
CHAPTER 1

IMPACT ANALYSIS

1.- Impact Analysis

1.1 Aesthetics

Table 1-1: Aesthetics

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

1.1.1 Environmental Setting

The proposed Project's Service Areas 1 and 2 are located in eastern Tulare County approximately 2.86 miles west of the City of Porterville. The pipelines serving Service Area 1 will be located within the rights-of-way of Road 200, Road 196, Avenue 160, and Avenue 164. A turnout will be installed on the Wood Central Ditch near its intersection with Road 200 (east side). The Service Area 2 site is located within the right-of-way of Road 208, as well as the Avenue 140 alignment and Road 204 alignment. The aesthetic features of the existing visual environment in the proposed Project area are relatively uniform, with the site surrounded by agricultural fields, vacant land, rural residences, and the Tule River. Although the Tule River is a distinctive component of the surrounding environment, it is not designated as a National Wild and Scenic River per the Wild & Scenic Rivers Act¹.

Two state routes are located near the Project sites: State Route 65 (SR 65) is approximately five miles to the east and SR 190 is approximately two miles to the south. According to Caltrans SR 65 is not a designated eligible State Scenic Highway. A portion of State Route 190 is an Eligible State Scenic Highway; however, this portion of the highway is over eight miles from the proposed Project site and it has not been officially designated². Tulare County contains an additional Eligible State Scenic Highway, State Route 198 (SR 198); however it is located approximately fifteen miles to the north of the Project. There are several rural residences to the north, east, west and south of the Project.

¹ National Wild and Scenic Rivers System. California's Designated Rivers. <http://www.rivers.gov/california.php>. Site Accessed March 2016.

² California Department of Transportation, 2015. List of Eligible and Officially Designated State Highways. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/lists/OD_and_E_Spreadsheet.xlsx Site Accessed March 2016.

1.1.2 Regulatory Setting

1.1.2.1 Federal

Federal regulations relating to aesthetics include: Organic Administration Act (1897), Multiple Use – Sustained Yield Act (1960), Wilderness Act (1964), Federal Lands Policy and Management Act (1976), Wild and Scenic Rivers Act. The Proposed Project is not subject to any of these regulations since there are no federally-designated lands or rivers in the vicinity.

1.1.2.2 State

California Scenic Highway Program: The Scenic Highway Program allows county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program which was created by the Legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263.

1.1.2.3 Local

Tulare County General Plan Policies:

- SL-1: To protect and feature the beauty of Tulare County’s view of working and natural landscapes.
 - SL-1.1: Natural Landscapes – During review of discretionary approvals, including parcel and subdivision maps, the County shall as appropriate, require new development to not significantly impact or block views of Tulare County’s natural landscapes.
 - SL-1.2: Working Landscapes – The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:
 - Referencing traditional agricultural building forms and materials,
 - Screening and breaking up parking and paving with landscaping, and
 - Minimizing light pollution and bright signage.
 - SL-1.3: Watercourses – The County shall protect visual access to, and the character of, Tulare County’s scenic rivers, lakes, and irrigation canals by:
 - Locating and designing new development to minimize visual impacts and obstruction of views of scenic watercourses from public lands and right-of-ways, and
 - Maintaining the rural and natural character of landscape viewed from trails and watercourses used for public recreation.
- SL-2: To protect the scenic views for travelers along the County’s roads and highways.

1.1.3 Impact Assessment

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

No Impact. The Project area is located on the San Joaquin Valley floor in central Tulare County. The sites proposed for construction to serve Project Service Areas 1 and 2 consist of road right- of- way and service road, and are surrounded by vacant land, canals, agricultural fields, and rural residences. The sites are flat and there are no designated scenic resources within the proposed Project vicinity. The Project will not have a substantial adverse effect on a scenic vista. There would be no impact.

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

No Impact. The scenic highway program protects and enhances California's natural scenic beauty by allowing county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program. Two state routes are located near the Project site; SR 65 and SR 190. According to Caltrans SR 65 is not a designated eligible State Scenic Highway. Portions of SR 190 and SR 198 are designated as Eligible State Scenic Highways; however, they are located over eight and fifteen miles from the proposed Project, respectively, and they have not been officially designated. Additionally, the Tule River is not designated as a Wild and Scenic River.³ There would be no impact.

I-c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. The Service Areas are surrounded by furrow irrigated agricultural land and tree crops, rural roads, and residences. The proposed Project conveyance facilities for Service Area 1 will be placed within existing road right- of- way along Road 200 and Avenue 164 and the facilities for Service Area 2 will be within the rights-of-way of Road 208, the Avenue 140 alignment, and the Road 204 alignment. The Tulare County General Plan recognizes agricultural lands as Working Landscapes and provides for protection of views of working and natural landscapes. The proposed Project will vary between open-channel and piped sections, with above ground turnout structures located approximately every one-quarter mile. These distribution facilities and turnouts are a common fixture in the agricultural landscape, and would not be likely to degrade the existing visual character or quality of the area or its surroundings; impacts would be less than significant.

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

No Impact. The proposed Project will consist of open-channel and pipeline water distribution facilities, with above ground turnouts located approximately every one-quarter mile along the proposed pipelines. The Project does not include onsite lighting or significant use of reflective materials. No portion of the Project will create light or glare. There would be no impact.

³ National Wild and Scenic Rivers System. California's Designated Rivers. <http://www.rivers.gov/california.php>. Site Accessed March 2016.

1.2 Agricultural Land and Forestry Resources

Table 1-2: Agriculture and Forest Resources

Agriculture and Forest Resources				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.2.1 Environmental Setting

According to the Tulare County General Plan, agriculture is one of the most identified assets in Tulare County. The Tulare County Agricultural Commission/Sealers identified Tulare County as the number one dairy county among the state and nation. In 2014, Tulare County totaled a gross production value of over 8 billion dollars in agriculture-related productions. In 2014, the Agricultural Crop and Livestock Report identified milk as the leading agricultural commodity in Tulare County with a total gross value of over 2.5 billion dollars. Additionally grapes, oranges, cattle, pistachio, walnuts, almonds, corn, tangerines, and peaches rank among Tulare County's 2014 top-ten list of agriculture commodities that generated over one million dollars in production⁴.

In 2014, Tulare County covered over 120 different agricultural commodities of which forty-two commodities generate over one million dollars annually. Tulare County continues to produce high quality crops that provide food and fiber to more than 90 countries throughout the world⁵.

⁴ Tulare County Ag Commissioner's Annual Crop Report.
<http://agcomm.co.tulare.ca.us/default/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2014-crop-report/> Site Accessed March 2016

⁵ Ibid.

A review of the “Important Farmlands” mapping by the California Department of Conservation’s (DOC’s) Farmland Mapping and Monitoring Program (FMMP) shows that the Service Area 1 site is designated as Prime Farmland and Farmland of Statewide Importance. Portions of Service Area 2 are designated as Prime Farmland and Farmland of Statewide Importance. The California Department of Conservation provides statistics on conversion of farmland to nonagricultural uses for Tulare County, where the proposed Project sites are located. Of the total land area that was inventoried (1,585,865 acres) in 2012, Tulare County had approximately 368,527 acres of Prime Farmland, 321,296 acres of Farmland of Statewide Importance, 11,474 acres of Unique Farmland, and 154,549 acres of Farmland of Local Importance. This represents a net loss of 1,724 acres of Prime Farmland, 2,302 acres of Farmland of Statewide Importance, and 120 acres of Unique Farmland since 2010. Farmland of Local Importance experienced a net increase of 4,274 acres⁶.

Historically, land use at the proposed Project sites has been road right- of- way and service roads used by the local land owners. No forest or timber land is present at the proposed Project site or in the proposed Project vicinity.

1.2.2 Regulatory Setting

1.2.2.1 Federal

Farmland Protection Policy Act: The Natural Resources Conservation Service, a federal agency within the U.S. Department of Agriculture, is the agency primarily responsible for implementation of the Farmland Protection Policy Act (FPPA). The FPPA was enacted after the 1981 Congressional report, Compact Cities: Energy-Saving Strategies for the Eighties indicated that a great deal of urban sprawl was the result of programs funded by the federal government. The purpose of the FPPA is to minimize federal programs’ contribution to the conversion of farmland to non-agricultural uses by ensuring that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years⁷.

1.2.2.2 State

California Environmental Quality Act (CEQA) Definition of Agricultural Lands: Public Resources Code Section 21060.1 defines “agricultural land” for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California. This Project is being evaluated pursuant to CEQA.

California Department of Conservation, Division of Land Resource Protection: The California Department of Conservation (DOC) applies the NRCS soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California’s agricultural land resources. Pursuant to the DOC’s FMMP, these designated agricultural lands are included in the Important Farmland Maps (IFM) used in planning for the present and future of California’s agricultural land resources. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

⁶ California Department of Conservation, 2015. California Farmland Conversion Report. http://www.conservancy.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/FCR/FCR%202015_complete.pdf. Site accessed March 2016.

⁷ USDA, Natural Resource Conservation Service, 2011

The list below provides a comprehensive description of all the categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as Farmland⁸.

- **Prime Farmland.** Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland.** Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance.** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- **Urban and Built-up Land.** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land.** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act): The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code Section 51200-51297.4, and therefore is applicable only to specific land parcels within the State of California. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts. However, an agricultural preserve must consist of no less than 100 acres. However, in order to meet this requirement two or more parcels may be combined if they are contiguous, or if they are in common ownership.

The Williamson Act program is administered by the DOC in conjunction with local governments, which administer the individual contract arrangements with landowners. The landowner commits the parcel to a 10-year period, or a 20-year period for property restricted by a Farmland Security Zone Contract, wherein no

⁸ California Department of Conservation. FMMP – Important Farmland Map Categories. http://www.consrv.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx. Accessed November 2015.

conversion out of agricultural use is permitted. Each year the contract automatically renews unless a notice of non-renewal or cancellation is filed. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. An application for immediate cancellation can also be requested by the landowner, provided that the proposed immediate cancellation application is consistent with the cancellation criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal or immediate cancellation does not change the zoning of the property. Participation in the Williamson Act program is dependent on county adoption and implementation of the program and is voluntary for landowners⁹.

Farmland Security Zone Act: The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy. Farmland Security Zone Act contracts are sometimes referred to as “Super Williamson Act Contracts.” Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35% reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses¹⁰.

Forestry Resources: State regulations regarding forestry resources are not relevant to the proposed Project because no forestry resources exist in the proposed Project’s vicinity.

1.2.2.3 Local

Tulare County General Plan:

- **Policy AG-1:** To promote the long-term preservation of productive and potentially-productive agricultural lands and to accommodate agricultural-support services and agriculturally-related activities that supports the viability of agriculture and further the County’s economic development goals.
 - **AG-1.1: Primary Land Use** – The County shall maintain agriculture as the primary land use in the valley region of the County, not only in recognition of the economic importance of agriculture, but also in terms of agriculture’s real contribution to the conservation of open space and natural resources.
 - **AG-1.17: Agricultural Water Resources** – The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

1.2.3 Impact Assessment

II-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. As shown in Figures 1-1 and 1-2, Prime Farmland and Farmland of Statewide Importance occur within both Service Areas; however, they would not be converted to a non-agricultural use. Surface water will be delivered to the landowners via channel and pipeline, with above ground turnouts located approximately

⁹ California Department of Conservation. Williamson Act Program. <http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx>. Accessed January 2015.

¹⁰ Farmland Security Zone Act. http://www.consrv.ca.gov/dlrp/lca/farmland_security_zones/Pages/Index.aspx. Accessed January 21, 2015.

every quarter mile. These turnouts would be located within road right-of-way and would not impact farming operations. Additionally, it would follow that more land would remain under, and/or new lands would apply for Williamson Act contracts if water sources are available to ensure continued agricultural operations. There would be no impact.

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

No Impact. The Project site areas are zoned for agricultural uses (**Figures 1-7 and 1-8**) and are under Williamson Act contracts. However, the pipeline and channel would be placed within road right-of-way with turnouts (located approximately every one-quarter mile) located above ground. Farming would continue as normal during and after construction and no agricultural land would be lost. The distribution of surface water to the land owners will not affect existing zoning or Williamson Act contracts and would further increase their ability to continue their current farming operations. There would be no impact.

II-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. The Service Area 1 and Service Area 2 Project sites are located within the AE-40 Agricultural Zone and as stated in Impact Assessment II- a, include open-channel and pipeline components, with above-ground turnouts located approximately every quarter mile along the pipeline. The proposed Project will not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. There would be no impact.

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

No Impact. There are no forest lands within the Project area; therefore, the proposed Project will not result in the loss of forest land or conversion of forest land to non-forest use. There would be no impact.

II-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. There are no forest lands within the Project area. The proposed Project will support agricultural activities and promote long-term preservation of agricultural lands by protecting and enhancing groundwater resources critical to agriculture. The Project will not involve other changes in the existing environment which could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. There would be no impact.

