA. No spotted bat or their sign was observed during the surveys.
Eumops perotis californicus Western mastiff bat	-/- -/SSC	Occurs in open, semi-arid to arid habitats throughout southeastern San Joaquin Valley and Coast Ranges from Monterey County southward; also in urban areas; feeds on insects captured in flight; roosts in cliff faces, high buildings, trees, and tunnels; nursery roosts most often in tight rock crevices or crevices in buildings; maternity season begins in March with young flying on their own by September.	No	No roosting or foraging habitat is present on the BSA. The nearest CNDDB recorded occurrence (EONDX 66508) is located approximately 2.0-miles north of the BSA. No western mastiff bat or their sign was observed during the surveys.
Gulo gulo California wolverine	FPT/ST -/FP	This species occurs in tundra, remote mountains, and boreal forests. It generally inhabits areas at or above timberline, but will use lower-elevation forests during the winter. Habitat requirement on a landscape scale are currently unknown and may differ substantially between populations. It is most common in regions with snow-covered ground	No	The BSA is within the known range of the species; however, no suitable habitat is present on the BSA. The nearest CNDDB recorded occurrence (EONDX

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		throughout the winter. It is morphologically well suited to hunting in the snow and may rely heavily on this advantage during severe winters.		23269) is located approximately 5.7-miles southeast of the BSA. No wolverine or their sign was observed during the surveys.
Pekania pennanti Fisher-West Coast	-/ST -/SSC	This species occurs in intermediate to large tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. It uses cavities, snags, logs, and rocky areas for cover and denning. It needs large areas of mature, dense forest.	No	The BSA is outside the known range of the species. No suitable habitat to support this species is present on the BSA. The nearest CNDDB recorded occurrence (EONDX 72520) is located approximately 5.6-miles east of the BSA. No fisher or their sign was observed during the surveys.
Vulpes macrotis mutica San Joaquin Kit Fox	FE/ST -/-	Endemic to the Central Valley; found primarily in San Joaquin Valley, Carrizo Plain, Salinas Valley, Cuyama Valley, and other small valleys in western foothills; occurs in arid to semi-arid grasslands, open shrublands, savannahs, and grazed lands with loose-textured soils; highly adaptable and documented in urban developed areas; uses burrows year-round for shelter, escape from predators, and rearing young; will use man-made structures, such as pipes, for denning; feeds primarily on small mammals, but will also consume birds, reptiles, insects, and scavenge for human food;	No	The BSA is outside the known range of the species. Habitat to support this species is absent from the BSA. The nearest CNDDB recorded occurrence (EONDX 70610) is located approximately 9.0-miles west of the BSA. No San Joaquin kit fox or their

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		intensively-maintained agricultural areas avoided; threatened by habitat loss and fragmentation, vehicle strikes, and disease; current mange outbreak in urban population in Bakersfield and in nearby natural areas.		sign was observed during the surveys.
Vulpes vulpes necator Sierra Nevada red fox	FC/ST -/-	This species occurs in forest openings, meadows, and barren rocky areas in alpine and subalpine zones; preferred habitat in California apparently is red fir and lodgepole pine forests and alpine fell-fields.	No	The BSA is outside the known range of this species. The nearest CNDDB recorded occurrence (EONDX 23729) is located approximately 12.5-miles northeast of the BSA. No Sierra Nevada red fox or their sign was observed during the surveys.

CRPR (California Rare Plant Rank):
- 1A Presumed Extinct in California
- 1B Rare, Threatened, or Endangered in California and elsewhere
- 2A Plants presumed extirpated in California, but more common elsewhere
- 2B Plants Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension:
- .1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Fairly endangered in California (20-80% occurrences threatened)
- .3 Not very endangered in California (<20% of occurrences threatened)

BCC	USFWS Birds of Conservation Concern
FE	Federally Endangered
FT	Federally Threatened
FC	Federal Candidate Species
FS	Federally Sensitive
SE	State Endangered
ST	State Threatened
SC	State Candidate
SS	State Sensitive
SSC	State Species of Special Concern
SFP	State Fully Protected
SR	State Rare
WL	Watch List

Appendix C
Cultural Resources

TECHNICAL MEMORANDUM

Date: March 5, 2018

Project: Cultural resources records search for the Three Rivers Tank Replacement Project Tulare County, CA

To: Jaymie Brauer

From: Robert Parr, MS, RPA, Senior Archaeologist

Subject: Cultural Resources Records Search Results (RS#19-078)

Background

A cultural resources records search (RS #19-078) was conducted at the Southern San Joaquin Valley Information Center, CSU Bakersfield for the Three Rivers Tank Replacement Project in Three Rivers, Tulare County, California. A Sacred Land File search and Tribal Consultation request was provided by the Native American Heritage Commission. The results of that request is included with this memo. The purpose of the search was to determine whether any known cultural resources or previously conducted cultural resource surveys were located on or near the proposed project.

Project Description

The project will include the replacement of a 150,000-gallon tank with the installation of two, 100,000-gallon water storage tanks. The installation of one water storage tank will be in adjacent to an existing tank, which will be subsequently demolished and replaced with a new tank.

Project Location

The Project is located in Tulare County, California (Figure 1). The Project site is within Section 35, Township 17 South, Range 28 East, Mount Diablo Base and Meridian, and the Kaweah U.S. Geological Survey (USGS) 7.5- minute topographic quadrangle (Figure 2). The project is located on an undeveloped 0.3-acre portion of at a residential lot located at 40707 Terminus Drive in Three Rivers, California (APN 068-230-003-000; Figure 3). The Project site is approximately 10-miles east of Woodlake, California, on previously disturbed property owned by SKMWC, which is surrounded by a residential neighborhood.

Results

A cultural resources records search (RS #19-124) was conducted at the Southern San Joaquin Valley Information Center, California State University- Bakersfield.

The records search covered an area within one half mile of the project site and included a review of the *National Register of Historic Places (NRHP), California Points of Historical Interest*,

California Registry of Historic Resources (CRHR), California Historical Landmarks, California State Historic Resources Inventory, and a review of cultural resource reports on file.

The records search indicated that the subject property had never been surveyed for cultural resources and it is not known if any exist there. Seven cultural resources studies have been conducted within a ½ mile of the project (Smithsonian Institution 1948; Elsasser 1966; Meighan et al. 1988; Murphy 1990; Weinberger 1991; Jackson and O'Neill 2005; Parr 2008). Three cultural resources have been recorded within 0.5 mile of the project. All three are prehistoric bedrock milling features (P-54-1612; P-54-1622; P-54-3393).

No other cultural surveys or resources have been recorded within 0.5 miles of the Three Rivers Tank Replacement Project.

Conclusions

A records search of site files and maps was conducted at the Southern San Joaquin Valley AIC and a search of the NAHC Sacred Lands File was completed. No cultural resources were known or had been recorded within the project area. No Native American sacred sites or cultural landscapes had been identified within or immediately adjacent to the study area.

Based on the results of cultural records search findings and the lack of historical or archaeological resources previously identified within a 0.5-mile radius of the proposed project, the potential to encounter subsurface cultural resources is minimal. Additionally, construction of the project construction activities would be conducted within the existing facility. The potential to uncover subsurface historical or archaeological deposits is would be considered unlikely. Construction of the Project does not have the potential to result in significant impacts or adverse effects to historical resources or historic properties, and a determination of no effect is recommended.

It is recommended, however, that an archaeologist be contacted in the unlikely event that cultural resources are uncovered during the construction.