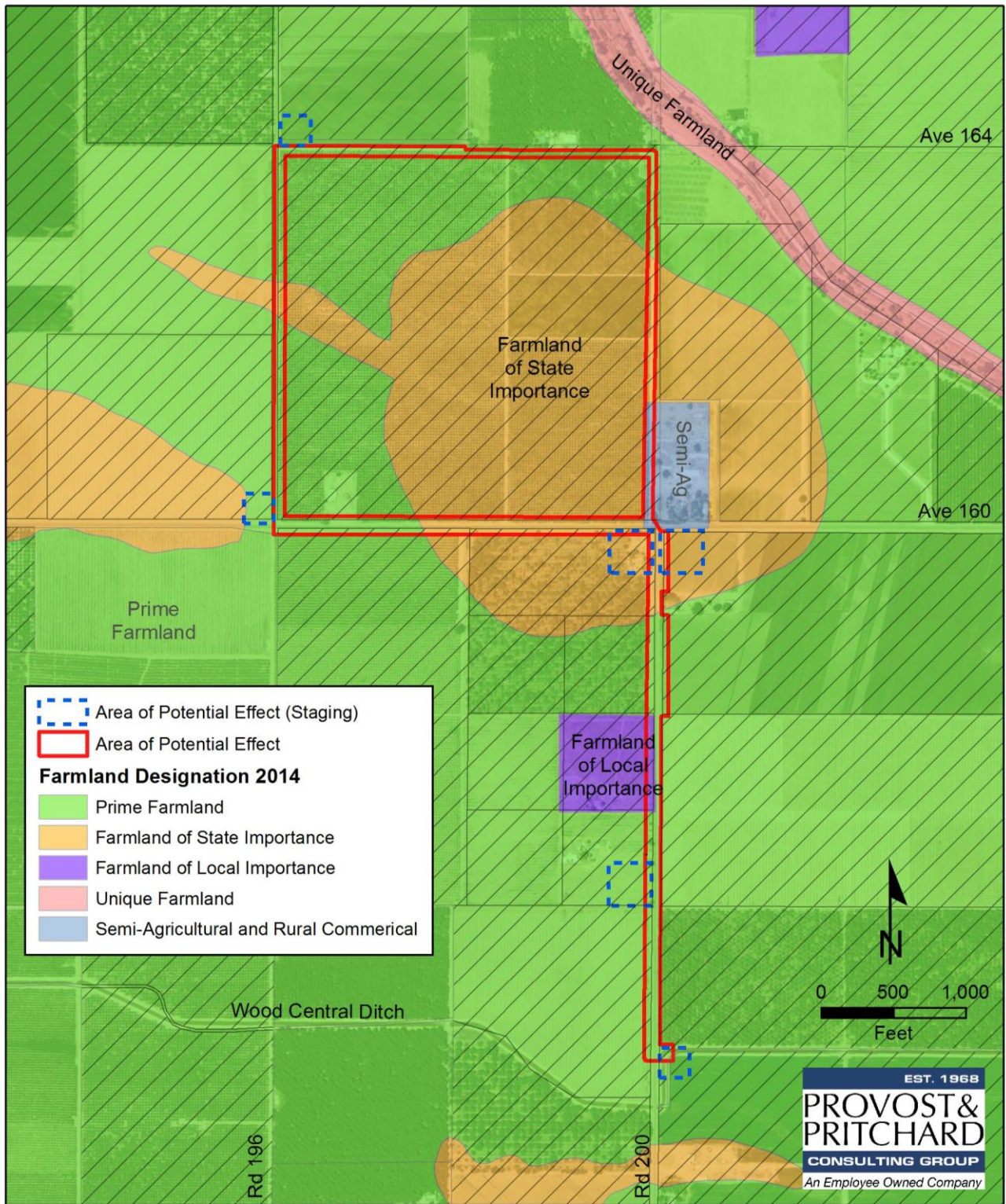


Figure 1-1: Farmland Designation Map - Service Area 1

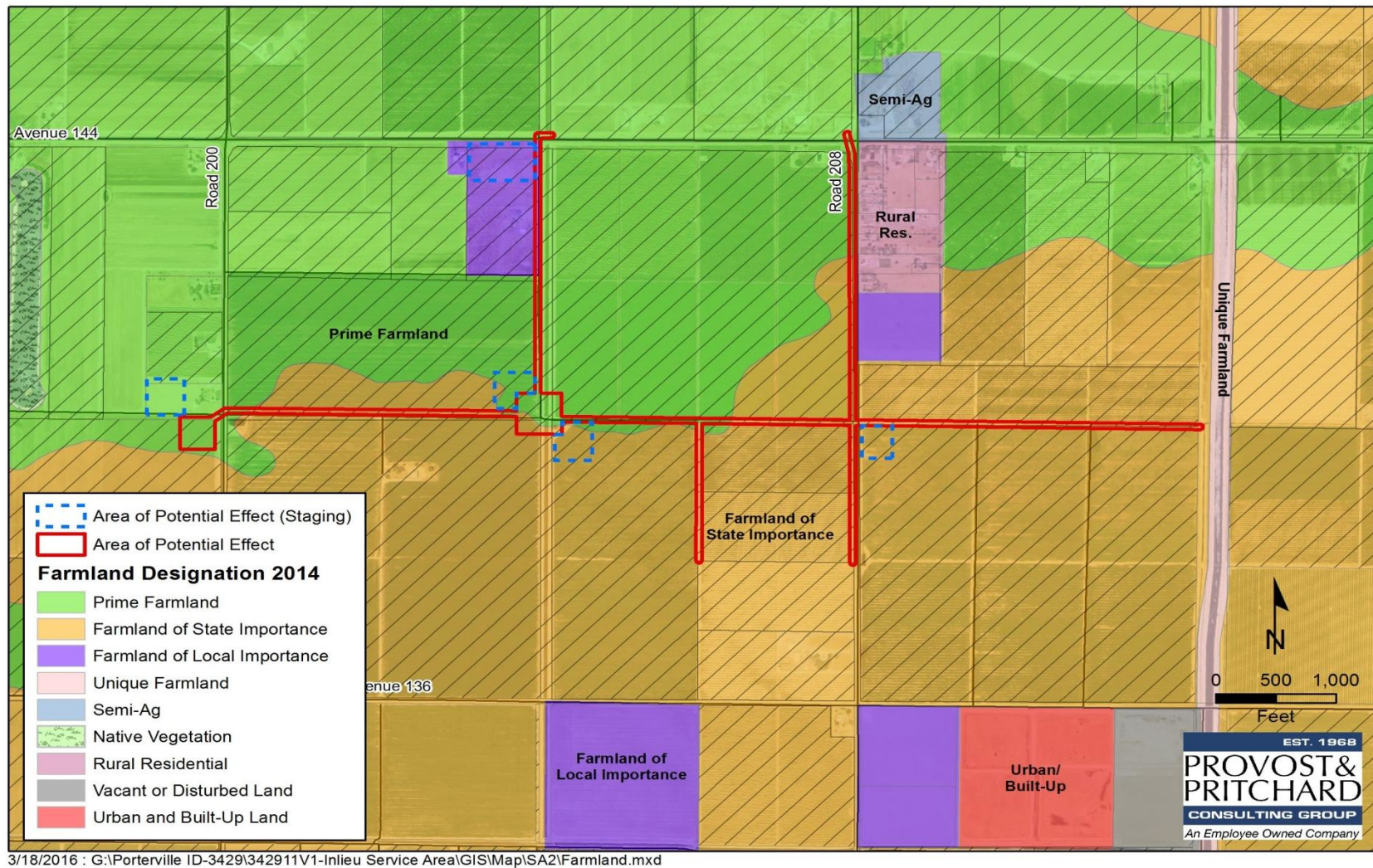


Figure 1-2: Farmland Designation Map - Service Area 2

1.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Table 1-3: Air Quality

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

1.3.1 Environmental Setting

The climate of the San Joaquin Valley is characterized by long, hot summers and stagnant, foggy, winters. Precipitation is low and temperature inversions are common. These characteristics are conducive to the formation and retention of air pollutants and are in part influenced by the surrounding mountains which intercept precipitation and act as a barrier to the passage of cold air and air pollutants.

The proposed Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either “attainment”, “non-attainment”, or “extreme non-attainment” areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for O₃, a

State and Federal non-attainment area for PM_{2.5}, a State non-attainment area for PM₁₀, and Federal and State attainment area for CO, SO₂, NO₂, and Pb¹¹.

1.3.2 Regulatory Setting

1.3.2.1 Federal

U.S. Environmental Protection Agency: At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act: The CAA of 1970 (as amended in 1990) required the U.S. EPA to develop standards for pollutants considered harmful to public health or the environment. Two types of National Ambient Air Quality Standards (NAAQS) were established. Primary standards protect public health, while secondary standards protect public welfare, by including protection against decreased visibility, and damage to animals, crops, landscaping and vegetation, or buildings. NAAQS have been established for six "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb).

Toxic Substances Control Act: The Toxic Substances Control Act (TSCA) first authorized the U.S. EPA to regulate asbestos in schools and public and commercial buildings under Title II of the law, which is also known as the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires Local Education Agencies (LEAs) to inspect their schools for asbestos-containing building materials (ACBMs) and prepare management plans to reduce the asbestos hazard. The Act also established a program for the training and accreditation of individuals performing certain types of asbestos work.

National Emission Standards for Hazardous Air Pollutants: Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP). These are technology-based source-specific regulations that limit allowable emissions of HAPs.

1.3.2.2 State

California Air Resources Board: The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act: The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO₂, and NO₂ by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

¹¹ San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards and Valley Attainment Status. <http://www.valleyair.org/aqinfo/attainment.htm>. Site accessed December 2014.

Table 1-4: Summary of Ambient Air Quality Standards & Attainment Designation

Summary of Ambient Air Quality Standards & Attainment Designation					
Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O ₃)	1-hour	0.09 ppm	Non- Attainment	–	Non-Attainment (Extreme)**
	8-hour	0.070 ppm		0.075 ppm	
Particulate Matter (PM ₁₀)	AAM	20 µg/m3	Non-Attainment	–	Attainment
	24-hour	50 µg/m3		150 µg/m3	
Fine Particulate Matter (PM _{2.5})	AAM	12 µg/m3	Non-Attainment	12 µg/m3	Non-Attainment
	24-hour	No Standard		35 µg/m3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Maintenance
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO ₂)	AAM	0.030 ppm	Attainment	0.053 ppm	Attainment/ Unclassified
	1-hour	0.18 ppm		0.100 ppb	
Sulfur Dioxide (SO ₂)	AAM	–	Attainment	0.03 ppm	Attainment/ Unclassified
	24-hour	0.04 ppm		0.14 ppm	
	3-hour	–		–	
	1-hour	0.25 ppm		75 ppb	
Lead	30-day Average	1.5 µg/m3	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		1.5 µg/m3	
	Rolling 3-Month Average	–		0.15 µg/m3	
Sulfates	24-hour	25 µg/m3	Attainment	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m3)	Unclassified		
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%.	Unclassified		

* For more information on standards visit :<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

** No federal 1-hour standard. Reclassified extreme nonattainment for the federal 8-hour standard May 5, 2010.

***Secondary Standard

Source: ARB 2015; SJVAPCD 2015

California Assembly Bill 170: Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003 creating Government Code Section 65302.1 which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies and feasible implementation strategies designed to improve air quality.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants: Within California, toxic air contaminants (TACs) are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

1.3.2.3 Local

San Joaquin Valley Air Pollution Control District: The SJVAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the San Joaquin Valley Air Basin (SJVAB), within which the proposed Project is located. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

The SJVAPCD Rules and Regulations that are applicable to the proposed Project include, but are not limited to, the following:

Regulation VIII (Fugitive Dust Prohibitions), Regulation VIII (Rules 8011-8081): This regulation is a series of rules designed to reduce particulate emissions generated by human activity, including construction and demolition activities, carryout and trackout, paved and unpaved roads, bulk material handling and storage, unpaved vehicle/traffic areas, open space areas, etc. If a non-residential area is 5.0 or more acres in area, a Dust Control Plan must be submitted as specified in Section 6.3.1 of Rule 8021. Additional requirements may apply, depending on total area of disturbance. The control measures that must be implemented at all construction sites are as follows:

- All disturbed areas, including storage piles, which are not actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressants, covered with a tarp or other similar cover, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions during construction using water or chemical stabilizer suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading cut and fill, and demolition activities during construction shall be effectively controlled of fugitive dust emissions utilizing application of water or pre-soaking.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from top of container shall be maintained.
- All operations shall limit, or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site at the end of each workday.
- Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

Regulatory Attainment Designations: Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A “nonattainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An “unclassified” designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO₂ as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The U.S. EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, U.S. EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM₁₀ based on the likelihood that they would violate national PM₁₀ standards. All other areas are designated “unclassified.”

The SJVAB is currently designated as a nonattainment area with respect to the state PM₁₀ standard, ozone, and PM_{2.5} standards. The SJVAB is designated nonattainment for the national 8-hour ozone and PM_{2.5} standards. On September 25, 2008, the U.S. EPA redesignated the San Joaquin Valley to attainment for the PM₁₀ NAAQS and approved the PM₁₀ Maintenance Plan.

Tulare County General Plan:

- Policy AQ-1: To improve air quality through a regional approach and interagency cooperation.
- Policy AQ-2: To improve air quality by reducing air emissions related to transportation.
- Policy AQ-4: To implement the best available controls and monitoring necessary to regulate air emissions.
 - AQ-4.1: Air Pollution Control Technology – The County shall utilize the BACM and RACM as adopted by the County to support SJVAPCD air quality attainment plans to achieve and maintain healthful air quality and high visibility standards.
 - AQ-4.2: Dust Suppression Measures – The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions.

1.3.3 Impact Assessment

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

Less Than Significant Impact. The proposed Project will not conflict with or obstruct the implementation of the air quality management standards. Standards set by the Air District, CARB, and Federal agencies relating

to the proposed Project will continue to apply. A Fugitive Dust Control Plan will be submitted to the Air District to comply with Regulation VIII (Table 4) prior to the initiation of construction. An Indirect Source Review (ISR) application and Air Impact Analysis (AIA) will be filed with the Air District to address NO_x emissions from construction. Therefore, the proposed Project will not conflict with the Air District plans and any impacts will be less than significant.

III-b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. Typically, construction and operation of a project generates emissions of various air pollutants, including criteria pollutants such as carbon monoxide (CO), ozone precursors such as nitrous oxides (NO_x) and reactive organic gases (ROG) or Volatile Organic Compounds (VOC), particulate matter less than 10 microns in diameter (PM₁₀), and PM_{2.5}, as well as sulfur oxides (SO_x). For example, typical emission sources during construction include equipment exhaust, dust from wind erosion, earthmoving activities, and vehicle movements.

To assist in evaluating impacts of Project-specific air quality emissions, the SJVAPCD has adopted thresholds of significance for criteria pollutant emissions, expressed in units of tons per year (tons/yr), as presented in **Error! Reference source not found..**

Table 1-5: SJVAPCD Thresholds of Significance

SJVAPCD Thresholds of Significance		
Pollutant	Construction Emissions (tons/yr)	Operation Emissions (tons/yr)
ROG	10	10
NO _x	10	10
CO	100	100
SO _x	27	27
PM ₁₀	15	15
PM _{2.5}	15	15

Source: SJVAPCD, May 2015.

Construction-Related Emissions:

The proposed Project includes the construction of approximately 15,000 LF of open channel and pipeline facilities, for a total of approximately 19 acres disturbed. Proposed Project construction will require the use of scrapers, graders, compacters, trenchers, backhoes, forklifts, front end loaders, water trucks, and materials and equipment hauling trucks. The aforementioned vehicles are diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. The estimated construction period (one phase, approximately eight months long) would generate air pollutant emissions intermittently within the site, and in the vicinity of the site. As a result, construction is a potential short-term concern because the proposed Project is in a nonattainment area for ozone and PM.

Construction of the proposed Project is estimated to require an average of eighteen (18) worker trips per day. Construction is estimated to start in 2016 and would be completed within approximately eight months, in one phase.

The proposed Project will comply with Air District Rule 8021 for construction and earthmoving activities.

The proposed Project's short-term construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the ITE Manual, vehicle mix, trip length, average speed, etc. The proposed Project's unmitigated construction-related emissions are presented in **Error!**

Reference source not found. and the output files can be seen in Appendix B.

Table 1-6: Maximum Unmitigated Proposed Project Construction-Related Emissions

Maximum Unmitigated Proposed Project Construction-Related Emissions			
Pollutant	2016 Project Construction Emissions (tons/yr)	2017 Project Construction Emissions (tons/yr)	SJVAPCD Thresholds of Significance (tons/yr)
ROG (VOC)	0.1998	0.1638	10
NO _x	2.1117	1.6421	10
CO	1.4993	1.1854	100
SO _x	0.0017	0.0017	27
PM ₁₀	0.6056	0.2978	15
PM _{2.5}	0.3532	0.1758	15

Source: CalEEMod, March 2016 (see Appendix B)

Operational Emissions

The proposed Project consists of approximately 15,000 LF of open channel and pipeline facilities, with above ground turnouts spaced by about a quarter of a mile along the proposed routes. These water distribution facilities will operate as a largely passive process. However, it is estimated that operation would require a maximum of fifty (50) round trips per year. The proposed Project's operational emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software. The proposed Project's unmitigated operational emissions are presented in **Error! Reference source not found.** below and the output files can be seen in Appendix B.

Table 1-7: Maximum Unmitigated Proposed Project Operation-Related Emissions

Maximum Unmitigated Proposed Project Operation-Related Emissions		
Pollutant	Project Construction Emissions (tons/yr)	SJVAPCD Thresholds of Significance (tons/yr)
ROG (VOC)	3.6148	10
NO _x	0.0082	10
CO	0.0261	100
SO _x	0.00005	27
PM ₁₀	0.0029	15
PM _{2.5}	0.0009	15

Source: CalEEMod, March 2016 (see Appendix B)

Therefore, the proposed Project's construction and operational emissions would not result in a significant contribution to the region's nonattainment status of ozone or PM, and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. Any impacts would be less than significant.

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

Less than Significant Impact. As discussed in Impact III-b, the Project would result in the generation of criteria pollutants during construction; however, during construction, air quality impacts would be less than SJVAPCD thresholds for non-attainment pollutants and operation of the Project would not exceed the emissions thresholds for criteria pollutants. Accordingly, net increases of non-attainment criteria pollutants would be less than significant.

III-d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The SJVAPCD defines sensitive receptors as: facilities that house or attract children, the elderly, and people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors¹². The nearest sensitive receptor to the proposed Project site is located approximately 50 feet from the proposed conveyance facilities.

As discussed in Impact III-b, the proposed Project would result in the generation of criteria pollutants during construction; however, these impacts would be less than SJVAPCD thresholds for non-attainment pollutants and operation of the Project would not exceed emissions thresholds for criteria pollutants.

Per CARB's Diesel Risk Reduction Plan¹³, the cancer risk associated with being exposed at a distance of 20 m to a truck stop (the closest comparable use listed in figure 2) for 70 years is approximately 75 to 150 chances in a million. At 60 meters (200 feet), the risk of cancer from exposure to diesel particulate matter goes down by about 50 percent¹⁴.

Any risk of cancer from exposure to diesel particulate matter at 20 meters to a construction site for approximately eight months is negligible at best since exposure for 70 continuous years creates a risk of only about 0.015 percent. Therefore, any exposure of sensitive receptors to pollutant concentrations would be less than significant.

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

Less than Significant Impact. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative or formulaic methodologies to determine the presence of a significant odor impact do not exist. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. **Error! Reference source not found.** below shows common types of facilities that have been known to produce odors in the San Joaquin Valley.

¹² GAMAQI, July 2014, Pg. 65.

¹³ California Air Resources Board. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. <http://www.arb.ca.gov/diesel/documents/rrpFinal.pdf>. Page 17. Accessed September 2014.

¹⁴ South Coast Air Quality Management District's Air Quality Issues Regarding Land Use. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/chapter-2---air-quality-issues-regarding-land-use.pdf?sfvrsn=2> Page 2-6. Accessed September 2014

Table 1-8: Screening Levels for Potential Odor Sources

Screening Levels for Potential Odor Sources ¹⁵	
Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

The proposed Project does not involve any of the aforementioned facilities, and the system would not generate chemical emissions that would negatively contribute to air quality or create objectionable odors.

As with all construction projects, during construction there would be emissions of diesel particulate matter (DPM). DPM poses health risks¹⁶. However, as discussed in Impact III-b, the proposed Project would not exceed SJVAPCD thresholds of significance and would cause only negligible cancer risk. Therefore, impacts associated with DPM will be less than significant.

No significant odor impacts related to Project implementation are anticipated due to the nature and short-term extent of potential sources, as well as the intervening distance to sensitive receptors. Therefore, the operation of the Project will have a less than significant impact associated with the creation of objectionable odors affecting a substantial number of people.

¹⁵ *GAMAQI, March 2015, Table 6, Pg 103*

¹⁶United States Department of Labor. Occupational Safety & Health Administration.
https://www.osha.gov/dts/hazardalerts/diesel_exhaust_hazard_alert.html Accessed September 2014.

1.4 Biological Resources

Table 1-9: Biological Resources

Biological Resources				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.4.1 Environmental Setting

The following summary of environmental conditions can be found in the Porterville Irrigation District In-Lieu Service Area Project Biological Evaluation, conducted and written by Live Oak Associates, Inc., which can be found in Appendix C:

The Service Area 1 and Service Area 2 Project sites are located in the southern San Joaquin Valley west of the City of Porterville. The Valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the southern San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the

Project sites is about 12 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

The principal drainage of the Project vicinity is the Tule River, which passes within 300 feet of the Service Area 1 preferred route. The Tule River historically contained large areas of riparian, wetland, and aquatic ecosystems that supported large populations of diverse native plants and animals. Currently, the drainage supports only a fraction of the riparian habitat it once supported and the aquatic habitat has been greatly degraded from agricultural runoff and irregular flows. In essence, the channel has been reduced to a series of distributary channels supplying water to farmland in the region.

The vicinity of the Service Area 1 Project site consists of roads, agricultural lands, several segments of the Wood-Central Ditch, two tailwater basins, non-native grassland, one residence, and disturbed areas bordering these uses. The area slopes gradually from the southeast to the northwest, with elevations ranging from 388 feet National Geodetic Vertical Datum (NGVD) at Road 200's crossing of Wood-Central Ditch to 378 feet NGVD at the intersection of Road 196 and Avenue 164.

Five soil-mapping units representing five soil series were identified on the Service Area 1 Project site: Tagus loam, 0 to 2 percent slopes; Exeter loam, 0 to 2 percent slopes; Nord fine sandy loam, 0 to 2 percent slopes; Flamen loam, 0 to 2 percent slopes; and Tujunga loamy sand, 0 to 2 percent slopes. Of these, all but the Tagus loam mapping unit is considered hydric. Hydric soils are defined as saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions hydrophytic vegetation is supported. However, due to long-term management, soils of the site exhibited no characteristics of hydric soils.

The vicinity of the Service Area 2 Project site consists of roads, agricultural lands, a segment of the Tule River Intertie and an adjacent irrigation ditch, one tailwater basin, and disturbed areas bordering these uses. The area slopes gradually from east to west, with elevations ranging from 407 feet NGVD at the eastern terminus of the proposed lateral to 383 feet NGVD at staging area 2-1, beyond the lateral's western terminus.

Two soil-mapping units representing two soil series were identified on the Service Area 2 Project site: Exeter loam, 0 to 2 percent slopes and Flamen loam, 0 to 2 percent slopes. Both mapping units are considered hydric; however, due to long-term management, soils of the site exhibited no characteristics of hydric soils.

Both Project sites are situated within a matrix of agricultural lands, rural residences, and industrial development. Eight habitat/land use types were observed on the Project site during the April 2015 and January 2016 biological field surveys; orchard/vineyard, agricultural field, ruderal, fallow field, non-native grassland, residential, irrigation ditch, and tailwater basin. Further description of these habitat/land use types can be found in Appendix C.

1.4.2 Regulatory Setting

1.4.2.1 Federal

Endangered Species Act of 1973 (16 U.S.C. 1531 through 1543): The federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries. Section 9 of the FESA prohibits the taking of listed wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging-up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16 U.S.C. 1538). Pursuant to Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed plant or wildlife species or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to another authorized activity,

provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties, provided a Habitat Conservation Plan (HCP) is developed.

Migratory Bird Treaty Act (16 U.S.C. 703 through 711): The Migratory Bird Treaty Act (MBTA) implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits are in 50 CFR 13 General Permit Procedures and 50 CFR 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of its Fish and Game Code.

Clean Water Act: The federal Clean Water Act's (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers (ACOE). The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3 7b)." The USEPA also has authority over wetlands and may override an ACOE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or Waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

1.4.2.2 State

California Endangered Species Act (Fish and Game Code 2050 *et seq.*): The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called "candidates" by the State). Section 2080 of the Fish and Game Code (FGC) prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. "Take" is defined in Section 86 of the FGC as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened, or candidate species or result in destruction or adverse modification of essential habitat. The CDFW administers the Act and authorizes take through Section 2081 agreements (except for designated fully-protected species).

Sections 2080 and 2081: Section 2080 of the FGC states, "No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act." Pursuant to Section 2081 of the FGC, the CDFW may authorize individuals or public agencies to import, export, take, or possess, State-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding if: (1) the take is incidental to an otherwise lawful activity, (2) impacts of the authorized take are minimized and fully mitigated, (3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) the project proponent ensures

adequate funding to implement the measures required by the CDFW. The CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Sections 3503 and 3503.5: Under these sections of the FGC, the project proponent is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory non-game bird as designated in the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to FGC Section 3800.

Fully Protected Species: The State of California first began to designate species as fully-protected prior to the creation of the CESA and FESA. Lists of fully-protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians, reptiles, birds, and mammals. Most fully-protected species have since been listed as threatened or endangered pursuant to the CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (FGC Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act (Fish and Game Code 1900 through 1913): Regarding listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (FGC Sections 1900 to 1913), which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants that are not protected pursuant to NPPA. In this case, plants listed as rare or endangered pursuant to the NPPA are not protected pursuant to CESA, but can be protected pursuant to CEQA. In addition, plants that are not state-listed, but that meet the standards for listing, are also protected pursuant to CEQA (Guidelines, Section 15380). In practice, this is generally interpreted to mean that all species on lists 1B and 2 of the California Native Plant Society (CNPS) Inventory potentially qualify for protection pursuant to CEQA, and some species on lists 3 and 4 of the CNPS Inventory may qualify for protection pursuant to CEQA. List 3 includes plants for which more information is needed on taxonomy or distribution. Some of these are rare and endangered enough to qualify for protection pursuant to CEQA. List 4 includes plants of limited distribution that may qualify for protection if their abundance and distribution characteristics are found to meet the standards for listing.

California Lake and Streambed Alteration Agreement: Sections 1600 through 1616 of the FGC require that a Lake and Streambed Alteration Program Notification Package be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal on which the CDFW and the applicant agree is the Lake and Streambed Alteration Agreement. Often, projects that require a Lake and Streambed Alteration Agreement also require a permit from the ACOE pursuant to Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Lake and Streambed Alteration Agreement may overlap.

1.4.2.3 Local

Tulare County General Plan:

- **Policy ERM-1:** To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County.
 - **ERM-1.1:** Protection of Rare and Endangered Species – The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development.

- ERM-1.2: The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.
- ERM-1.4: Protect Riparian Areas – The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.
- ERM-1.6: Management of Wetlands – The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.
- ERM-1.9: Coordination of Management on Adjacent Lands – The County shall work with other government land management agencies (such as the Bureau of Land Management, US Forest Service, National Park Service) to preserve and protect biological resources, including those within and adjacent to designated critical habitat, reserves, preserves, and other protected lands, while maintaining the ability to utilize and enjoy the natural resources in the County.
- ERM-1.12: Management of Oak Woodland Communities – The County shall support the conservation and management of oak woodland communities and their habitats.
- ERM-1.16: Cooperate with Wildlife Agencies – The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.
- ERM-1.17: Conservation Plan Coordination – The County shall coordinate with local, State and federal habitat conservation planning efforts to protect critical habitat areas that support endangered species and other special-status species.

1.4.3 Impact Assessment

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

Less Than Significant with Mitigation Incorporation. Reconnaissance-level field surveys of the proposed Project sites were conducted on April 28, 2015 and January 21, 2016 by Live Oak Associates (LOA). Detailed results can be found in Appendix C. The proposed Project site is located within the United States Geological Survey (USGS) Page 7.5-minute topographic quadrangle. Based on a review of information from CDFW's Natural Diversity Database (CNDDB) RareFind5 data (CDFW 2014) for this quadrangle, and the eight surrounding quadrangles (*Tulare, Tipton, Taylor Weir, Corcoran, Waukena, Remnoy, Gosben, and Visalia*), the following species that are federally or state-listed or have other special status that are reported from historical information for the nine quadrangles are shown in **Error! Reference source not found.** and **Error! Reference source not found.**

Table 1-10: Federal and State-Listed Status Plant Species

Species	Status	Habitat	Occurrence on the Proposed Project Site
California Jewel-flower (<i>Caulanthus californicus</i>)	FE, CE, CNPS 1B	Occurs in chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland. Blooms February–May; elevation 250-3,300 ft.	Absent. Historic and ongoing human disturbance of the Project site has rendered habitats unsuitable for this species.
Springville Clarkia (<i>Clarkia springvillensis</i>)	FE, CE, CNPS 1B	Occurs in chaparral, cismonte woodland, and valley and foothill grassland habitats with granitic soil. Blooms May-July; elevation 800-4,000 ft.	Absent. Suitable habitat for Springville clarkia is absent from the Project sites, and both sites are situated below the lower limits of this species' elevational range.
Striped Adobe Lily (<i>Fritillaria striata</i>)	CT, CNPS 1B	Occurs in cismontane woodland and valley and foothill grassland habitats with clay soils. Blooms February-April; elevation 450-4,775 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.
San Joaquin Adobe Sunburst (<i>Pseudobahia peirsonii</i>)	FT, CE, CNPS 1B	Occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	Absent. Suitable heavy clay soils of the Porterville and Centerville series are absent from the two Project sites.
Keck's Checkerbloom (<i>Sidalcea keckii</i>)	FE, CNPS 1B	Occurs in valley grassland and foothill woodland, often in serpentine soils. Blooms April-May; elevations below 2,100 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.
Earlimart Orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)	CNPS 1B.2	Occurs in valley and foothill grasslands between 130 and 330 ft. in elevation; blooms August-September.	Absent. Suitable habitat for this species is absent from the Project site. Any suitable habitat that may have once been present has been highly modified by years of agricultural and water conveyance practices on the site.
Lost Hills Crownscale	CNPS 1B	Found in chenopod scrub and valley and foothill grasslands; alkaline soils. Blooms April-August; elevations below 2,080 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.

Species	Status	Habitat	Occurrence on the Proposed Project Site
Brittlescale (<i>Atriplex depressa</i>)	CNPS 1B.2	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, grasslands, and vernal pools of the Central Valley. Blooms April-October; elevations below 1,050 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.
Lesser Saltscale (<i>Atriplex minuscula</i>)	CNPS 1B	Occurs widely scattered locations of California's Central Valley with sandy alkaline soils in chenopod scrub, valley grasslands, and vernal pools. Blooms May-October; elevations below 660 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.
Vernal Pool Smallscale (<i>Atriplex persistens</i>)	CNPS 1B	Occurs in alkaline vernal pools; blooms July-October; elevations below 400 ft.	Absent. Vernal pools are absent from the Project site and adjacent lands.
Subtle Orache (<i>Atriplex subtilis</i>)	CNPS 1B	Occurs in valley and foothill grasslands of the San Joaquin Valley; blooms August-October; elevation 130-330 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.
Recurved Larkspur (<i>Delphinium recurvatum</i>)	CNPS 1B	Occurs in cismontane woodland and valley and foothill grass-lands; blooms March-June; alkaline soils; elevations below 2,500 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.
Spiny-sepaed Button-celery (<i>Eryngium spinosepalum</i>)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin. Blooms April-May; elevation 330-840 ft.	Absent. Historic and ongoing human disturbance of the Project sites has rendered habitats unsuitable for this species.
Madera Leptosiphon	CNPS 1B	Occurs in oak woodland, cismontane woodland, and coniferous forest. Blooms April-May; elevation 1,000 to 4,000 ft.	Absent. Suitable habitats for this species are absent from the Project sites, and both sites are situated outside of the species' elevational range.
Calico Monkeyflower	CNPS 1B	Occurs in foothill woodland habitats. Blooms March-May; elevation 1,400 to 4,000 ft.	Absent. Suitable habitat for calico monkeyflower is absent from the Project sites, and both sites are situated below the lower limits of this species' elevational range.

Table 1-11: Federal and State-Listed Status Wildlife Species

Species	Status	Habitat	Occurrence on the Proposed Project Site
Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>)	FT	Mature elderberry shrubs of California's Central Valley and Sierra Foothills.	Absent. The newly revised range of this species by the USFWS does not include Tulare County.
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	Absent. Habitat suitable for this species is absent from the Project sites. The closest known vernal pool fairy shrimp population was recorded approximately 3 miles east of the Service Area 2 site in 2002.
California Condor (<i>Gymnogyps californianus</i>)	FE, CE, CFP	Requires vast expanses of open savannah, grasslands, and foothill chaparral. Forages on large, dead animals. Nests of cliffs, often within deep canyons. Occurs in many habitats on the southern half of California.	Unlikely. The Project sites do not offer suitable breeding habitat for this species, nor would they serve as a source of the large animal carcasses the condor feeds on. However, condors may occasionally fly over the sites. The closest known condor occurrence was documented in the Blue Ridge Condor Area, approximately 17 miles northeast of the sites, in 1976.
Blunt-nosed Leopard Lizard (<i>Gambelia silus</i>)	FE, CE, CFP	Frequents grasslands, alkali meadows and chenopod scrub of the San Joaquin Valley from Merced south to Kern County.	Absent. Habitats required by this species have been highly disturbed or eliminated as a result of agricultural activities.