References

(all reports on file at the Southern San Joaquin Valley Information Center, California State University, Bakersfield)

Elsasser, Albert B.
1966 Terminus Reservoir. U.S. Army Corps of Engineers, Sacramento, CA. (TU-120)

Jackson, Thomas L., and Mary M. O'Neill
2005 Reconnaissance Report for the Infrastructure Ploe Replacement Project on Six Circuits on Private Lands in Tulare County, California. Submitted to Southern California Edison Company, Rosemead, CA. (TU-1258)

Meighan, Clement W., Brian D. Dillon, Douglas V. Armstrong, Paul Farnsworth, David S. Whitley, Elliot A. Gehr and Leslie Conton
1988 Lake Kaweah Intensive Cultural Resources Survey. Institute of Archaeology, Los Angeles, CA. (TU-378)

Murphy, Peggy
1990 An Archaeological Assessment of the 3.6-Acre Grant Property, Three Rivers, Tulare County, California. Report prepared for Dave Learned Real Estate, Three Rivers, CA. (TU-397)

Parr, Robert E.
2008 Cultural Resources Assessment for the Replacement of Four Deteriorated Power Poles on the Southern California Edison Company Pawley, Terminus, and Salt Creek 12 kV Circuits, Three Rivers, Tulare County, California. Submitted to Southern California Edison Company, Rosemead, CA. (TU-1359)

Smithsonian Institution
1948 Appraisal of the Archaeological Resources of Terminus Reservoir, Tulare County, California. Report prepared by Pacific Coast Area River Basin Surveys, Smithsonian Institution. (TU-84)

Weinberger, Gay
1991 Cultural Resource Assessment of Bullene Property. Report prepared fro Danny and Sharon Bullene, Visalia, CA. (TU-605)

190081

ATTACHMENT A
PROJECT FIGURES

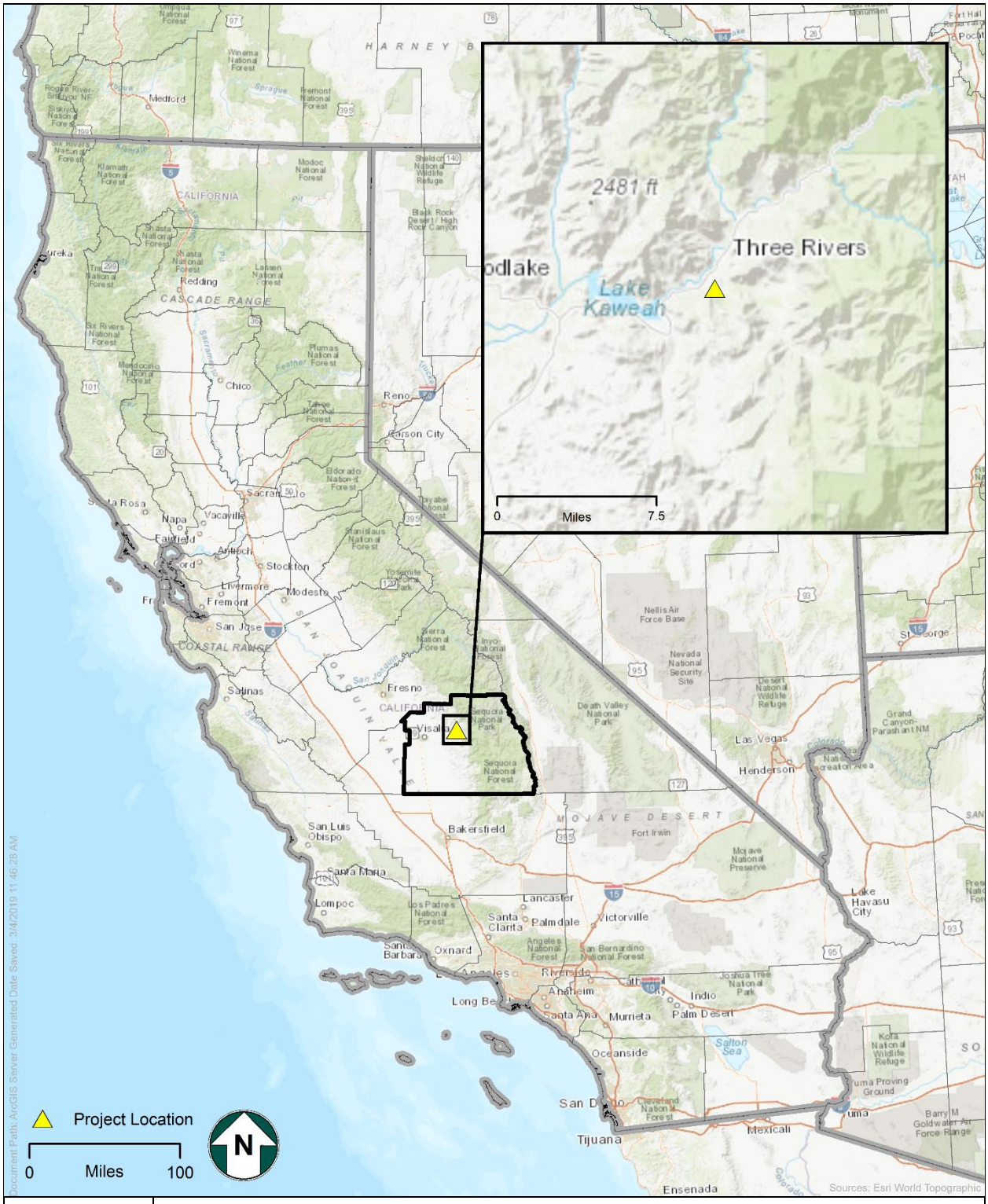


Figure 1
Regional Location

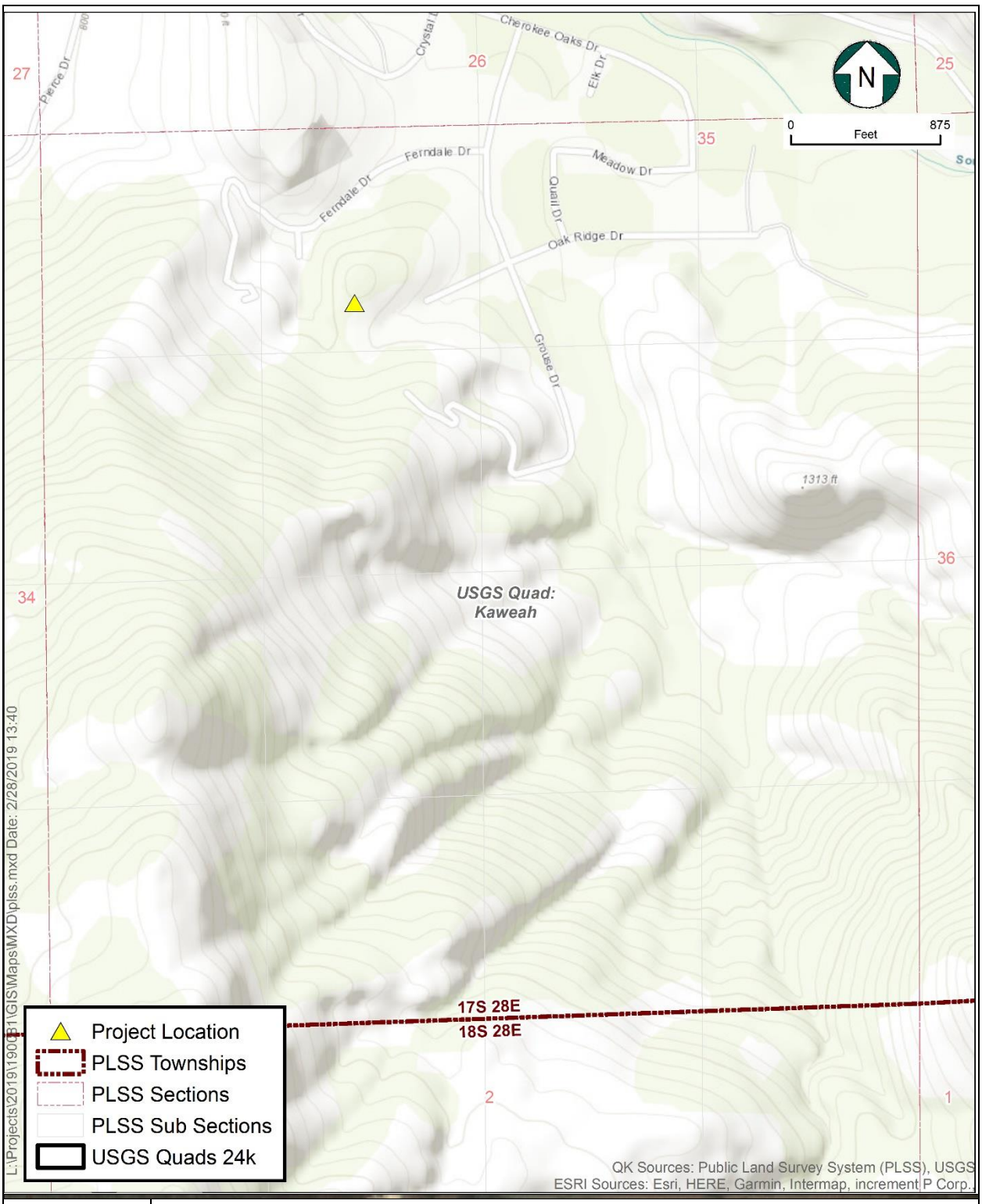


Figure -2
PLSS-USGS Quad

Figure -3
Project Site

Native American Heritage Commission Letter

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

March 11, 2019

Jaymie Brauer, Principal Planner
Quad Knopf, Inc.