Species	Status	Habitat	Occurrence on the Proposed Project Site
Swainson's Hawk (<i>Buteo swainsoni</i>)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	Possible. Swainson's hawks could potentially nest in the dead valley oak on the Service Area 1 site, or in mature trees adjacent to the two sites. Swainson's hawks could forage over agricultural fields of both sites, and fallow fields and non-native grassland of Service Area 1. However, Swainson's hawks are uncommon in the eastern portion of the San Joaquin Valley. The closest known nesting occurrences of this species were recorded approximately 10 miles northwest of the Service Area 1 site in 2000 and 2008.
White-tailed Kite (<i>Elanus leucurus</i>)	CFP	Occurs in savanna, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	Possible. Kites could forage over the fields and grassland of the sites and theoretically also nest in the dead valley oak on the Service Area 1 site or mature trees adjacent to the sites; however, this species does not typically nest adjacent to roads. There are no known occurrences of this species within 10 miles.
Tricolored Blackbird (<i>Agelaius tricolor</i>)	CE	Nests colonially near fresh water in dense cattails or tules, or in thickets of willows or shrubs. Forages in grassland and cropland areas.	Possible. Tricolored blackbirds could potentially forage in the fields and grassland of the sites, but nesting habitat is absent. The closest known occurrence of this species was recorded approximately 10 miles east of the Service Area 2 site in 1971.

Species	Status	Habitat	Occurrence on the Proposed Project Site
Tipton Kangaroo Rat (<i>Dipodomys nitratoides nitratoides</i>)	FE, CE	Occupies underground burrows in valley saltbush scrub and valley sink scrub habitats in the southern San Joaquin Valley.	Absent. Any potential Tipton kangaroo rat habitat that may have once been present has been eliminated through intensive agricultural uses. There are no modern occurrences of this species in the Project vicinity. The two CNDDDB records within 10 miles were recorded in 1927 and 1943.
San Joaquin Kit Fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (6 to 10 inches in diameter) ground squirrel burrows as denning habitat.	Possible. Intensive agricultural practices, highly modified habitats, and ongoing disturbance make kit fox occupation of the Project sites unlikely. However, individual SJKF may pass through or forage on the sites from time to time. The grassland and fallow fields of the Service Area 1 site and the dry-farmed grain field of the Service Area 2 site could potentially be used for denning. The CNDDDB lists 25 occurrences of SJKF within 10 miles of the Project sites, all from more than 20 years ago.
Townsend's Big-eared Bat	CCT, CSC	Found throughout California. Primarily a cave-dwelling species, but may roost in tunnels, buildings, other human-made structures, and hollow trees.	Possible. Individuals of this species may forage over the sites from time to time, and could potentially roost on the Service Area 1 site in the dead valley oak on the north side of Avenue 160. The closest known occurrence was recorded approximately 9 miles east of the Service Area 1 site in 1988.

Species	Status	Habitat	Occurrence on the Proposed Project Site
Western Spadefoot (<i>Scaphiopus hammondi</i>)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	Absent. Wetland habitat suitable for breeding by the western spadefoot is absent from the Project sites and surrounding lands. The closest known breeding occurrence was recorded approximately 6 miles southwest of the Service Area 2 site in 1978.
Foothill Yellow-Legged Frog (<i>Rana boylei</i>)	CSC	Occurs in rocky streams or pools in foothill woodlands or chaparral, with an isolated population on the floor of the Central Valley.	Absent. The Project sites do not offer suitable habitat for this species, and no occurrences have been documented within 10 miles of the sites.
Coast Horned Lizard (<i>Phrynosoma blainvillii</i>)	CSC	Occurs in the lower Sierra foothills and throughout the central and southern California coast in relatively open areas.	Unlikely. The disturbed habitats for the sites are marginal to unsuitable for this species, and there are no known occurrences within 10 miles.
San Joaquin Coachwhip (<i>Coluber flagellum ruddocki</i>)	CSC	Occurs in open, dry areas including grassland and saltbrush scrub. Takes refuge in rodent burrows and under shaded vegetation.	Unlikely. The disturbed habitats of the sites are marginal to unsuitable for this species, and there are no known occurrences within 10 miles.
Northern Harrier (Nesting) (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in wet areas, although grassland, pasture, and cultivated fields may be used.	Present. A northern harrier was observed foraging over an alfalfa field and vineyard of the Service Area 2 site during the field survey, and may also forage on the agricultural fields, fallow fields, and grassland of the Service Area 1 site from time to time. Breeding habitat is absent from both sites. The CNDDB lists no nesting occurrences in the Project vicinity.

Species	Status	Habitat	Occurrence on the Proposed Project Site
Burrowing Owl (<i>Athene cunicularia</i>)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	Possible. Burrowing owls could roost, nest, or forage in the grassland and possibly also the fallow fields of the Service Area 1 site, and the dry-farmed grain field of the Service Area 2 site. Agricultural fields of either site could be used for foraging. There are no CNDDB occurrences in the vicinity, but LOA observed a burrowing owl roosting in a pasture approximately 8 miles southwest of the Service Area 2 site in February 2015.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	Possible. Shrikes could nest in trees associated with the residence in staging area 1-4 on the Service Area 1 site. Agricultural fields of both sites and fallow fields and grassland habitat of the Service Area 1 site could be used for foraging. There are no known occurrences of this species within 10 miles of the sites, however.
Pallid Bat (<i>Antrozous pallidus</i>)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	Possible. Individuals of this species could forage on the sites, and could potentially roost on the Service Area 1 site in the dead valley oak on the north side of Avenue 160. There are no known occurrences of the pallid bat within 10 miles of the sites.
Western Mastiff Bat (<i>Eumops perotis</i> ssp. <i>californicus</i>)	CSC	Found in open, arid to semi-arid habitats, where it feeds on insects in flight. Roosts most often in crevices in cliff faces, but may also use high buildings, bridges, and tunnels.	Possible. Individuals of this species could forage over the sites, but roosting habitat is absent. There are no known occurrences of the western mastiff bat within 10 miles of the sites.

Species	Status	Habitat	Occurrence on the Proposed Project Site
American Badger (<i>Taxidea taxus</i>)	CSC	Uncommon resident statewide; most abundant in drier open stages of most shrub, forest, and herbaceous habitats.	Unlikely. Badgers may occasionally pass through or forage on the Project sites, and could potentially den in the non-native grassland or fallow fields of the Service Area 1 site or the dry-farmed grain field of the Service Area 2 site. The CNDDDB lists one historical occurrence of this species in the Project vicinity, approximately 2 miles southeast of the Service Area 2 site.

Occurrence Terminology:

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

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CCT	California Threatened (Candidate)
FPT	Federally Threatened (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Special Concern
CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

The proposed Project considered in this evaluation of impacts to biological resources is the construction of approximately 15,000 LF of water conveyance facilities over two service areas. Potentially significant Project impacts to biological resources and mitigations are discussed below (Appendix C).

San Joaquin Kit Fox (Vulpes macrotis mutica). Federal Listing Status: Federally Endangered; State Listing Status: Threatened.

Potential Impacts. The marginal nature of most of the onsite habitats, matrix of intensive land uses surrounding the sites, and lack of recent San Joaquin kit fox observations in the Project vicinity make kit fox occurrence on the two Project sites relatively unlikely. Nevertheless, it is at least theoretically possible that individual SJKF pass through or forage/den on the sites from time to time. If a kit fox were present at the time of construction, then it would be at risk of Project-related injury or mortality. Kit fox mortality as a result of project activities would violate the State and federal Endangered Species Acts, and is considered a potentially significant impact of the proposed Project.

Mitigation Measure Biological - 1: Prior to construction, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (see Appendix C) will be implemented.

- **Pre-construction Surveys.** Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any Proposed Project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS Standardized Recommendations. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the Proposed Project sites and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately.
- **Avoidance.** Should an active kit fox den be detected within or immediately adjacent to the area of work, a disturbance-free buffer will be established around the den in consultation with the USFWS and CDFW, to be maintained until a qualified biologist has determined that the den is no longer occupied. Known kit fox dens may not be destroyed until they have been vacant for a period of at least three days, as demonstrated by use of motion-triggered cameras or tracking medium, and then only after obtaining take authorization from the USFWS.
- **Minimization.** Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of Proposed Project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.
- **Employee Education Program.** Prior to the start of construction, the Applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the Proposed Project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the Project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during Project construction and implementation. The training will include a hand out with all of the training information included in it. The Project manager will use this handout to train any construction personnel who were not in attendance at the first meeting, prior to starting work on the Project.
- **Mortality Reporting.** The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during Project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Burrowing Owl (Athene cunicularia). Federal Listing Status: None. State Listing Status: Species of Special Concern

Potential Impacts. Both of the Project Service Area sites have the potential to be used by burrowing owls from time to time for foraging, roosting, and/or nesting. If individual owls occupy burrows on or immediately adjacent to the Project sites at the time of construction, then these owls would be at risk of construction-related injury or mortality. Construction mortality of the burrowing owl would constitute a violation of the Federal Migratory Bird Treaty Act and related state laws (see Sections 3.2.4, 3.2.5, and 3.2.6 of Appendix C) and is considered a potentially significant impact of the Project.

Mitigation Measure Biological - 2: Prior to construction, the following measures adapted from the U.S. Fish and Wildlife Service's 2012 Staff Report on Burrowing Owl Mitigation (Appendix C) will be implemented.

- **Take Avoidance Surveys.** A take avoidance survey for burrowing owls will be conducted by a qualified biologist between 14 and 30 days prior to the start of construction. This take avoidance

survey will be conducted according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFG 2012). The survey area will include all suitable habitats on and within 200 meters of Project impact areas, where accessible.

- **Avoidance of Active Nests.** If Project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near Project impact areas, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.
- **Avoidance or Passive Relocation of Resident Owls.** During the non-breeding season (September 1-January 31), resident owls occupying burrows in impact areas may either be avoided, or passively relocated to alternative habitat. If the Applicant chooses to avoid active owl burrows within the impact area during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing, and will remain in place until a qualified biologist determines that the burrows are no longer active. If the Applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50-foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50-foot buffer and up to 50 meters outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50-foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50-foot buffer.

American Badger (Taxidea taxus). Federal Listing Status: None. State Listing Status: Species of Special Concern

Potential Impacts. The American badger is relatively uncommon in the region, but individuals may occasionally pass through or forage/den within the Project sites. If one or more badgers were denning on the site(s) at the time of construction, then these individuals would be at risk of Project-related injury or mortality. Construction mortality of American badgers is considered a potentially significant impact of the Project. (Appendix C).

Mitigation Measure Biological - 3. Prior to construction, the following mitigation measures will be implemented:

- **Pre-construction Survey.** A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the start of construction. Preconstruction surveys will be conducted in all suitable denning habitat of the Project site.
- **Avoidance.** Should an active natal den be identified during the preconstruction surveys, a suitable disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.

Project Impacts to Nesting Migratory Birds

Potential Impacts. The majority of both sites consist of habitat that could be used for nesting by one or more avian species protected by the federal MBTA and related state laws. American robins and mourning doves may nest in the sites' orchards or residential trees. Ornamental shrubs of the Service Area 1 site could be used by the disturbance-tolerant house finch or northern mockingbird. Cliff swallows are known to nest in

the box culvert at the Road 200 crossing of the Wood-Central Ditch on the Service Area 1 site. Killdeer may nest on bare ground in ruderal areas of either site. Although unlikely, the dead valley oak on the Service Area 1 site could theoretically be used for nesting by the Swainson's hawk or white-tailed kite, and these special status raptors could also nest in mature trees immediately adjacent to the Project sites. Any birds nesting within the sites at the time of construction have the potential to be injured or killed by Project activities, and birds nesting adjacent to the sites could be disturbed by Project activities such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds would be in violation of state and federal laws and are considered a potentially significant impact of the proposed Project.

Mitigation Measure Biological - 4: The following measures will be implemented to reduce impacts to a less than significant level.

- **Avoidance.** In order to avoid impacts to nesting raptors and migratory birds, the Proposed Action/Project will be constructed, if feasible, outside the nesting season, or between September 1st and January 31st.
- **Pre-construction Surveys.** If Project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days prior to the start of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet, where accessible, for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.
- **Establish Buffers.** Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Project Impacts to Roosting Bats

Potential Impacts. The Service Area 1 site contains a number of trees that could be used by roosting bats, including a dead valley oak and two palms along the north side of Avenue 160, and several ornamental trees located within Staging Area 4 and at the northeast corner of Road 200 and Avenue 160. Of these, only the ornamental trees at the northeast corner of Road 200 and Avenue 160 are proposed for removal under current Project design. These trees are relatively immature, and are not expected to be used by bats associated with cavities or exfoliating bark; however, they may be used by foliage roosting species. If trees removed by the proposed Project contain maternity colonies, many individual bats could be killed. Such a mortality event would be considered a potentially significant impact of the Project.

Mitigation Measure Biological - 5. Prior to construction, the following measures will be implemented:

- **Temporal Avoidance.** To avoid potential impacts to maternity bat roosts, tree removal should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.
- **Pre-construction Survey.** If tree removal is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to the removal of large trees, a qualified biologist will survey these trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for

nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

- **Minimization.** If a non-breeding bat colony is found in disturbance areas, the individuals will be humanely evicted via two-stage removal of trees, under the direction of a qualified biologist to ensure that no harm or “take” of any bats occurs as a result of construction activities.
- **Avoidance of Maternity Roosts.** If a maternity colony is detected during pre-construction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist determines that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.

Implementation of these measures will reduce impacts to the special status species to a less than significant level.

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

No Impact. No riparian or other sensitive habitats occur on either of the two Project sites, and designated critical habitat is absent from the sites and adjacent lands. Because these habitats are absent from the Project sites, they will not be impacted by Project activities.

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

Less than Significant Impact. Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the ACOE, CDFW, and the RWQCB.

The Wood-Central Ditch may fall under the jurisdiction of the ACOE owing to its apparent upstream and downstream connectivity to known Waters of the U.S. However, this potentially-jurisdictional feature consists of a highly-maintained irrigation ditch with minimal wetland function or value. Temporary impacts to the ditch will be restricted to an area approximately one-half-acre in size, and permanent impacts are expected to be considerably less than one-half-acre. For these reasons, the proposed impacts to the Wood-Central Ditch will be less than significant.

IV-d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. The Project sites do not contain any features that would function as a wildlife movement corridor. The Project will have no effect on the Pacific flyway; birds using the flyway will continue to do so during and following Project development. Project impacts to wildlife movement corridors will be less than significant.

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

No Impact. There is no adopted biological preservation or tree preservation ordinance in Tulare County. There would be no impact.

IV-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 proposed Project is consistent with the goals and policies of the Tulare County General Plan. No known Habitat Conservation Plans or Natural Community Conservation Plans are in effect for the area. There would be no impact.

1.5 Cultural Resources

Table 1-12: Cultural Resources

Cultural Resources				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1.5.1 Environmental Setting

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The Information Center at California State University Bakersfield houses records associated with reported cultural resources surveys. The reconstruction of cultures inhabiting the subject area during the late Paleo-Indian to early Archaic Periods has proven difficult based on erosion and depositional pattern of the San Joaquin River. Many of the earliest archaeological records for the region have likely been buried beneath the vast alluvial deposits created by erosion and depositional processes indicative of the Valley and Sierra foothills.¹⁷

Tulare County was inhabited by indigenous California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Most information regarding these groups is based on Spanish government and Franciscan mission records of the 18th and 19th centuries, and in studies conducted during the 1900s to 1930s by American and British ethnographers. The ethnographic setting presented below is derived from the early works, compiled by W. J. Wallace, Robert F.G. Spier, and Charles R. Smith¹⁸, with statistical information provided by the California Native American Heritage Commission (NAHC).

Of the five main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory, which is defined roughly by the crest of the Diablo Range on the west and the foothills of the Sierra Nevada on the east, and from the Kings River on the north, to the Tehachapi Mountains on the south. The

¹⁷ County of Tulare. 2010. General Plan Background Report. Page 9-53.