VIA Email to: jaymie.brauer@qkine.com

RE: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Three Rivers Water Tank Replacement Project (190081), Tulare County.

Dear Ms. Brauer:

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

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

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

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

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

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

   - A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;

   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;

   - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

   - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

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

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

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

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.
4. Any ethnographic studies conducted for any area including all or part of the APE; and
5. Any geotechnical reports regarding all or part of the APE.

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

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

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

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

Sincerely,

Nancy Gonzalez

for Katy Sanchez
Associate Environmental Planner

Attatchment

Native American Heritage Commission
Tribal Consultation List
03/11/2019

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella , CA 93240
(661) 340-0032 Cell

Kawaiisu
Tubatulabal

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella , CA 93283
bbutterbredt@gmail.com
(760) 378-2915 Cell

Tubatulabal
Kawaiisu

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P.O. Box 8
Lemoore , CA 93245
(559) 924-1278

Tache
Tachi
Yokut

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Tribal Chairperson
P.O. Box 226
Lake Isabella , CA 93240
(760) 379-4590

Tubatulabal

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

Yokuts

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
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Foothill Yokuts
Mono
Wuksache

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

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

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.1, 21080.3.1, and 21080.3.2 for proposed Three Rivers Water Tank Replacement Project (190081), Tulare County.

Robert E. Parr, MA, RPA

Senior Archaeologist

AREAS OF EXPERTISE

- Cultural Resources
- California Archaeology
- Archaeology of the Southern San Joaquin Valley
- Technical Report Preparation and Editing

EDUCATION

- MS, Anthropology, University of California, Riverside
- BA, Art, California State University, San Bernardino

REGISTRATIONS / CERTIFICATIONS

- Registered Professional Archaeologist

PROFESSIONAL ORGANIZATIONS

- Member, Archaeological Institute of America
- Member, California Native Plant Society
- Member, Kern County Archaeological Society
- Member, Malki Museum
- Member, Nevada Archaeological Association
- Member, Society for California Archaeology
- Member, Society for Historical Archaeology
- Member, Society for Ethnobiology

AWARDS / RECOGNITION

- Outstanding Staff Employee of the Year; Staff Forum, California State University, Bakersfield
- Extraordinary Service Award, Riverside Chinatown, Great Basin Foundation

CONTINUING EDUCATION

- Federal Projects and Historic Preservation Law, Advisory Council on Historic Preservation

Mr. Parr has extensive experience with archaeology of the Great Basin and California, with recent experience in the San Joaquin Valley. His research emphasis included hunter-gatherers of the region; settlement/subsistence; communal hunting systems; historical archaeology of mines, railroads, and petroleum industry; cultural resources management; and protein residue analysis. Mr. Parr recently joined QK, Inc., and brings his 25+ years of professional experience as a Principal Investigator and Director. He is familiar with all aspects of cultural resources management, including field investigations and excavations, laboratory and records research, report and publications preparation, editing of professional journals, and presenting lectures and professional papers. He has prepared a number of reports and publications, including archaeological assessments, for projects in the Sequoia National Park, and in Kern, Kings, Fresno, and other California counties for Federal and State agencies (including Caltrans) and public utility companies.

PROFESSIONAL EMPLOYMENT

2016 – Present	QK, Inc., Senior Archaeologist/Anthropologist
2008 – 2015	Cal Heritage, Cambria, Principal Investigator
2007 – 2008	Kern River Ranger District, Sequoia, National Forest, Kernville, District Archaeologist
1995 - 2007	Laboratory of Archaeological Sciences, California State University, Bakersfield Assistant Director/Laboratory Manager

PROJECT EXPERIENCE

Archaeological Assessment, Various Oil Companies –Kern County, CA *Principal Investigator.*
Conducted archaeological investigations of anomaly and new well/access road projects for several major oil companies operating in Kern County.

Archaeological Assessment, Southern California Edison – Rosemead, CA *Principal Investigator.*
Oversaw archaeological investigations for a grid reliability maintenance project: intake 16kV cutover on the Sequoia National Forest, Kern River Ranger District.

Archaeological Assessment, Tule River Indian Tribe – Porterville, CA. *Principal Investigator.*
Conducted archaeological investigations for the Black Mountain Shaded Fuel Break, on the Tule River Indian Reservation.

SELECTED PUBLICATIONS

- Gilbert, Dennis L. Jenkins, Anders Götherstrom, Nuria Naveran, Juan J. Sanchez, Michael Hofreiter, Philip Francis Thomsen, Jonas Binladen, Thomas F. G. Higham, Robert M. Yohe, II, Robert Parr, Linda Scott Cummings, Eske Willerslev.. 2008. DNA from Pre-Clovis Human Coprolites in Oregon, North America. Science 320(5877): 786-789.
- H. Barnard, S.H. Ambrose, D. E. Beehr, M. Forster, R. E. Lanehart, M. E. Maliney, R. E. Parr, R. M. Yohe II, M. Rider, and C. Solazzo. 2007. Mixed Results of Seven Methods for Archaeological Residue Analysis Applied to One Vessel With Residue of Known Foodstuff. Journal of Archaeological Science 34(1): 28-37Parr, Robert E. 2005. The Archaeology of Hart Flat, Keene Ranch, Kern County, California. Kern County Archaeological Society Journal 9:3-61.
- Parr, Robert E., David J. Scott, and Mark Q. Sutton 2001. Archaeological Investigations at CA-SBR-7691, A Millingstone Horizon Site in Summit Valley, San Bernardino County, California. San Bernardino County Museum Quarterly 48 (1).
- Parr, Robert E. 1997. The Dillonwood Grove Site (CA-TUL-1985), Tulare County, California. Sacramento: California Department of Forestry and Fire Protection Archaeological Reports No. 21.

PRESENTATIONS

- Yohe, Robert M. II, Robert E. Parr, Dennis L. Jenkins, and Eske Willerslev. 2006. Concordance of Immunological Protein Residue Analysis and mDNA in the Taxonomic Identification of Nonvisual Constituents of Paleo-Indian and Archaic Human Coprolite from Paisley 5 Mile Point Cave, Oregon. Presented at the 30th Great Basin Anthropological Conference, Las Vegas, Nevada.
- Yohe, Robert M., II and Robert E. Parr. 2004. Recent Developments in the Archaeological Applications of Counter Immunoelectrophoresis. Presented at the 38th annual meeting of the Society for California Archaeology, Riverside, California.

Archaeological Inventory and Historical Evaluation, Tule River Indian Tribe – Porterville, CA. *Principal Investigator.*
Conducted an archaeological inventory and historical evaluation of the Diaz Ranch Property on the Tule River Indian Reservation.

Archaeological Survey, California Department of Transportation – Inyo County, CA *Principal Investigator.*
Completed an archaeological survey of the Cartago-Olancha Four-Lane Project, U.S. Route 395, Inyo County, CA.

Cultural Resources Analyses for Various Projects – California. *Senior Archaeologist.*
Performed Cultural Resources analyses for the following projects:

- Apollo Solar Project – Kern County, CA
- Trafalgar Solar Project – Kings County, CA
- Solari Mine & Quarry Project – Kern County, CA
- Manor Street Bridge – Bakersfield, CA
- Proposed Elementary School, Central Unified School District – Fresno, CA
- Various Kern County oil companies in compliance with the certified Kern County Oil/Gas EIR mitigation measures related to cultural resources.

Appendix D
Geotechnical and Soils Report

SOIL INVESTIGATION
SOUTH KAWEAH MUTUAL COMPANY - WATER TANK
THREE RIVERS, CALIFORNIA

SEE'S JOB 18096S

Submitted to:

QUAD KNOPF, INC.

May 25, 2018

Submitted by:

See's Consulting & Testing, Inc.

See's Consulting & Testing, Inc.

Geotechnical Investigation • Forensic Engineering • Environmental Assessment • Construction Inspection & Testing

May 25, 2018

SEE'S JOB 18096S

Mr. Ken Bonesteel
Quad Knopf, Inc.
6051 N. Fresno Street, Suite 200
Fresno, California 93710

SUBJECT: Soil Investigation
South Kaweah Mutual Water Company – Water Tank
40707 Terminus Court
Three Rivers, California

Gentlemen:

At your authorization and request, and in accordance with our Proposal SP16004 dated January 20, 2016, we have performed a Soil Investigation for the South Kaweah Mutual Water Company - Water Tank in Three Rivers, California.

The accompanying report presents the results of our soil investigation for the subject project. The report describes our study, findings, conclusions and recommendations for use in design by the project consultants. It is the client's responsibility to see that all parties to the project, including the designer, contractor, subcontractors, etc., are made aware of this report in its entirety, including the Additional Services and Limitations sections.

We appreciate the opportunity to be of service. If you have questions regarding the information contained in this report, please contact us.

Respectfully submitted,

See's Consulting & Testing, Inc.

James H. Lorenzo
Engineer Manager
C 79027

Distribution:
- Mr. Ken Bonesteel (via email)

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SOUTH KAWEAH MUTUAL WATER COMPANY - WATER TANK
THREE RIVERS, CALIFORNIA

INTRODUCTION

This report presents the results of a Soil Investigation for the proposed South Kaweah Mutual Water Company - Water Tank in Three Rivers, California. The purpose of the investigation was to explore and evaluate the subsurface conditions, and to make recommendations for site preparation procedures and foundation design parameters. This report includes the field and laboratory investigation data and presents geotechnical conclusions and recommendations. This report is based upon data obtained from two soil borings and laboratory tests performed on samples obtained from the site.

SITE LOCATION AND DESCRIPTION

The proposed water storage tank site is located 40707 Terminus Court in Three Rivers, California. The proposed water storage tank will be about 20 feet northwest of the existing water tank. The proposed tank site was gently rolling with a natural slope ranging from 4:1 to 10:1(horizontal:vertical). The vegetation at the site consisted of weeds and oak trees. The description of the proposed water storage tank site is based on visual observations made during our field investigation on April 26, 2018.

PROPOSED FACILITY

Based on information obtained, a water storage tank is planned to be constructed to next to the existing water tank. The proposed water storage tank will be about 30 feet in diameter and 24 feet in height. The water storage tank will be supported on a gravel pad with a center column spread footing or steel plate, and secured in place by a perimeter concrete ringwall foundation. A bearing pressure of less than 1,500 pounds per square

foot (psf) for the proposed water storage tank is anticipated. The water tank site will be cut down 3 to 7 feet to final grade. Retaining walls 7 to 8 feet in height will be constructed to support the native cut. Appurtenant construction will include underground utilities.

SOIL AND GROUNDWATER CONDITIONS

The subsurface soils encountered generally consist of sandy clayey silt with rocks, clayey sand, decomposed granite, and bedrock. The upper surface soil is a soft sandy clayey silt with rocks to depths ranging from 1.5 to 2 feet below grade (BG), underlain by very stiff clayey sand to a depth of 3 feet BG. The clayey sand was underlain by hard clayey sand/ decomposed granite to a depth of 5 feet BG, which was underlain by medium dense decomposed granite to a depth of 7 feet BG, which in turn was underlain by very dense decomposed granite until hard rock was encountered at 12 feet BG, the maximum depth explored. The clayey sand in the upper 5 feet has a low expansion potential as indicated by Expansion Index results of 30 and 36.

Groundwater was not encountered during our field exploration. It should be noted that groundwater level fluctuates due to variations in precipitation, land use, irrigation, and other factors. The evaluation of these factors is beyond our scope of services.

The soil profile described above is generalized, therefore, the reader is advised to consult the Logs of Borings (B-1 through B-2, Appendix A) for soil conditions at specific locations or depths. Care should be exercised in interpolating or extrapolating subsurface conditions beyond the boring locations.

Locations of our exploratory borings, shown on the Boring Location Maps were determined with a measuring wheel from features shown on the Boring Location Map. Surface elevations at the boring locations were not measured.

CONCLUSIONS AND RECOMMENDATIONS

1.0 General

Based on field and laboratory test data and engineering analyses, the site is suitable for the proposed construction provided the site is graded in accordance with the California Building Code and that our recommendations are incorporated into the project design and are followed throughout the construction.

Clayey Sand was encountered at the proposed water storage tank site in the upper 5 feet below grade. The Clayey Sand has a low expansion potential as indicated by Expansion Index results of 30 and 36. Non-expansive native decomposed granite or import fill is recommended for the top six inches of the water tank pad. The site is not on an active known fault, and surface rupture does not apply. Very dense decomposed granite and hard rock was encountered at shallow depths. The tank site will be cut down to form a level pad. Therefore, there is no potential of slope instability. Since the site has shallow bedrock, there is no potential for liquefaction and lateral spreading has a very low potential to occur at the site.

Ringwall footings and spread footings bearing in non-expansive engineered fill or undisturbed medium dense to hard native soil are suitable for supporting the proposed water tank. Detailed site preparation and foundation design recommendations are presented in the following sections.

2.0 Site Preparation

2.1 Clearing: Clearing: Prior to earthwork operations, the area to be developed should be stripped vegetation, organic topsoil, and cleared of surface and subsurface obstructions including utility lines and miscellaneous debris, from the proposed building area. We estimate the depth of stripping to be approximately 2 to 6 inches. Deeper stripping may be required in localized areas. The limits of stripping and clearing should be at least five feet beyond the limits of construction.

Tree root systems of the existing oak trees in proposed construction area should be removed to a minimum depth of two feet below existing grade and to such an extent which permit removal of all roots larger than 1-inch in diameter.

Any abandoned utility lines, water pipes, and other subsurface structures in the proposed construction areas should be removed. All these resulting excavations should be cleared of loose and disturbed material and backfilled with soils placed as engineered fill. The clearing and backfilling of these excavations should be performed under the observation and testing of See's Consulting & Testing.

2.2 **Preparation of Construction Area:** Following clearing and cutting to final grade, the proposed water tank area should be over-excavated to a minimum depth of **6 inches** below final grade. The over-excavation should extend a minimum of 5 feet beyond the perimeter of the tank. The bottom of the over-excavation should be cleared of loose and disturbed soil. The over-excavation must be reviewed by See's Consulting & Testing. The bottom of the over-excavation should be scarified to a depth of six inches, moisture conditioned to near optimum moisture content, and compacted as outlined in the following sections. The top six inches of the water tank pad should consist of non-expansive native decomposed granite or import fill.

2.3 **Compaction**: The scarified subgrade and subsequent fill placed at the site should be compacted to at least **92** percent of maximum dry density as determined by ASTM Test Method D1557. Retaining wall backfill should be compacted to at least **90** percent.

2.4 **Material for Fill:** Fill should consist of native soil or non-expansive import material. Native soil or Import soil, free from organics, vegetation, and rocks

or cobbles larger than three inches, may be used as backfill and fill at the site. Import material should consist of non-expansive, inorganic granular soils conforming to the following criteria:

IMPORTED FILL	
Maximum Expansion Index	5
Maximum Particle Size (inches)	3
Percentage Passing #200 Sieve	10-40
Maximum Water Soluble Sulfate (SO_4) in Soil, percent by weight	0.2

Import material must be reviewed by See's Consulting for conformance to these criteria prior to transport to the site.

2.5 Fill Placement: Fill material should be moisture-conditioned to near the optimum moisture content prior to compaction. Fill material with excessive moisture should be allowed to dry prior to compaction or be mixed with dry soil to bring the fill to a workable and stable moisture content. Fill should be placed in level lifts not exceeding a loose, uncompacted thickness of eight inches, and compacted as engineered fill.

2.6 Site Drainage: Control of surface drainage in the proposed tank areas should be an important design consideration. Final grading around the structures should be such that there is positive and enduring drainage away from the foundations, and water should not be allowed to pond on the site or against the tank.