¹⁸ Ibid. Page 9-54.

Foothill Yokuts inhabited the western slopes of the Sierra Nevada between the Fresno River and Kern River, with settlements generally occurring between the 2,000- and 4,000-foot elevations. The Tubatulabal inhabited the Sierra Nevada Mountains, at the higher elevations, near Mt. Whitney in the east, extending westward along the drainages of the Kern River, and the Kern River-South Fork. The Monache comprised six small groups that lived in the Sierra Nevada east of the Foothill Yokuts, in locations ranging between 3,000- and 7,000-foot elevations¹⁹.

1.5.2 Regulatory Setting

1.5.2.1 Federal

Section 106 of the National Historic Preservation Act: Section 106 of the National Historic Preservation Act (NHPA) as amended (16 USC §470(f)) requires that impacts on significant cultural resources, hereafter called historic properties, be taken into consideration in any federal undertaking. “Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (National Register) maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties.

The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria” [36 CFR 800.16(l)]. The federal significance of an archaeological site or an architectural structure is defined in the NHPA implementing regulations (36 CFR 60.4).

As prehistoric archaeological sites, artifacts, and human remains are considered important components of contemporary American Indian heritage, two federal statutes apply. The American Indian Religious Freedom Act of 1978 (AIRFA) (42 USC §1996–1996(a)) requires that locations identified as central to American Indian religious practice be protected. The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (25 USC §3001–3013) requires that prehistoric human remains and burial-related artifacts, as well as sacred objects of cultural patrimony that are recovered during ground disturbances be provided to those contemporary Native Americans who are recognized as lineal descendants or as a tribal group that has the closest cultural affiliation with such remains or artifacts.

Federal Regulations Relating to Paleontological Resources: Federal protection for scientifically-significant paleontological resources applies to projects if any construction or other related project impacts occur on federally-owned or -managed lands, involve the crossing of state lines, or are federally-funded. The following federal protections apply to paleontological resources:

- **American Antiquities Act of 1906** (16 USC §431-433). Establishes a penalty for disturbing or excavating any historic or prehistoric ruin or monument or object of antiquity on federal lands as a maximum fine of \$500 or 90 days in jail.
- **The National Environmental Policy Act of 1969**, as amended (Pub. L. 91-190, 42 USC 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258 §4(b), Sept. 13, 1982). Recognizes the continuing responsibility of the Federal Government to “preserve important historic, cultural, and natural aspects of our national heritage....” (Sec. 101 [42 USC § 4321]) (#382).
- **National Historic Preservation Act of 1966** (Pub. L. 89-665; 80 Stat. 915, 16 USC 470 et seq.). Provides for the survey, recovery, and preservation of significant paleontological data when such data may be destroyed or lost due to a federal, federally licensed, or federally funded project.

¹⁹ County of Tulare. 2010. General Plan Background Report. Page 9-54.

- **Federal Land Management and Policy Act of 1976** (43 USC §1712[c], § 1732[b]); sec. 2, Federal Land Management and Policy Act of 1962 [30 USC §611]; Subpart 3631.0 et seq.), Federal Register Vol. 47, No. 159, 1982. Defines significant fossils as: unique, rare or particularly well-preserved; an unusual assemblage of common fossils; being of high scientific interest; or providing important new data concerning (1) evolutionary trends, (2) development of biological communities, (3) interaction between or among organisms, (4) unusual or spectacular circumstances in the history of life, or (5) anatomical structure.

1.5.2.2 State

California Register of Historical Resources: Created in 1992 and implemented in 1998, the California Register of Historic Resources (CRHR) is “an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR.

California Historical Landmarks: California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the CRHR.

California Points of Historical Interest: California points of historical interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of historical interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally-enacted cultural heritage or preservation ordinance.

American Indian Human Remains: The disposition of American Indian burial sites is governed by Section 7050.5 of the California Health and Safety Code (HSC) and Sections 5097.94 and 5097.98 of the Public Resources Code (PRC), and falls within the jurisdiction of the NAHC. HSC Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historical or archaeological interest located on public or private lands, but specifically excludes the landowner. PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological or historical resources located on public lands.

The HSC requires archaeological sites known to contain human remains to be treated in accordance with the provisions of HSC Section 7050.5. The protection of human remains is also ensured by PRC Sections 5097.94, 5097.98, and 5097.99. If human remains are exposed during construction, all ground-disturbing activities must cease until the County Coroner had made the necessary findings as to origin and disposition. Construction must halt in the area of the discovery of human remains, the project proponent must assure that the area is protected, and consultation and treatment shall occur as prescribed by law.

California Assembly Bill 52: AB 52 stipulates that any project that may cause substantial adverse changes to the significance of a tribal cultural resource must be considered to be a project that may have a significant effect on the environment. AB 52 requires the lead agency of such a project to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that area and the tribe requests consultation.

Native American Heritage Commission: Section 5097.91 of the California PRC established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to American Indians and the identification of known graves and cemeteries of American Indians on private lands. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of American Indian human remains from a county coroner.

California Public Records Act: Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to “Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.” Section 6254.10 specifically exempts from disclosure requests for “records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency.”

Health and Safety Code, Sections 7050 and 7052: HSC Section 7050.5 declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbances must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code, Section 622.5: The California Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

Public Resources Code, Section 5097.5: PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

1.5.2.3 Local

Tulare County General Plan:

- **Policy ERM-6:** To manage and protect sites of cultural and archaeological importance for the benefit of present and future generations.
 - **Policy ERM-6.1:** Evaluation of Cultural and Archaeological Resources – The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.
 - **Policy ERM-6.2:** Protection of Resources with Potential State or Federal Designations – The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation’s California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

- Policy ERM-6.4: Mitigation – If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.
- Policy ERM-6.6: Historic Structures and Sites – the County shall support public and private efforts to preserve, rehabilitate, and continue the use of historic structures, sites, and parks. Where applicable, preservation efforts shall conform to the current Secretary of the Interior’s Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
- Policy ERM-6.7: Cooperation of Property Owners – The County should encourage the cooperation of property owners to treat cultural resources as assets rather than liabilities, and encourage public support for the preservation of these resources.
- Policy ERM-6.8: Solicit Input from Local Native Americans – The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.
- Policy ERM-6.9: Confidentiality of Archaeological Sites – The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal or artifacts.
- Policy ERM-6.10: Grading Cultural Resources Sites – The County shall ensure all grading activities conform to the County’s Grading Ordinance and California Code of Regulations, Title 20, §2501 et. Seq.

1.5.3 Impact Assessment

V-a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less Than Significant with Mitigation Incorporation. An intensive Class III Inventory/Phase I archaeological survey was conducted for the In-Lieu Project study areas by ASM Affiliates. An archival records search of site files and maps was conducted at the Southern San Joaquin Valley AIC to determine if prehistoric or historical archaeological sites had been previously recorded, if the study area had been surveyed by archaeologists prior to the initiation of this field study, and/or whether the region of the field project was known to contain archaeological sites and thereby be archaeologically sensitive. Additionally, a search of the NAHC Sacred Lands File was completed to ascertain whether traditional cultural places or landscapes had been identified within or adjacent to the study area. These investigations determined that the study areas had not been previously surveyed in their entirety and no sites had been recorded within or near either Service Area. No Native American sacred sites or cultural landscapes had been identified within or immediately adjacent to the study areas.

The Phase I survey of the study area resulted in the identification and recording of one cultural resource, the Wood Central Ditch. After documentation and evaluation of this resource, and careful consideration of its ability to reflect the historic contexts and individuals with which it might be associated, the Wood Central Ditch is recommended to not be eligible as an individual resource or as a contributor to a potential historic district under NRHP/CRHR Criteria A/1, B/2, C/3, or D/4. Accordingly, it does not qualify as a CEQA historical resource pursuant to Section 15064.5, nor does it need to be considered as a historic resource under the NHPA. The Project will not result in any direct impacts to historic properties or resources.

Although no other cultural resources were identified in the survey, there would, nonetheless, be a potentially significant impact if historical resources were uncovered during Project construction; however, implementation of the following mitigation measures will reduce potential impacts to historical or archaeological resources to less than significant.

Mitigation Measure Cultural - 1:

In the event cultural resources are encountered during construction within the Project area, , all ground disturbing activities shall be halted within 50 feet of the discovery. A qualified archaeologist should be contacted to evaluate the discovery as an archaeological site, which constitutes three or more artifacts or a feature, or an isolated find, which contains fewer than three artifacts. If a site is found to be present, further testing may be required to determine CRHR or NRHP eligibility. In coordination with the BOR, a testing plan should be implemented within the Project area and area of direct impact to determine the nature and depth of the site. If a discovered site is determined NRHP/CRHR eligible and the resource cannot be avoided by Project redesign, further treatment measures and coordination with U.S. Bureau of Reclamation shall be required. In the event that human remains are encountered, all work shall be halted in the vicinity of the discovery area and the County Coroner shall be notified. California State Law (HSC Section 7050.5; PRC Code Sections 5097.94, 5097.98 and 5097.99) shall be followed on State, County, and private lands.

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

Less Than Significant with Mitigation Incorporation. Any impacts to archaeological resources have been discussed in Impact V-a. The mitigation measure in Impact V-a will ensure that any impacts will be less than significant.

V-c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. On June 29, 2015 and January 28, 2016, record searches were conducted with the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS). No known paleontological resources exist within the Project area, nor are there any known geologic features in the Project area. Project construction will not be expected to disturb any paleontological resources not previously disturbed; however, the mitigation measure in Impact V-a will ensure that any impacts will be less than significant.

V-d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. No formal cemeteries or other places of human internment are known to exist on the Project site; however, in accordance with HSC Section 7050.5 and PRC Section 5097.98, if human remains are unearthed during Project construction, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition of such remains. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The NAHC would then identify the person(s) thought to be the most likely descendent of the deceased Native American, who will then help determine what course of action should be taken in dealing with the remains. As such, any impacts will be less than significant.

1.6 Geology and Soils

Table 1-13: Geology and Soils

Geology and Soils				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Chapter 18 of the most recently adopted California Building Code creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.6.1 Environmental Setting

Geologic setting is generally characterized on a regional basis.

Geomorphic Province: Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the county, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks, with several islands of older metamorphic rock. The central and western parts of the county are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting and erosion of the mountains.²⁰

²⁰ County of Tulare. 2010. General Plan Background Report. Page 8-4

Faulting and Seismicity: The proposed Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no known faults cut through the local soil at the site. There are several faults located within a 70-mile radius of the proposed Project site. An unnamed fault is approximately seven miles southeast (near Terra Bella), Poso Creek Fault is 26.5 miles south, San Andreas Fault, Parkfield section is approximately 64 miles southwest. Groundshaking is 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 the Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock²¹. In 1973, five counties within the Southern San Joaquin Valley undertook the preparation of the Five County Seismic Safety Element to assess seismic hazards which projected that with the maximum probable earthquake of a magnitude 8 to 8.5 centered along the San Andreas Fault, "relatively low levels of shaking should be expected in the eastern and central parts of the San Joaquin Valley²²."

Soils: According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), there are predominantly two soil types present within Service Area 1: Tagus loam (60%) and Exeter loam covering approximately 32.4%. Also present are Flamen loam (5.9%), Tujunga loamy sand (1.3%), and Nord fine sandy loam (0.4%). Both the Tagus loam and Nord fine sandy loam are well-drained, the Exeter loam and Flamen loam are moderately well-drained, and the Tujunga loamy sand is somewhat excessively-drained. All soil types present are very limited for building due to flooding, and the Exeter and Flamen loams are further limited by shrink-swell. Service Area 2 consists primarily of Exeter loam, covering 44.1%, and Flamen loam, covering 55.9% (Appendix A).

1.6.2 Regulatory Setting

1.6.2.1 Federal

National Earthquake Hazards Reduction Program: The National Earthquake Hazards Reduction Program (NEHRP), which was first authorized by Congress in 1977, coordinates the earthquake-related activities of the Federal Government. The goal of NEHRP is to mitigate earthquake losses in the United States through basic and directed research and implementation activities in the fields of earthquake science and engineering. Under NEHRP, FEMA is responsible for developing effective earthquake risk reduction tools and promoting their implementation, as well as supporting the development of disaster-resistant building codes and standards. FEMA's NEHRP activities are led by the FEMA Headquarters (HQ), Federal Insurance and Mitigation Administration, Risk Reduction Division, Building Science Branch, in strong partnership with other FEMA HQ Directorates, and in coordination with the FEMA Regions, the States, the earthquake consortia, and other public and private partners.

1.6.2.2 State

California Alquist-Priolo Earthquake Fault Zoning Act: The Alquist-Priolo Earthquake Fault Zoning Act (originally enacted in 1972 and renamed in 1994) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The statute prohibits the location of most types of structures intended for human occupancy across the traces of active faults and regulates construction in the corridors along active faults.

California Seismic Hazards Mapping Act: The California Seismic Hazards Mapping Act is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically-induced landslides. The State is charged with identifying and mapping

County of Tulare. 2010. General Plan Background Report. Page 8-7

²² Ibid. Page 8-6 and 7

areas at risk of strong ground shaking, liquefaction, landslides, and other hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

California Building Code: The California Code of Regulations (CCR) Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The California Building Code incorporates by reference the International Building Code with necessary California amendments. The International Building Code is a widely-adopted model building code in the United States published by the International Code Council. A significant portion of the California Building Code is dedicated to earthquake conditions.

1.6.2.3 Local

Tulare County General Plan:

- **Policy ERM-7:** To preserve and protect soil resources in the County for agricultural and timber productivity and protect public health and safety.
 - **ERM-7.2:** Soil Productivity – The County shall encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Resource Conservation Districts, UC Cooperative Extension, and other similar agencies and organizations.
- **Policy HS-2:** To reduce the risk to life and property and governmental costs from seismic and geologic hazards.
 - **HS-2.1:** Continued Evaluation of Earthquake Risks – The County shall continue to evaluate areas to determine levels of earthquake risk.
 - **HS-2.2:** Landslide Areas – The County shall not allow development on existing unconsolidated landslide debris.
 - **HS-2.4:** Structure Siting – The County shall permit development on soils sensitive to seismic activity only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity.
 - **HS-2.7:** Subsidence – The County shall confirm that development is not located in any known areas of active subsidence.

1.6.3 Impact Assessment

VI-a) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

VI-a-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.

VI-a-ii) Strong seismic ground shaking?

VI-a-iii) Seismic-related ground failure, including liquefaction?

VI-a-iv) Landslides?

Less than Significant Impact. No substantial faults are known to occupy Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the DOC. The potential for the rupture of a known earthquake fault would be less than significant.

Seismic ground shaking is influenced by the proximity of the site to an earthquake fault, the intensity of the seismic event and the underlying soil composition. According to the Five County Seismic Safety Element assessment, a maximum probable earthquake of a magnitude 8.0 to 8.5 centered along the San Andreas Fault would result in relatively low levels of shaking in the eastern and central parts of the San Joaquin Valley. The impact would be less than significant.

Seismic ground failure (liquefaction) occurs during intense prolonged groundshaking (ground acceleration approaching 0.3g). 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. No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the San Joaquin Valley portion of the County. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Additionally, the area is not prone to ground acceleration of sufficient energy to induce liquefaction. Tulare County's Safety Element designates the risk of liquefaction as low²³. The impact would be less than significant.

No geologic landforms exist on or near the site that would result in a landslide event. There would be no impact.

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

Less Than Significant Impact with Mitigation. Grading activities associated with the construction of the proposed pipeline would involve earthmoving, excavation, stockpiling, and grading. These activities could expose soils to erosion processes. The extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions.