2.7 Utility Trench Backfill: The underground utilities should be installed according to the manufacturer's recommendations. However, where no manufacturer's recommendations are available, underground utilities should

be installed as described below. Underground utility lines should have no less than 12 inches of cover. A minimum of six inches of compacted sand bedding under the pipe, and a pipe envelope extending six inches above the pipe, should be provided. The remaining backfill material may consist of native soil, or import material as described in this report. Utility trench backfill should be placed and compacted in accordance with the requirements for engineered fill. Import material should be reviewed by See's Consulting prior to transportation to the site.

3.0 Foundation Recommendations

Water Tank: Provided the site preparation procedures in this report are carried out, ringwall foundation with gravel or concrete pad bearing in non-expansive engineered fill or undisturbed medium dense to hard native soil may be used for supporting the structural loads of the tank. The tank pad should consist of a minimum of eight inches leveling and drainage course of open graded, 1"x #4 crushed rock. A perimeter concrete ringwall footing should be a minimum of 18 inches wide and 18 inches below grade. Isolated footings supporting any interior columns should be a minimum of one foot below grade.

A net allowable bearing pressure of **3,000** pounds per square foot (psf) may be used for the water tank pad, isolated footing for interior columns, and ring wall foundation. For uniformity of bearing pressures beneath the tank, a ringwall foundation should be sized according to the same bearing pressure as the tank. Retaining wall footings may be sized according to a net bearing pressure of **3,500** psf, provided they are a minimum of 3 feet wide. Ringwall and retaining wall footing excavations should be reviewed by an engineer from See's Consulting prior to placement of rebar. The recommended bearing pressure applies to combined dead and sustained live loads and may be increased by one third (⅓) to include transient loads due to wind and seismic effects.

An ultimate coefficient of friction of 0.45 may be used below the water tank base, water tank foundations, and retaining wall foundations. In calculating the friction resistance to sliding, the area should be reduced to account for partial up-lift.

For the water tank, a total settlement on the order of 1 inch at the center of the tank is anticipated. Differential settlement from the center to the edge of the tank is expected to be about 50 percent of the total settlement.

The proposed structure should be designed with construction specifications and structural properties to withstand the anticipated or probable effects of seismic ground motion, if a seismic event was to occur. The latitude is 36.4117 degrees and the longitude is -118.9169 degrees at the approximate location of the water storage tank site. The following seismic design parameters were determined based on the procedure in Section 1613 of 2016 California Building Code (CBC).

SEISMIC DESIGN PARAMETERS 2016 CBC		
Property	Symbol	Value
Occupancy Category		IV
Site Class		B
Mapped MCE Acceleration at Short Periods	S_s	0.497
Mapped MCE Acceleration at 1-Second Periods	S_1	0.220
Site Coefficient	F_a	1.0
Site Coefficient	F_v	1.0
Adjusted MCE Spectral Response Acceleration Parameter	S_{MS}	0.497
Adjusted MCE Spectral Response Acceleration Parameter	S_{M1}	0.220
Design Spectral Acceleration Parameter	S_{DS}	0.331
Design Spectral Acceleration Parameter	S_{D1}	0.147
Seismic Design Category, short periods	S_{DS}	D
Seismic Design Category, 1-sec period	S_{D1}	D

4.0 Lateral Earth Pressure and Frictional Resistance

For structures subject to lateral pressures from native soils and backfill at the site, the following values are recommended:

LATERAL EARTH PRESSURE	
Lateral Pressure and Condition	**Equivalent Fluid Pressure, pcf**
Active case, drained	60
At-rest case, drained	100
Passive case, drained	400

Design values assume level, drained native clayey soil backfill. Pressures due to surcharge loads from adjacent footings, traffic, etc., should be analyzed separately. The upper one foot of soil of the adjacent grade should not be used in the passive pressure computation.

The foregoing equivalent fluid pressures and frictional coefficients represent ultimate soil values, and a safety factor consistent with design conditions should be included. A minimum safety factor of 1.5 against lateral sliding is recommended if the sliding is resisted only by frictional resistance. When combined passive and frictional resistance is used, we recommend a minimum safety factor of 2.0. For lateral stability against seismic loading, we recommend a minimum safety factor of 1.1.

5.0 Retaining Wall Seismic Load

During an earthquake, lateral soil pressure may increase due to inertia forces action of the soil mass. For a yielding wall (not fixed at the top) and the active earth pressure condition, the equation developed by Seed and Whitman (1970) may be used.

$$P_E = (3/8)K_h \gamma H^2$$

H is the height of the wall. K_h is the site peak ground acceleration ($S_{DS}/2.5$). γ is the unit weight of the soil in pcf.

Because the peak ground acceleration may occur for only one instant during an earthquake, a reduction factor of 2.5 was used for this analysis with the horizontal acceleration, S_{DS} of 0.331. Based on our analysis, the seismic increments of pressure given below are recommended.

For a yielding wall: Seismic increment of the active lateral force is $6H^2$ (pound per linear foot of wall length) acts at 0.33H above the wall base. The seismic increment should be added to the static active pressure lateral force.

6.0 Soil-Cement Reactivity

A surficial soil sample obtained from the site was tested to determine the potential for concrete deterioration due to attack by soil-borne soluble salts. Laboratory testing to determine water-soluble sulfate content in a sample of the on-site soils was performed. A water-soluble sulfate concentration of 1.4 mg/Kg was detected. Soil sulfate concentrations of this magnitude would have a negligible effect on normally formulated concrete. Concrete formulated with Type II cement has been shown to resist these sulfate concentrations.

7.0 Additional Services

The review of plans and specifications, construction consultation, and field observation by See's Consulting & Testing are an integral part of the conclusions and recommendations made in this report. These are vital elements and extensions of this geotechnical engineering investigation.

We recommend that following the development of construction plans and specifications, those portions of the contract drawings and specifications that pertain to earthwork and foundations be made available to See's Consulting & Testing to verify that they are consistent with our recommendations contained in this report.

We recommend that See's Consulting & Testing be retained to provide geotechnical consultation and construction testing services, as they are required in the sections of Site Preparation and Foundation Recommendations in this soil investigation report.

CHANGED CONDITIONS AND LIMITATIONS

Findings of this report are valid as of the present. However, changes in proposed construction such as structure type, design loads, and location may invalidate the report. Also, site conditions and applicable standards may change. Therefore, this report should be reviewed to determine its applicability considering changed conditions or after a substantial lapse of time between the preparation of our report and the start of work at the site (two years or more).

The analyses and recommendations submitted in this report are based upon the data obtained from the exploratory borings performed. The samples obtained and tested, and the observations made, are assumed to be representative of the site soils. The report does not reflect variations which may occur between borings.

The validity of the recommendations contained in this report is also dependent upon the prescribed testing and observation program during the site preparation and construction phases. Our firm assumes no responsibility for construction compliance with these design concepts and recommendations unless we have been retained to perform observation and review during site preparation, and rough grading.

See's Consulting & Testing has prepared this report for the exclusive use of the client noted on the cover page and the project design consultants. The report has been prepared in accordance with generally accepted practices by reputable geotechnical engineers practicing in this or a similar locality at the time the report was written. No warranties, either expressed or implied, are made as to the professional advice provided under the terms of this agreement and included in this report.

See's Consulting & Testing, Inc.

APPENDIX "A"

APPENDIX "A"

FIELD INVESTIGATION

1. Test Hole Drilling

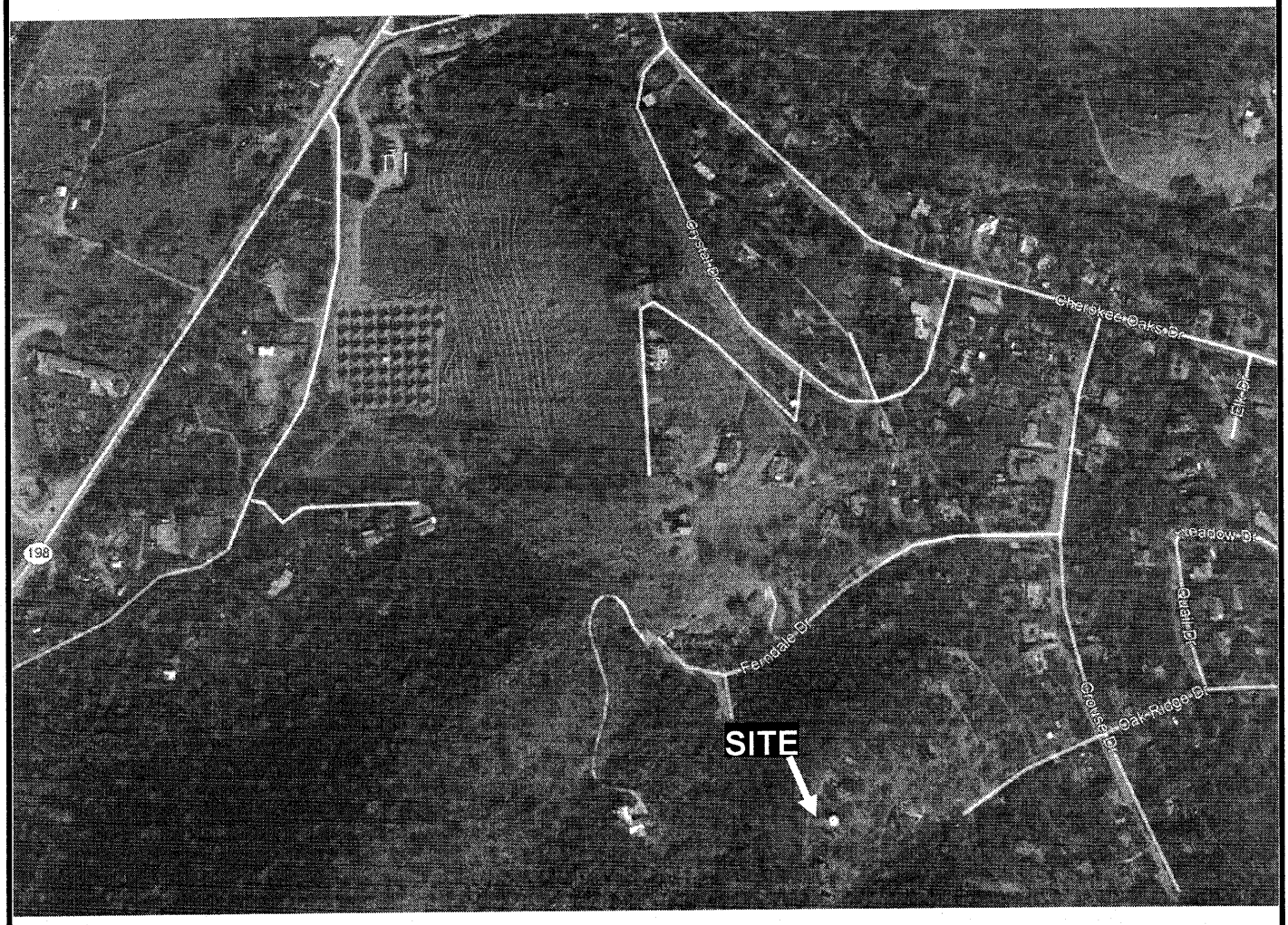
The field investigation was conducted on April 26, 2018. Two test borings were drilled with a truck-mounted drill rig using a six-inch diameter, hollow stem auger at the approximate locations indicated on the Boring Location Maps.

Standard Penetration Tests (SPT) were conducted with a split spoon sampler. The sampler was driven with a 140-pound hammer falling from a height of 30 inches. Driving resistance determinations were made during the time the samplers were driven. Field blow counts required to drive the sampler 12 inches are recorded on the Logs of Borings. Soil samples were also obtained from the site.

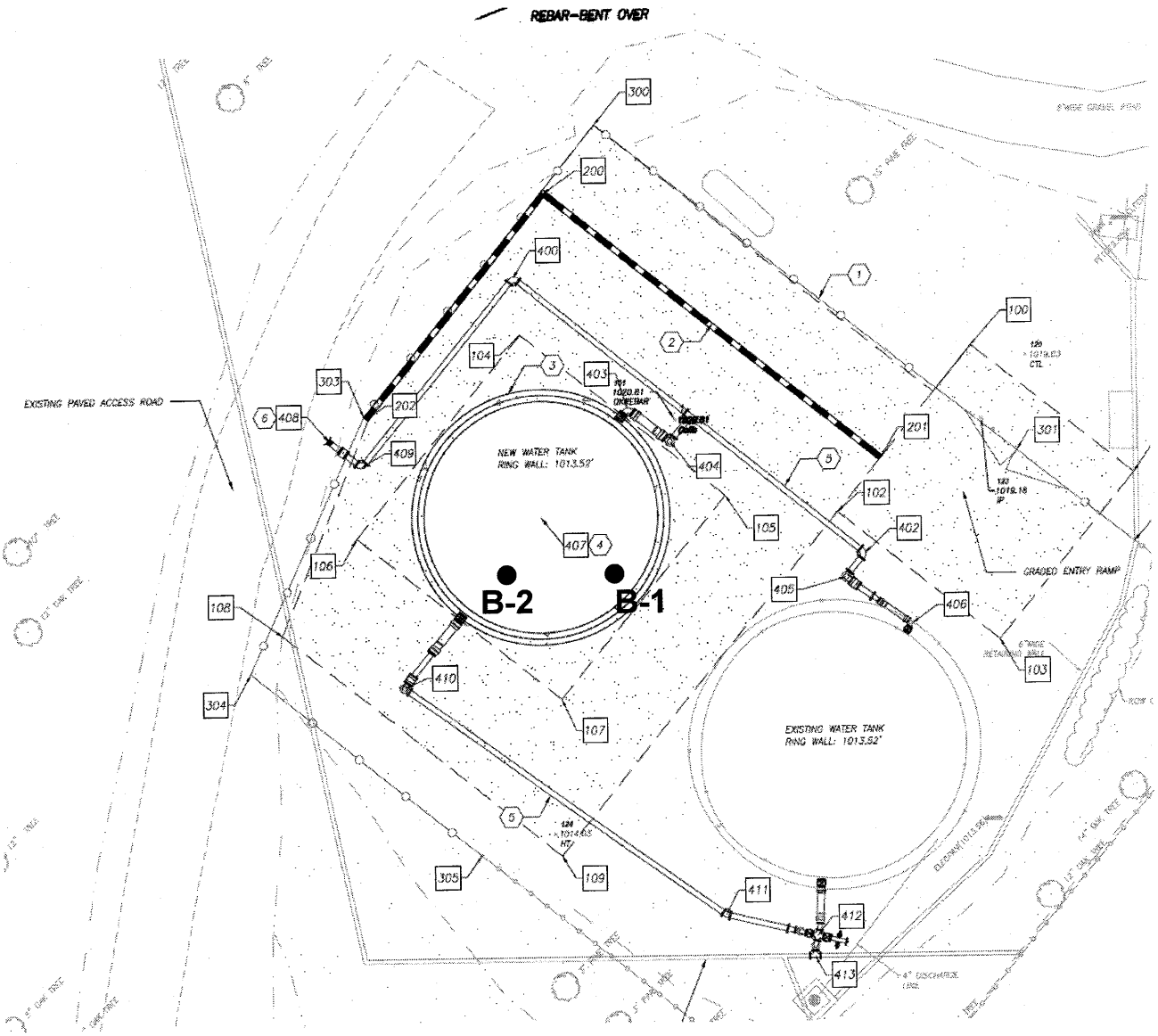
2. Logs of Borings

A continuous log of soils as encountered in the test borings was recorded at the time of the field investigation by an engineer. The Logs of Borings are shown on Logs B-1 through B-2.

Locations and depths of sampling, in-situ soil dry densities, and moisture contents are tabulated in the Logs of Borings.