Both Service Area sites are relatively flat, which would reduce the potential for erosion and loss of topsoil to a certain degree. Topsoil materials would be stripped from the ground surface and then used to cover the newly-installed pipeline. This would ensure that organic matter, the existing seed bank, and topsoil texture are maintained for soil-stabilizing efforts at the Project site. To further prevent water and wind erosion during the construction period, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared for the Project in accordance with the State Water Resources Control Board (SWRCB) Construction General Permit Order 2009-0009-DWQ. The SWPPP will incorporate Best Management Practices to ensure that potential water quality impacts during construction from soil erosion would be reduced to less than significant. Additionally, a Dust Control Plan will be required during construction including dust control measures to be implemented during construction to prevent loss due to wind erosion. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction period would be less than significant.

Mitigation Measure Geology - 1:

The District shall complete a Storm Water Pollution Prevention Plan (SWPPP) prior to any ground moving activities. As part of the SWPPP, the District would be required to provide the following Best Management Practices (BMPs) where relevant to further protect the topsoil:

- *Grading and Preservation of Existing Vegetation*

²³ Tulare County, 2012. General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf> Accessed March 2016.

Existing vegetation shall be preserved to the maximum extent practicable. Clearing and grubbing shall only be performed in areas where new foundations, utilities, or internal access drives are planned.

- *Soil Compaction*

All soil compaction and subgrade preparation specifications will be per the site-specific recommendations of a California-licensed Geotechnical Engineer, and will be based on his field exploration prior to construction. Typically, trench backfill and subgrade compaction consists of either hand-held vibratory, rolled-drum equipment, or tracked equipment. Compaction would be 90 percent of maximum density as calculated by ASTM D1557 Modified Proctor.

- *Hydroseeding*

Disturbed areas will be seeded upon completion of construction in order to protect exposed soils from erosion by wind and water. Upon completion of an earth disturbance activity, disturbed areas shall be covered with a minimum uniform 70 percent perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation. The vegetative cover will also be chosen to be appropriate for the proposed sheep grazing activities in the event the continued farming concept is chosen.

- *Straw Mulch*

Straw mulch will be used to temporarily stabilize disturbed areas until soil can be prepared for revegetation. Straw mulch will be anchored immediately after application to prevent being windblown. Straw or hay will be “crimped” into the soils by running tracked machinery across the surface.

- *Non-Vegetative Stabilization*

A non-combustible surface will surround the Project site to function as a fire break as well as provide a stabilized surface for post-construction access. Non-vegetative stabilization methods, such as gravel mulch, will be used to provide a stabilized 12-foot wide access.

- *Stabilized Construction Entrance/Exit*

A stabilized construction entrance/exit will be maintained at each construction site entrance/exit to reduce tracking of sediment as a result of construction traffic. The entrance/exit will be constructed per the detail included with the Erosion and Sediment Control Drawings (ESCDs).

- *Stabilized Construction Roadway*

The construction access route into the site will also be maintained to prevent erosion and to control tracking of mud and soil material onto adjacent roads. The ESCDs will specify the construction access locations. A regular maintenance program will be conducted to replace sediment-clogged stabilization material with new stabilization material as required.

- *Entrance/Outlet Tire Wash*

Tire wash racks will be installed if soil and/or traffic conditions on-site require washing the construction vehicle wheels prior to exiting the site to avoid excessive tracking of mud onto the roadway.

- *Street Sweeping and Vacuuming*

Road sweeping and vacuuming will occur as necessary during construction to keep street surfaces clear of soil and debris. Washing sediment onto streets will not occur.

- *Dust Control*

During windy conditions (forecast or actual wind conditions of approximately 25 mph or greater), dust control will be applied to disturbed areas, including construction access roads, to adequately control wind erosion. Water will be applied to disturbed soil areas of the Project site using water trucks as required by weather conditions to control dust. Water application rates will be minimized as necessary to prevent runoff and ponding.

Implementation of the above measure will mitigate potential impacts to a less than significant level.

VI-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. The soil conditions on the sites are not considered to be susceptible to liquefaction. The site is relatively flat and is not in the vicinity of slopes that would be susceptible to landslides. Additionally, the soil conditions at the site are not considered to be susceptible to subsidence. Tulare County's 2030 General Plan Update designates the Project area as having minimal risk for landslides, low risk of subsidence, and low risk of liquefaction²⁴. The potential for the Project to result in on, or offsite landslides, lateral spreading, subsidence, liquefaction or collapse would be less than significant.

VI -d) Be located on expansive soil, as defined in Chapter 18 of the most recently adopted California Building Code creating substantial risks to life or property?

No Impact. According to the USDA NRCS, there are predominantly two soil types present within Service Area 1: Tagus loam (60%) and Exeter loam covering approximately 32.4%. Also present are Flamen loam (5.9%), Tujunga loamy sand (1.3%), and Nord fine sandy loam (0.4%). Both the Tagus loam and Nord fine sandy loam are well drained, the Exeter loam and Flamen loam are moderately well drained, and the Tujunga loamy sand is somewhat excessively drained. All soil types present are very limited for building due to flooding, and the Exeter and Flamen loams are further limited by shrink-swell. Service Area 2 consists primarily of Exeter loam, covering 44.1%, and Flamen loam, covering 55.9% (Appendix A). Soil type distribution for Service Area 1 and Service Area 2 are shown in **Figure 1-3** and **Figure 1-4**, respectively. These soils are not considered to be expansive. There would be no impact.

VI-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. The proposed Project does not involve the construction of residential habitable structures. As such, the proposed Project does not include installation of septic tanks or wastewater disposal systems therefore this provision does not apply. There would be no impact.

²⁴ Tulare County, 2012. General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/General%20Plan%202012.pdf> Accessed March 2016.

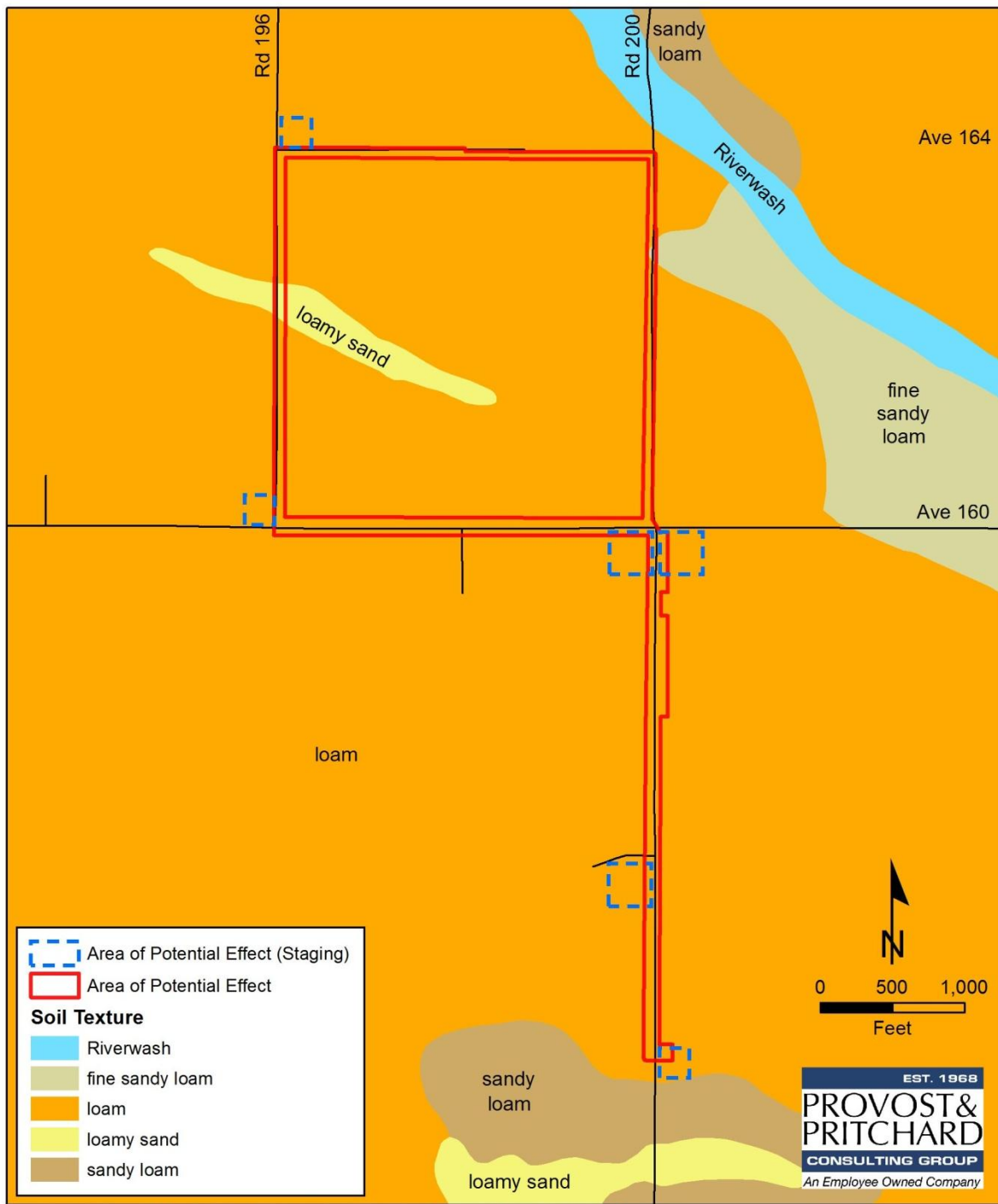
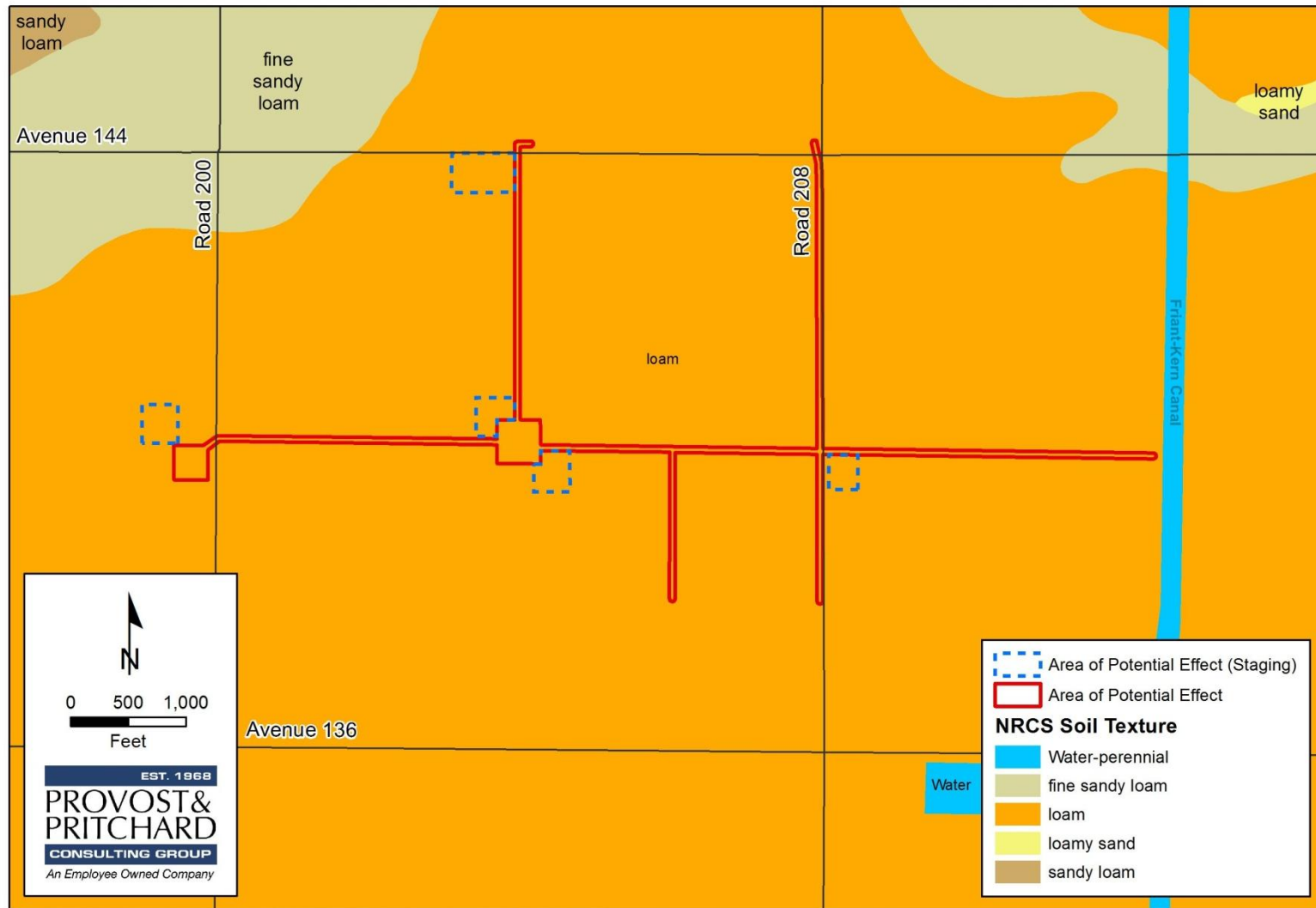


Figure 1-3: Soils Map – Service Area 1



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Figure 1-4. Soils Map – Service Area 2

1.7 Greenhouse Gas Emissions

Table 1-14: Greenhouse Gas Emissions

Greenhouse Gas Emissions				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1.7.1 Environmental Setting

1.7.1.1 Climate Change

According to the Office of Planning and Research's June 2014 Draft California Climate Change Research Plan:

“Climate change is the biggest environmental challenge of our time. California has long been a global leader in addressing climate-related issues through cutting-edge research and innovative climate policies. Governor Brown recently joined more than 500 world-renowned researchers and scientists in releasing a groundbreaking call to action on climate change and other global threats to humanity. The 20-page consensus statement was produced at Governor Brown's request and has been signed by scientists from over 40 countries. The consensus statement connects key scientific findings from different fields into a clear warning and a call for immediate, substantial, and sustained action to preserve humanity's life support systems. The science in the consensus statement is confirmed in the October 2013 report of scientific findings by the Intergovernmental Panel on Climate Change (IPCC). The IPCC report states that “[h]uman influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes.” The IPCC further concludes that “human influence has been the dominant cause of the observed warming since the mid-20th century” (IPCC 2013).

As shown in the report Indicators of Climate Change in California (Office of Environmental Health Hazard Assessment 2013), observations over the last several decades reveal clear signals of climate change and its effects in California. The growing body of scientific research shows unequivocally that this change is associated with the release of carbon dioxide and other greenhouse gases (GHGs) resulting from burning fossil fuels as well as other human activities. Using sophisticated computer models, climate research projects an unprecedented rate of rise in temperature with shifting patterns of precipitation and more extreme weather events in the future. Climate change and the efforts of the State to confront it will touch nearly every aspect of the state's planning and investment for the future. Over the next few decades, significant reductions in GHG emissions will be necessary to avoid the worst consequences of climate change. At the same time, California must escalate and accelerate its efforts to safeguard the State from the already-observable climate change as well as the larger changes that will be unavoidable in the future. Scientific research sponsored by the State of California has provided new knowledge that has enabled California to respond with science-based

policies. New, carefully targeted research is necessary to inform future policy development and implementation.”

1.7.1.2 Greenhouse Gases

According to the SJVAPCD’s Guidance for Assessing and Mitigating Air Quality Impacts:

“Greenhouse gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth’s atmosphere. There are no “attainment” concentration standards established by the Federal or State government for greenhouse gases. In fact, GHGs are not generally thought of as traditional air pollutants because greenhouse gases, and their impacts, are global in nature, while air pollutants affect the health of people and other living things at ground level, in the general region of their release to the atmosphere. Some greenhouse gases occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated carbons.”

1.7.2 Regulatory Setting

1.7.2.1 Federal

U.S. Environmental Protection Agency: On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the U.S. Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The Court held that the Environmental Protection Agency (U.S. EPA) must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the U.S. EPA is required to follow the language of section 202(a) of the Clean Air Act. The Supreme Court decision resulted from a petition for rulemaking under section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations.