Site Location Map	Map 1	N
SEE'S CONSULTING & TESTING **4644 E. CARMEN AVENUE** **FRESNO, CA 93703** **(559) 452-0100**	Project Name: South Kaweah Mutual Water Company Water Tank Site Address: 40707 Terminus Court, Three Rivers, CA Project Number: 18096S	



Boring Location Map	Map 2	N
SEE'S CONSULTING & TESTING **4644 E. CARMEN AVENUE** **FRESNO, CA 93703** **(559) 452-0100**	Project Name: South Kaweah Mutual Water Company Water Tank Site Address: 40707 Terminus Court, Three Rivers, CA Project Number: 18096S	

LOG B-1

Project Name: South Kaweah Mutual Water Company – Water Tank
Location: Three Rivers, CA
Date: 4/26/18
Logged by: J. Lorenzo
Water Level: Not encountered
Equipment: CME-55, 4.25" Inside Diameter & 7" Outside Diameter Hollow Stem Auger

Depth, Feet	Sampler Type	Blow/ft	Moisture, Percent	Dry Density PCF	U.S.C.	Soil or Rock Description
0.0					GM	ROCKS W/ SANDY CLAYEY SILT, Lt. Br., Dry, Dense, Rocks up to 10" Dia.
0.5						
1.0						
1.5						
2.0						Terminated @ 2 feet w/ Auger Refusal on Rocks.
2.5						
3.0						
3.5						
4.0						
4.5						
5.0						
5.5						
6.0						
6.5						
7.0						
7.5						
8.0						
8.5						
9.0						
9.5						
10.0						
10.5						
11.0						
11.5						
12.0						
12.5						
13.0						
13.5						
14.0						
14.5						
15.0						
15.5						
16.0						
16.5						

Lithologic boundaries are approximate, and may be gradational. Conditions described may not be representative of those at other locations.

LOG B-2

Project Name: South Kaweah Mutual Water Company – Water Tank
Location: Three Rivers, CA
Date: 4/26/18
Logged by: See's
Water Level: Not encountered
Equipment: CME-55, 4.25" Inside Diameter & 7" Outside Diameter Hollow Stem Auger

Depth, Feet	Sampler Type	Blow/ft	Moisture, Percent	Dry Density PCF	U.S.C.	Soil or Rock Description
0.0					ML/CL	SANDY CLAYEY SILT W/ ROCKS, Lt. Br., Dry, Soft, 30% Rocks
0.5						
1.0						
1.5					SC	CLAYEY SAND, Lt. Br., Moist, V. Stiff, V. Low Plasticity
2.0						
2.5						
3.0					SC/DG	CLAYEY SAND, Lt. Br., Dry, Hard
3.5						
4.0						
4.5						
5.0	SPT	38			DG/SM	DECOMPOSED GRANITE, Tan, Dry, Dense to M. Dense, Iron Stained, V. Weathered
5.5						
6.0						
6.5						W/ Weathered Rock @ 7'
7.0					DG	DECOMPOSED GRANITE, Tan, Dry, V. Dense, W/ Fractured Granitic Rocks Fine Grained
7.5						
8.0	SPT	50/6"				
8.5						
9.0						
9.5						
10.0						
10.5						
11.0						
11.5						
12.0						Terminated @ 12 feet w/ Auger Refusal on Hard Rock.
12.5						
13.0						
13.5						
14.0						
14.5						
15.0						
15.5						
16.0						
16.5						

APPENDIX "B"

APPENDIX "B"

LABORATORY TESTING

1. **Sieve Analysis**
Sieve analyses were performed to evaluate the gradation characteristics of the soil and to aid in soil classification. Tests were performed in general accordance with ASTM Test Method C 136. Results of these tests are shown on Figures 1 to 3.

2. **Expansion Index**
An expansion index (EI) test was performed on a remolded, fine-grained soil sample considered representative of the clayey site soil. Test procedures were in general accordance with ASTM D 4829. Results of these tests are presented in Table 1.

3. **Soil Reactivity Determination**
The results of chemical analyses performed on a soil sample obtained at a depth of three to five feet at Boring No. 2 are presented below.

SUMMARY OF CHEMICAL TEST RESULTS	
Sulfates, mg/Kg	1.4

See's Consulting & Testing

PROJECT NAME: South Kaweah Mutual Water Tank
SAMPLE LOCATION : B-2
DEPTH: 1.5-3.0'
SAMPLE DESCRIPTION: Clayey Sand

SEE'S JOB NUMBER: 18096S
FIGURE: 1

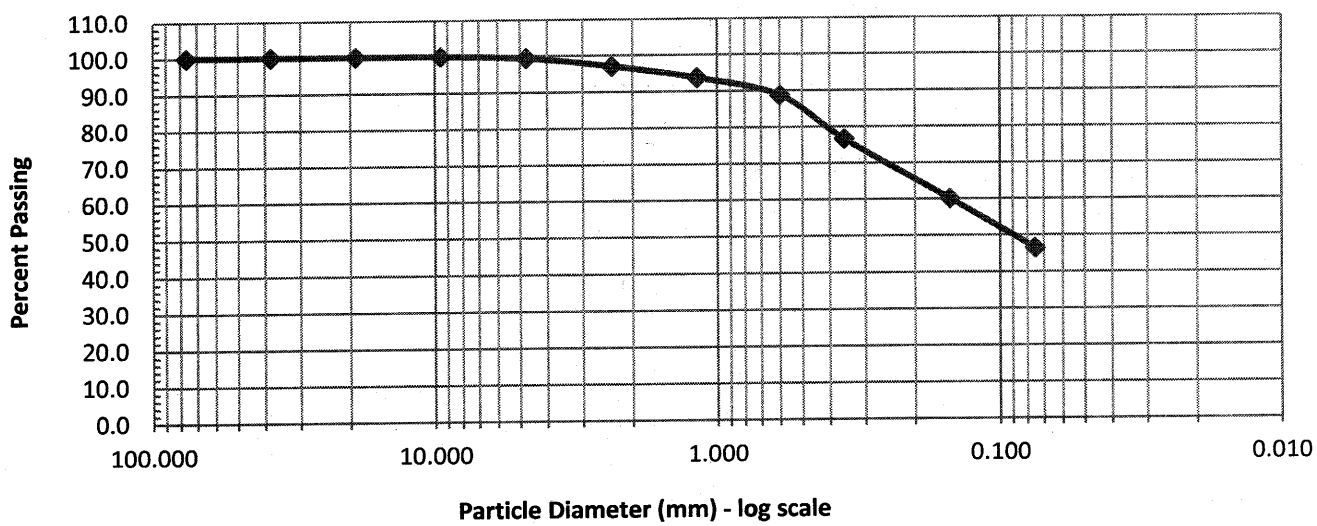
SAMPLE MOIST WT, [g]: 300.0
SAMPLE DRY WT(1),[g]: 258.8
FINES (1)-(2): 119.6

DRY WT AFTER WASH(2),[g]: 139.2
PAN [g]: 1.1

SIEVE SIZE	OPENING (MM)	WEIGHT RETAINED (3) [GRAMS]	PERCENT RETAINED (4) =(3)/(1)X100	CUMULATIVE PERCENT RETAINED (5) = SUM OF (4)	CUMULATIVE PERCENT PASSING (6) = 100-(5)
3"	76.200	0.0	0.0	0.0	100.0
1 1/2"	38.100	0.0	0.0	0.0	100.0
3/4"	19.050	0.0	0.0	0.0	100.0
3/8"	9.530	0.0	0.0	0.0	100.0
NO.4	4.750	1.5	0.6	0.6	99.4
NO.8	2.360	6.1	2.4	2.9	97.1
NO.16	1.180	8.5	3.3	6.2	93.8
NO.30	0.600	12.9	5.0	11.2	88.8
NO.50	0.355	31.5	12.2	23.4	76.6
NO.100	0.150	42.7	16.5	39.9	60.1
NO.200	0.075	35.2	13.6	53.5	46.5
PAN+(1)-(2)	0.000	120.7	46.6	100.1	0.0
TOTAL		259.1	100.1		

% Gravel	% Sand	% Fines
0.6	52.9	46.5

PARTICLE SIZE DISTRIBUTION



See's Consulting & Testing

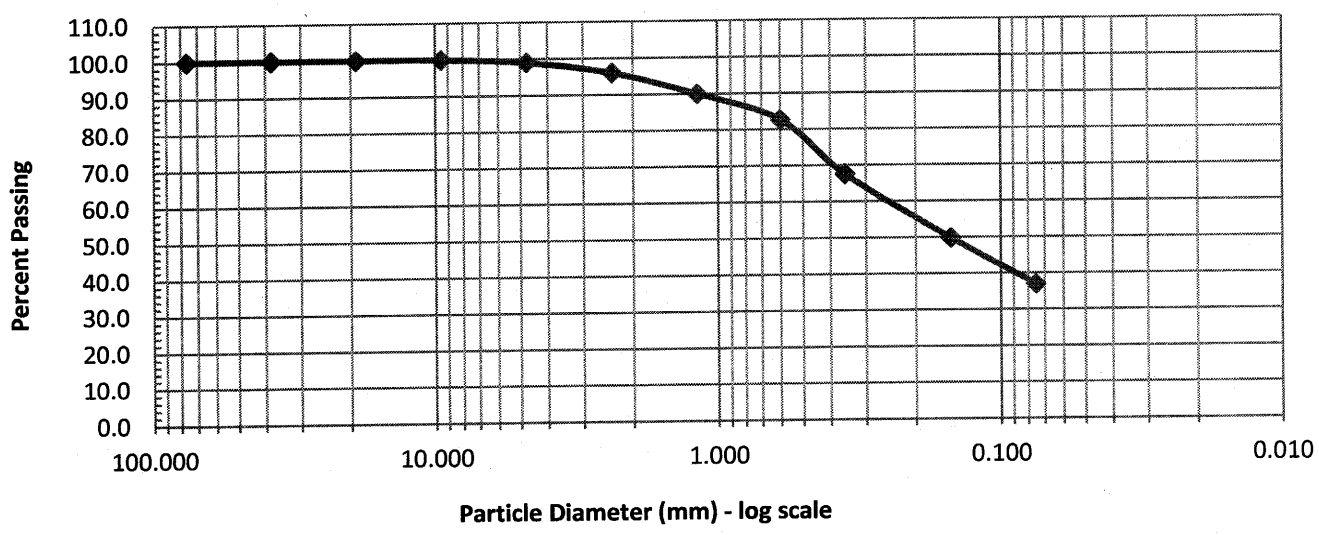
PROJECT NAME: South Kaweah Mutual Water Tank
SEE'S JOB NUMBER: 18096S
SAMPLE LOCATION : B-2
FIGURE: 2
DEPTH: 3.0-5.0'
SAMPLE DESCRIPTION: Clayey Sand/Decomposed Granite

SAMPLE MOIST WT, [g]: 300.0
SAMPLE DRY WT(1),[g]: 267.3
DRY WT AFTER WASH(2),[g]: 168.6
FINES (1)-(2): 98.7
PAN [g]: 1.1

SIEVE SIZE	OPENING (MM)	WEIGHT RETAINED (3) [GRAMS]	PERCENT RETAINED (4) =(3)/(1)X100	CUMULATIVE PERCENT RETAINED (5) = SUM OF (4)	CUMULATIVE PERCENT PASSING (6) = 100-(5)
3"	76.200	0.0	0.0	0.0	100.0
1 1/2"	38.100	0.0	0.0	0.0	100.0
3/4"	19.050	0.0	0.0	0.0	100.0
3/8"	9.530	0.0	0.0	0.0	100.0
NO.4	4.750	2.6	1.0	1.0	99.0
NO.8	2.360	8.1	3.0	4.0	96.0
NO.16	1.180	15.9	5.9	10.0	90.0
NO.30	0.600	19.7	7.4	17.3	82.7
NO.50	0.355	40.5	15.2	32.5	67.5
NO.100	0.150	47.2	17.7	50.1	49.9
NO.200	0.075	34.5	12.9	63.0	37.0
PAN+(1)-(2)	0.000	99.8	37.3	100.4	0.0
TOTAL		268.3	100.4		

% Gravel	% Sand	% Fines
1.0	62.1	37.0

PARTICLE SIZE DISTRIBUTION



See's Consulting & Testing

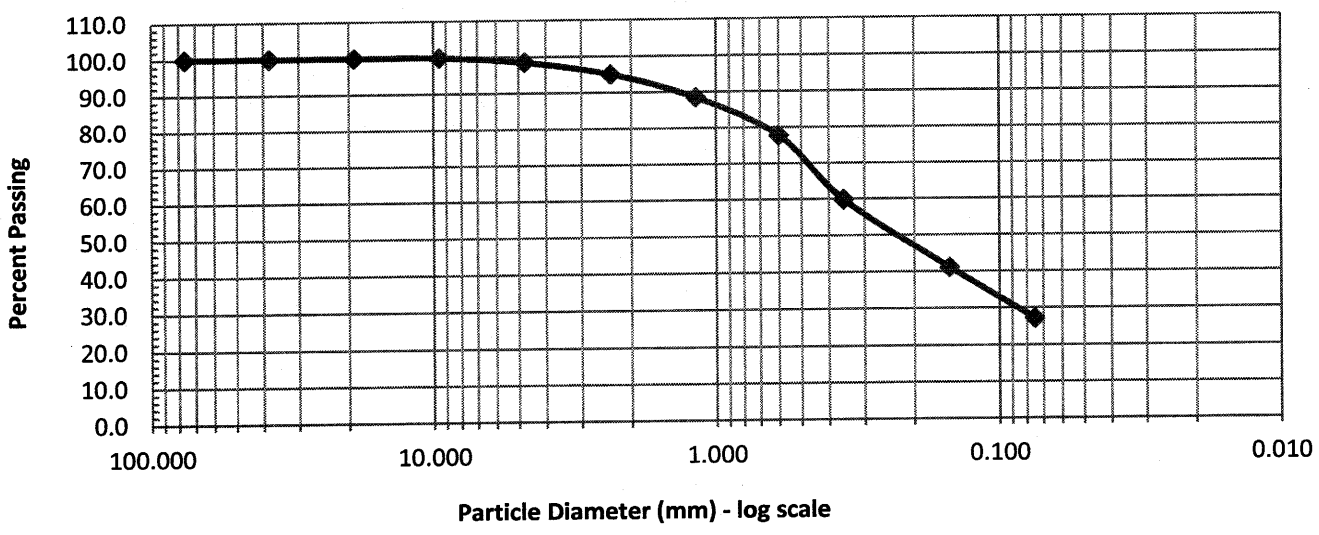
PROJECT NAME: South Kaweah Mutual Water Tank
SEE'S JOB NUMBER: 18096S
SAMPLE LOCATION : B-2
FIGURE: 3
DEPTH: 5.0-8.0'
SAMPLE DESCRIPTION: Silty Sand/Decomposed Granite

SAMPLE MOIST WT, [g]: 300.0
SAMPLE DRY WT(1),[g]: 277.1
DRY WT AFTER WASH(2),[g]: 202.2
FINES (1)-(2): 74.9
PAN [g]: 0.9

SIEVE SIZE	OPENING (MM)	WEIGHT RETAINED (3) [GRAMS]	PERCENT RETAINED (4) =(3)/(1)X100	CUMULATIVE PERCENT RETAINED (5) = SUM OF (4)	CUMULATIVE PERCENT PASSING (6) = 100-(5)
3"	76.200	0.0	0.0	0.0	100.0
1 1/2"	38.100	0.0	0.0	0.0	100.0
3/4"	19.050	0.0	0.0	0.0	100.0
3/8"	9.530	0.0	0.0	0.0	100.0
NO.4	4.750	4.1	1.5	1.5	98.5
NO.8	2.360	9.7	3.5	5.0	95.0
NO.16	1.180	18.1	6.5	11.5	88.5
NO.30	0.600	29.9	10.8	22.3	77.7
NO.50	0.355	49.4	17.8	40.1	59.9
NO.100	0.150	51.9	18.7	58.9	41.1
NO.200	0.075	38.6	13.9	72.8	27.2
PAN+(1)-(2)	0.000	75.8	27.4	100.1	0.0
TOTAL		277.5	100.1		

% Gravel	% Sand	% Fines
1.5	71.3	27.2

PARTICLE SIZE DISTRIBUTION



See's Consulting & Testing

PROJECT NAME: South Kaweah Water Tank

SEE'S JOB NO.: 18096S

SAMPLE DESCRIPTION: 1) B-2, 1.5'-3.0', Clayey Sand

Table: 1

2) B-2, 3.0'-5.0', Clayey Sand/Decomposed Granite

EXPANSION INDEX ASTM D 4829					
Sample Number	Total Load	% Expansion	Moisture Before	Moisture After	Expansion Index
1	144 psf	3.7	13.9	30.0	37
2	144 psf	3.0	14.2	27.4	30

The results may be compared to the table presented below to qualitatively evaluate the expansion of the near-surface site soils.

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above 130	Very High