On April 17, 2009, the Administrator signed the Proposed Endangerment and Cause or Contribute Findings for GHGs under Section 202(a) of the Clean Air Act. The U.S. EPA held a 60-day public comment period, which ended June 23, 2009, and received over 380,000 public comments. These included both written comments as well as testimony at two public hearings in Arlington, Virginia and Seattle, Washington. The U.S. EPA carefully reviewed, considered, and incorporated public comments and has now issued these final Findings.

The U.S. EPA found that six GHGs taken in combination endanger both the public health and the public welfare of current and future generations. The U.S. EPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse as air pollution that endangers public health and welfare under CAA section 202(a). These Findings were based on careful consideration of the full weight of scientific evidence and a thorough review of numerous public comments received on the Proposed Findings published April 24, 2009. These Findings became effective on January 14, 2010.

Specific GHG Regulations that the U.S. EPA has adopted to date are as follows:

- **40 CFR 98. Mandatory Reporting of Greenhouse Gases Rule.** This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons of CO₂e emissions per year (EPA, 2009). Additionally, reporting of emissions is required for owners of SF₆- and PFC-insulated equipment when the total nameplate capacity of these insulating gases is above 17,280 pounds (lbs). The proposed Project is not believed to trigger GHG reporting as required by this regulation.

- 40 CFR 52. Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule. U.S. Environmental Protection Agency recently mandated to apply Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source CO₂e emissions exceed 75,000 tons per year (EPA, 2010b). The proposed Project is not believed to trigger PSD permitting as required by this regulation.

1.7.2.2 State

There are a variety of statewide rules and regulations which have been implemented or are in development in California that mandate the quantification or reduction of GHGs. Under CEQA, an analysis and mitigation of emissions of GHGs and climate change in relation to a proposed project is required where it has been determined that a project will result in a significant addition of GHGs. Certain Air Pollution Control Districts (APCDs) have proposed their own levels of significance. The SJVAPCD, which has regulatory authority over the air emissions from this project, has not established a significance threshold.

Executive Order S-3-05: Executive Order S-3-05 was established by Governor Arnold Schwarzenegger in June 2006.

Executive Order S-3-05 establishes statewide emission reduction targets through the year 2050:

- by 2010, reduce GHG emissions to 2000 levels;
- by 2020, reduce GHG emissions to 1990 levels; and
- by 2050, reduce GHG emissions to 80 percent below 1990 levels.

This Executive Order does not include any specific requirements that pertain to the proposed Project. However, actions taken by the State to implement these goals may affect the Project, depending on the specific implementation measures that are developed.

Assembly Bill 32: AB 32, also known as the California Global Warming Solutions Act of 2006, was established in 2006 to mandate the quantification and reduction of GHGs to 1990 levels by 2020. The law establishes periodic targets for reductions, and requires certain facilities to report emissions of GHGs annually. The bill also reserves the ability to reduce emissions targets lower than those proposed in certain sectors which contribute the most to emissions of GHGs, including transportation.

Additionally, the bill requires:

- GHG emission standards to be implemented by 2012; and
- CARB to develop an implementation program and adopt GHG control measures “to achieve the maximum technologically feasible and cost-effective GHG emission reductions from sources or categories of sources.” CARB issued a draft Climate Change Scoping Plan in December 2008.

The Assembly Bill 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The scoping plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program. These measures have been introduced through four workshops between November 30, 2007 and April 17, 2008. A draft Scoping Plan was released for public review and comment on June 26, 2008 followed by more workshops in July and August, 2008. The proposed Scoping Plan was released on October 15, 2008 and approved at the Board hearing on December 12, 2008.

Per CARB's Updated Scoping Plan Fact sheet January 21, 2010, the following has occurred:

- 12 of 30 ARB regulations approved, including all nine Discrete Early Actions;

- Approved measures provide approximately 70 MMTCO₂e in 2020, 40 percent of the 2020 goal of reducing 169 MMTCO₂e; and
- First year of Mandatory Reporting is complete, with a 97 percent compliance rate.

Senate Bill (SB) 97 – CEQA: Greenhouse Gas Emissions: In August 2007, Governor Schwarzenegger signed into law Senate Bill (SB) 97 – CEQA: Greenhouse Gas Emissions. SB 97 requires the Office of Planning and Research, by July 1, 2009, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency would be required to certify and adopt those guidelines by January 1, 2010. The Office of Planning and Research would be required to periodically update the guidelines to incorporate new information or criteria established by ARB pursuant to the California Global Warming Solutions Act of 2006. SB 97 also identifies a limited number of types of projects that would be exempt under CEQA from analyzing GHG emissions. Finally, the legislation will be repealed on January 1, 2010.

Office of Planning and Research Technical Advisory: Consistent with SB 97, on June 19, 2008, the Office of Planning and Research (OPR) released its *Technical Advisory on CEQA and Climate Change*, which was developed in cooperation with the Resources Agency, the California Environmental Protection Agency (Cal/EPA), and the ARB. The *Technical Advisory* offers the informal interim guidance regarding the steps lead agencies should take to address climate change in their CEQA documents, until CEQA guidelines are developed pursuant to SB 97 on how state and local agencies should analyze, and when necessary, mitigate greenhouse gas emissions (OPR).

According to OPR, lead agencies should determine whether greenhouse gases may be generated by a proposed project, and if so, quantify or estimate the GHG emissions by type and source. Second, the lead agency must assess whether those emissions are individually or cumulatively significant. When assessing whether a project's effects on climate change are "cumulatively significant" even though project specific GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects. Finally, if the lead agency determines that the GHG emissions from the project as proposed are potentially significant, it must investigate and implement ways to avoid, reduce, or otherwise mitigate the impacts of those emissions.

On April 13, 2009, the Governor's Office of Planning and Research sent proposed amendments of the CEQA Guidelines to the Secretary of the Resources Agency for promulgation. The proposed amendments contain Model Policies for GHGs in General Plan. OPR recommended changes to fourteen sections of the existing guidelines, including: the determination of significance as well as thresholds; statements of overriding consideration; mitigation; cumulative impacts; and specific streamlining approaches. The proposed Guidelines also include an explicit requirement that environmental impact reports (EIRs) analyze GHG emissions resulting from a project when the incremental contribution of those emissions may be significant.

1.7.2.3 Local

San Joaquin Valley Air Pollution Control District: The SJVAPCD provides guidance for addressing greenhouse gas emissions under CEQA. The SJVAPCD guidance for evaluating greenhouse gas significance states that projects implementing best performance standards, reducing project specific GHG emissions by at least 29 percent compared to "business as usual" and consistent with GHG emissions reduction targets established in the AB 32 Scoping Plan would be determined to have a less than significant individual and cumulative impact on global climate change. Business as usual is defined as unmitigated emissions (the California Air Resources Board Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008).

Tulare County General Plan:

- **Policy AQ-1:** To improve air quality through a regional approach and interagency cooperation.

- AQ-1.8: Greenhouse Gas Emissions Reduction Plan/Climate Action Plan – The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.
 - Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County.
 - Inventory the greenhouse gases
 - Set a target for the reduction of emissions attributable to the County’s discretionary land use decisions and its own internal government operations.
- AQ-1.9: Support Off-Site Measures to Reduce Greenhouse Gas Emissions – The County will support and encourage the use of off-site measures or the purchase of carbon off-sets to reduce greenhouse gas emissions.
- Policy AQ-2: To improve air quality by reducing air emissions related to transportation.
- Policy AQ-4: To implement the best available controls and monitoring necessary to regulate air emissions.

1.7.3 Impact Assessment

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

Less Than Significant Impact. Implementation of the proposed Project could contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to development is primarily associated with increases of CO₂ and other GHG pollutants, including CH₄ and N₂O, from mobile sources and utility usage. As discussed in Section III, Air Quality, of this IS/MND, because the proposed Project consists of open channel and pipeline water conveyance facilities, it would not involve typical operations that would involve sources of GHG emissions, such as utility usage, emissions associated with mobile sources would be the only operational source of air pollutant emissions.

It should be noted that construction-related GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change, as global climate change is inherently a cumulative effect that occurs over a periods of time. The proposed Project’s short-term construction-related GHG emissions were estimated using CalEEMod. Emissions (Appendix B) are expressed in annual metric tons of CO₂ equivalent units of measure (MTCO₂e), the common indicator for GHG emissions based on the global warming potential of the individual pollutants. According to CalEEMod, the proposed Project would result in GHG emissions as presented in **Table 1-14** below.

Table 1-15: Maximum Unmitigated Project GHG Emissions

Maximum Unmitigated Project GHG Emissions	
Emission Source	GHG Emissions (MT CO ₂ e/yr)
Total 2016 Construction Emissions	160.29
Total 2017 Construction Emissions	158.71
Annual Operational Emissions	3.77

Given that the threshold for significance for emissions is 25,000 metric tons/year, the proposed Project would not generate GHG emissions, either directly or indirectly, that may result in a significant impact on the environment. Additionally, given the temporary nature of construction emissions, it would not potentially conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, potential impacts would be less than significant.

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

Less Than Significant Impact. In August 2008, the SJVAPCD adopted the Climate Change Action Plan (CCAP). The CCAP directed the District Air Pollution Control Officer to develop guidance to assist lead agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas (GHG) emissions on global climate change. Accordingly, on December 17, 2009, the SJVAPCD adopted the Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. The guidance relies on the use of performance-based standards, otherwise known as Best Performance Standards (BPSs), to assess significance of project-specific GHG emissions on global climate change. Use of BPSs is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPSs would be determined to have a less-than significant individual and cumulative impact on global climate change and would not require project-specific quantification of GHG emissions. Otherwise, demonstration that a project's emissions would be reduced or mitigated by 29 percent (from business as usual [BAU] levels by 2020), consistent with the GHG emission reduction targets established in the Assembly Bill (AB) 32 Scoping Plan would be required in order to determine that a project would have a less-than-significant individual and cumulative impact on global climate change. It should be noted that the SJVAPCD's guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change.

It should be noted that the BPSs included in the SJVAPCD guidance for development projects are design measures applicable primarily to commercial or residential developments, such as affordable housing, green building features, and vehicle miles travelled (VMT) reduction measures including alternative transportation and parking features. Therefore, the BPSs do not apply to a water infrastructure project. Therefore, the proposed Project would not generate GHG emissions, either directly or indirectly, that may result in a significant impact on the environment or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

Best Management Practices for construction.

The Project applicant will require all construction contractors to implement the Best Management Practices (BMP) to reduce GHG emissions. Emission reduction measures will include, at a minimum, the following three measures:

- Use alternative-fueled (e.g. biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet.

- Recycle at least 50 percent of construction waste.
- Use at least 10 percent local building materials (from within 100 miles of the Project Site / Area of Potential Effect).

Therefore, with implementation of the above BMP for construction-related impacts, impacts would be less than significant.

1.8 Hazards and Hazardous Materials

Table 1-16: Hazards and Hazardous Materials

Hazards and Hazardous Materials				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.8.1 Environmental Setting

The sites for both Service Area 1 and 2 are within road right-of-way and are surrounded by land that has historically been used as agricultural land and grazing land. The application of agricultural chemicals, including but not limited to herbicides and pesticides, is anticipated to have occurred at portions of the site. The routine and appropriate application of agricultural chemicals is not considered a recognized environmental condition.

1.8.2 Regulatory Setting

1.8.2.1 Federal

Hazardous Materials - U.S. Environmental Protection Agency: The U.S. EPA was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting and enforcement activities to ensure environmental protection. U.S. EPA's mission is to protect human health and to safeguard the natural environment — air, water, and land — upon which life depends. U.S. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, U.S. EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act: The federal Toxic Substances Control Act (TSCA, 1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act: The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (U.S. Code Title 42, Chapter 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (40 CFR 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Clean Water Act/SPCC Rule: The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. As part of the Clean Water Act, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 CFR 112 which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “navigable waters” of the United States. Other federal regulations overseen by the U.S. EPA relevant to hazardous materials and environmental contamination include 40 CFR 1, Subchapter D – Water Programs and Subchapter I – Solid Wastes. 40 CFR 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act. 40 CFR 116 sets forth a determination of the reportable quantity for each substance that is designated as hazardous. 40 CFR 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

The NFPA 70®: National Electrical Code® is adopted in all 50 states²⁵. Any electrical work associated with the proposed Project is required to comply with the standards set forth in this code.

Several federal regulations govern hazards as they are related to transportation issues. They include:

- 49 CFR 171-177 governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

1.8.2.2 State

California Environmental Protection Agency: CalEPA was created in 1991 by Governor's Executive Order. The six boards, departments, and office were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources. The mission of CalEPA is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality under Title 22 of the California Code of Regulations (CCR)²⁶

Department of Toxic Substances Control: The Department of Toxic Substances (DTSC) is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC listed hazardous waste facilities and sites, Department of Homeland Security (DHS) lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.²⁷

Unified Program: The Unified Program (codified CCR Title 27, Division 1, Subdivision 4, Chapter 1, Sections 15100- 15620) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs²⁸:

- Hazardous Waste Generator (HWG) program and Hazardous Waste On-site Treatment activities;
- Aboveground Storage Tank (AST) program Spill Prevention Control and Countermeasure Plan requirements;
- Underground Storage Tank (UST) program;
- Hazardous Materials Release Response Plans and Inventory (HMRRP) program;
- California Accidental Release Prevention (CalARP) program;

²⁵ National Fire Protection Association, 2015. NFPA 70: National Fire Code.

²⁶ California Environmental Protection Agency. <http://www.calepa.ca.gov>. Accessed January 27, 2015.

²⁷ California Department of Toxic Substances Control. <http://www.dtsc.ca.gov/>. Accessed January 27, 2015.

²⁸ California Environmental Protection Agency. <http://www.calepa.ca.gov/cupa/>. Accessed January 27, 2015.

- Hazardous Materials Management Plans and Hazardous Materials Inventory Statement (HMMP/HMIS) requirements.

The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program. The Unified Program requires all counties to apply to the CalEPA Secretary for the certification of a local Unified Program agency. Qualified cities are also permitted to apply for certification. The local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements in the county. Most CUPAs have been established as a function of a local environmental health or fire department.

Hazardous Waste Management Program: The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement, and Unified Program activities in accordance with California Health and Safety Code Section 25135 et seq. The main focus of HWMP is to ensure the safe storage, treatment, transportation, and disposal of hazardous wastes.

State Water Resources Control Board: The State Water Resources Control Board (SWRCB) was created by the California legislature in 1967. The mission of SWRCB is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters.

California Department of Industrial Relations – Division of Occupational Safety and Health: In California, every employer has a legal obligation to provide and maintain a safe and healthful workplace for employees, according to the California Occupational Safety and Health Act of 1973 (per Title 8 of the CCR). The Division of Occupational Safety and Health (CalOSHA) program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. CalOSHA regulations are administered through Title 8 of the CCR. The regulations require all manufacturers or importers to assess the hazards of substances that they produce or import and all employers to provide information to their employees about the hazardous substances to which they may be exposed.

1.8.2.3 Local

Tulare County General Plan:

- **HS-3:** To minimize the possibility of the loss of life, injury, or damage to property as a result of airport hazards.
 - **HS-3.1: Airport Land Use Compatibility Plan:** The County shall require that development around airports is consistent with the safety policies and land use compatibility guidelines contained in the adopted Tulare County Comprehensive Airport Land Use Plan (CALUP).
- **HS-4:** To protect residents, visitors, and property from hazardous materials through their safe use, storage, transport, and disposal.
 - **HS-4.1: Hazardous Materials –** The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan.
 - **HS-4.2: Establishment of Procedures to Transport Hazardous Wastes –** The County shall continue to cooperate with the California Highway Patrol (CHP) to establish procedures for the movement of hazardous wastes and explosives within the County.

- HS-4.4: Contamination Prevention – The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.
- Policy HS-6: To minimize the exposure of County residents, visitors, and public and private property to the effects of urban and wildland fires.
 - HS-6.6: Wildland Fire Management Plans – The County shall require the development of wildland fire management plans for projects adjoining significant areas of open space that may have high fuel loads.
 - HS-6.12: Weed Abatement – The County shall continue to encourage weed abatement programs throughout the County in order to promote fire safety.
- Policy HS-7: To provide effective emergency response to natural or human-made hazards and disasters.
 - Policy HS-7.3: To provide effective emergency response to natural or human-made hazards and disasters.

Tulare County Health and Human Services Agency, Environmental Health Division: The Unified Hazardous Waste and Hazardous Management Regulatory Program (SB 1082, Health and Safety Code section 25260 et seq) is a State and local effort to consolidate, coordinate, and make consistent existing programs regulating hazardous waste and hazardous materials management. The program is implemented at the local level by a Certified Unified Program Agency (CUPA). The Tulare County Health and Human Services Agency (TCHHSA), Environmental Health Division (EDH) through the County of Tulare is the CUPA for all cities and unincorporated areas within Tulare County²⁹.

Tulare County Hazardous Waste Management Plan: Tulare County has prepared a Hazardous Waste Management Plan (HWMP) in accordance with California Health and Safety Code Section 24135 et seq. The Tulare County HWMP was developed in May 1989 and identifies hazardous waste generators within the County, amounts and types of waste produced, and projected waste generation. The major goal of the HWMP is to reduce the need for new hazardous waste facilities by reducing waste at its source through recycling, reduced use of hazardous materials, and public education³⁰.

Tulare County Multi-Hazard Functional Plan: Tulare County has prepared a Multi-Hazard Functional Plan to serve as the County's emergency response plan. The plan addresses responses to various emergency incidents, responsibilities of various agencies, and sources of outside assistance. The plan also identifies evacuation centers and addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain³¹.

1.8.3 Impact Assessment

VIII-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. The proposed Project involves construction of 15,000 LF of open-channel and pipeline water conveyance facilities with above ground turnouts approximately every one-quarter mile and up to nineteen (19) acres of land to be disturbed during construction. During construction of the proposed Project it will be necessary to use, transport and possibly store incidental amounts of fuel and equipment

²⁹ County of Tulare. 2010. Recirculated Draft Environmental Impact Report, SCH No. 2006041162. Page 3.8-5

³⁰ Ibid.

³¹ County of Tulare. 2010. Recirculated Draft Environmental Impact Report, SCH No. 2006041162. Page 3.8-5 – 3.8-6

maintenance materials to support the use of construction equipment. Operation of the facilities will not require the use, storage, or transport of hazardous materials. Therefore, impacts would be less than significant.

VIII-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?

No Impact. The Project would not create a significant hazard to the public or the environment as the Project would not discharge hazardous materials into the environment. There would be no impact.

VIII-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. There is one school in the vicinity of the proposed Project, located approximately one mile to the southeast. The Project would not emit hazardous emissions, involve hazardous materials, or create a hazard to the school in any way. There would be no impact.

VIII-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. The Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by DTSC. There would be no impact.

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

No Impact. The proposed Project is located approximately 3.7 miles northwest of the Porterville Municipal Airport and approximately eleven miles southeast of the Mefford Field Airport in the City of Tulare. There are no private airstrips within the vicinity of the proposed Project. According to the Tulare County Comprehensive Airport Land Use Plan, the site is not located within the airport safety zones for either airport. Therefore, the Project would not result in a safety hazard for people within the Project area. There would be no impact.

VIII-f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. Any impacts regarding private airstrips have been discussed in Impact VII-e. There would be no impact.

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

Less than Significant Impact. The construction and operation of the proposed Project would not result in the permanent closure of any roadways. Temporary lane closures may be required for installation of the facilities on the west side of Road 200 for Service Area 1 and Road 208 for Service Area 2. Road 200 is a rural road that terminates and turns into Avenue 164, along which the pipeline continues until the Road 196 junction. Avenue 164 is primarily a service road. Road 208 is also primarily a rural road that does not experience heavy use. Construction activities will be temporary and will be scheduled to maintain access to nearby properties.

Therefore, impacts to an adopted emergency response plan or emergency evacuation plan would be less than significant.

VIII-h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The Project site and the surrounding lands are in intensive agricultural production and are not considered wildlands. According to the Fire Threat map (Figure 10-2) in the Tulare County General Plan Background Report the Project site is not located in a fire threat area. There would be no impact.

1.9 Hydrology and Water Quality

Table 1-17: Hydrology and Water Quality

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

1.9.1 Environmental Setting

Tulare County's climate is classified as a Mediterranean climate with lower rainfall and warmer temperatures averaging annually between 76.6 and 49.6 degrees Fahrenheit. Normal annual precipitation on the Valley floor varies between approximately 6 and 11 inches.. The majority of precipitation (95%) falls during the months of October through April.

Tulare County is primarily located within the Tulare Lake Hydrologic Region (Tulare Lake Basin). The Tulare Lake Basin is a closed drainage basin at the south end of the San Joaquin Valley, encompassing stream channels draining to Kern, Tulare, and Buena Vista Lakes. Local streams in Tulare County flow from the Sierra Nevada Mountains westwards towards the San Joaquin Valley. The Tulare County General Plan defines four rivers and their watersheds in the County: Kings River Watershed, Kaweah Watershed, Tule Watershed, and Deer Creek/White River Watershed³². The proposed Project is located within the Tule River Watershed³³.

Groundwater in Tulare County occurs in an unconfined state throughout, and in a confined state beneath the western portion underlying the Kings, Kaweah and Tule sub-basins. Areas near the Kings, Kaweah and Tule Rivers contain highly-permeable areas with opportunities for natural and artificial recharge. Groundwater provides approximately one-third of the County's urban and agricultural demands in an average year and more during drought years due to reductions in surface water supplies and increased groundwater pumping. Groundwater yields tend to increase with distance from the foothills. Since groundwater demand also increases, groundwater overdraft also tends to increase in the westward direction. Groundwater planning efforts in the County are addressing some identified issues such as groundwater overdraft³⁴.

Groundwater recharge occurs both naturally and artificially. Natural recharge consists of percolation from lakes, drainage channels, and rainfall. Artificial recharge occurs through seepage from conveyance facilities and percolation from irrigation as well as deliveries of surface water to recharge basins, open land, unlined canals, and fields in the off-season. Recharge can serve to stabilize groundwater reservoirs and utilize groundwater storage capacity made available by the removal of water from the groundwater aquifer³⁵.

In most areas of Tulare County, groundwater quality is acceptable for agricultural and urban uses through normal treatment and delivery operations.

According to the Tulare County General Plan Update Figure 3.6-5 Flood Hazards, the proposed Project site is not located within the FEMA 100-Year or 500-Year Flood Zones. The Project site is, however, located within the middle of the 2-3 hour dam failure inundation zone for Lake Success.

1.9.2 Regulatory Setting

1.9.2.1 Federal

Federal Emergency Management Agency Flood Zones: The Federal Emergency Management Agency (FEMA) is the federal agency that oversees floodplains and manages the nation's flood insurance program. FEMA's regulations govern the delineation of flood plains and establish requirements for flood plain management. FEMA conducted extensive map updates as well as digitized all its flood insurance rate maps throughout the nation which was completed in June of 2009. Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. Moderate flood hazard areas, labeled Zone B or Zone X (shaded), are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas

³² County of Tulare. 2010. Recirculated Draft Environmental Impact Report, SCH No. 2006041162. Page 3.6-14 – 3.6-15

³³ Five Year Update Agricultural Water Management Plan, Porterville Irrigation District, July 2012. Page 2-3.

³⁴ County of Tulare. 2010. Recirculated Draft Environmental Impact Report, SCH No. 2006041162. Pages 3.6-21 and 3.6-22

³⁵ Ibid, Page 3.6-27

of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded³⁶).

Clean Water Act: The CWA is the primary federal legislation that governs water pollution. The CWA established a national policy to help maintain and restore the physical, chemical, and biological integrity of the nation's waters. The principal body of law currently in effect is based on the federal Water Pollution Control Amendments of 1972, which significantly strengthens the CWA.

The 1972 Act introduced a permit system for regulating point sources of pollution. In California, the State assumed responsibility for implementing the CWA. The following regulatory programs have been developed under the CWA, though they are administered at the State level.

National Pollutant Discharge Elimination System: In 1972, the CWA established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate the discharge of pollutants from "point sources" to waters of the nation ("Waters of the U.S."). From 1972 to 1987, the main focus of the NPDES program was to regulate conventional pollutant sources such as sewage treatment plants and industrial facilities. At the same time, the U.S. EPA conducted studies along with public agencies and other entities dealing with urban stormwater and found that runoff from urbanized areas, along with erosion and siltation from construction sites, were major sources of urban runoff pollution. Consequently, the 1987 amendments to the CWA added Section 402(p) requiring the U.S. EPA to develop permitting regulations for stormwater discharges from municipal separate storm sewers (MS4s) and industrial facilities, including construction sites.

Impaired Water Bodies: Section 303(d) of the CWA requires states to identify water bodies that do not meet, or are not expected to meet, water quality standards (i.e. impaired waterbodies). The affected water body, and associated pollutant or stressor, is then prioritized in the 303(d) List. The CWA further requires the development of a Total Maximum Daily Load (TMDL) for each listing. California's current list, approved by the U.S. EPA, is the 2006 303(d) List. The 303(d) list is being updated through the development of a 303(d)/305(b) Integrated Report which will address both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The 2008 Integrated Report for the Central Valley Region was approved by the Central Valley Regional Water Quality Control Board in June 2009 and has been included in a statewide 2008/2010 California Integrated Report.

1.9.2.2 State

Regional Water Quality Board: The Regional Water Quality Control Board (RWQCB) administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The plan will include specifications for Best Management Practices (BMPs) that will be implemented during proposed Project construction to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established by the RWQCB in the *California Storm Water Best Management Practice Handbook* (2003), and are recognized as effectively reducing degradation of surface waters to an acceptable level. Additionally, the SWPPP will describe measures to prevent or control runoff degradation after construction is complete, and identify a plan to inspect and maintain these facilities or project elements.

³⁶ Federal Emergency Management Agency. <http://msc.fema.gov/portal>. Site Accessed March 2016.

California Water Code: The California Water Code establishes the governing law pertaining to all aspects of water management in California. The California Water Code establishes the Department of Water Resources (DWR) as the primary research and water supply development and management agency and the SWRCB for overall water quality policy development and for dealing with water rights issues.

California Water Code (Sections 10004 *et seq.*) requires that the DWR update the State Water Plan every five years. The State Water Plan divides the State into 12 hydrologic regions; the proposed Project is located in the Tulare Lake Hydrologic Region.

State Water Resources Control Board: The SWRCB, located in Sacramento, is the agency with jurisdiction over water-quality issues in California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code), which establishes the legal framework for water-quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate factors that may affect the quality of waters of the State to attain the highest quality that is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The proposed Project site is located within the Central Valley Region.

(Stats. 1913, CH. 586): California created a system of appropriating surface water rights (rivers and streams) through a permitting process in 1913 (Stats. 1913, CH. 586) but groundwater has never had any statewide regulation. Groundwater management needs are identified at the local level and may be directly resolved at the local level. If groundwater management needs cannot be directly resolved at the local level, additional actions such as enactment of ordinances by local governments, passage of laws by the Legislature, or decisions by the courts may be necessary to resolve the issues.

AB 3030 (Stats. 1992, CH. 947): The most significant legislation regarding groundwater management was passed in 1992. AB3030 (Stats. 1992, CH. 947) greatly increased the number of local agencies authorized to develop a groundwater management plan and detailed a common framework for management by local agencies. AB 3030, codified in Water Code Section 10750 *et seq.*, provides for the formulation and adoption of a plan for an identified groundwater basin. Such plans must include the cooperation and involvement of all holders of water rights and the various water users to be adopted. Upon adoption of a plan and with a majority vote in favor of the proposal in a local election, the agency can fix and collect fees and assessments for groundwater management. There is no Tulare Lake Basin Groundwater Plan or other coordinated County-wide effort to manage groundwater resources³⁷.

Sustainable Groundwater Management Act: On September 16, 2014 Governor Edmund G. Brown Jr. signed historic legislation to strengthen local management and monitoring of groundwater basins most critical to the state's water needs. The three bills, SB 1168 (Pavley) SB 1319 (Pavley) and AB 1739 (Dickinson) together makeup the Sustainable Groundwater Management Act (SGMA). The SGMA comprehensively reforms groundwater management in California. The intent of the Act is to place management at the local level under State oversight. Under the Act, the state will have direct oversight of how groundwater basins are managed at the local level and the State may intervene to manage basins when local agencies fail to take appropriate responsibility. The implementation of the Act will occur over the next several years.

Central Valley Flood Protection Board: Under California Water Code § 8534, 8608, and 8710-8723, the Flood Board is required to enforce appropriate standards for the construction, maintenance, and protection of adopted flood control plans that will best protect the public from floods. The Flood Board's jurisdiction encompasses the Central Valley, including all tributaries and distributaries of the Sacramento and San Joaquin

³⁷ Tulare County General Plan 2030 Update, Page 3.6-8

Rivers and excluding the Tulare and Buena Vista Basins. The Flood Board exercises jurisdiction over State and federal levees, of which Tulare County has none³⁸.

1.9.2.3 Local

Tulare County Flood Control District: The Tulare County Flood Control District is a countywide special district governed by the County Board of Supervisors and oversees the local flood program. The County's Flood Plain Administrator uses FEMA maps to determine areas that are within the 100-year and 500-year floodplains.

Tulare County General Plan:

- **HS-5:** To minimize the possibility of the loss of life, injury, or damage to property as a result of flood hazards.
 - **HS-5.3:** Participation in Federal Flood Insurance Program – The County shall continue to participate in the National Flood Insurance Program (NFIP).
- **WR-1:** To provide for the current and long-range water needs of the County and for the protection of the quality and quantity of surface and groundwater resources.
 - **WR-1.5:** Expand Use of Reclaimed Wastewater – To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts.
 - **WR-1.8:** Groundwater Basin Management – The County shall take an active role in cooperating in the management of the County's groundwater resources.
 - **WR-1.11:** Groundwater Overdraft – The County shall consult with water agencies within those areas of the County where groundwater extraction exceeds groundwater recharge, with the goal of reducing and ultimately reversing groundwater overdraft conditions in the County.
- **WR-2:** To provide for the current and long-range water needs of the County and for the protection of the quality of surface and groundwater resources.
 - **WR-2.2:** National Pollutant Discharge Elimination System (NPDES) Enforcement – The County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board.
 - **WR-2.3:** Best Management Practices (BMPs) – The County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effect of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board.
 - **WR-2.4:** Construction Site Sediment Control – The County shall continue to enforce provisions to control erosion and sediment from construction sites.
 - **WR-2.5:** Major Drainage Management – The County shall continue to promote protection of each individual drainage basin within the County based on the basins unique hydrologic and use characteristics.

³⁸ Tulare County General Plan 2030 Update, Page 3.6-7

- WR-2.6: Degraded Water Resources – The County shall encourage and support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.
- WR-2.7: Industrial and Agricultural Sources – The County shall work with agricultural and industrial concerns to ensure that water contaminants and waste products are handled in a manner that protects the long-term viability of water resources in the County.
- WR-3: To provide a sustainable, long-term supply of water resources to meet domestic, agricultural, industrial, and recreational needs and to assure that new urban development is consistent with available water resources.
 - WR-3.1: Develop Additional Water Sources – The County shall encourage, support and, as warranted, require the identification and development of additional water sources through the expansion of water storage reservoirs, development of groundwater banking for recharge and infiltration, and promotion of water conservation programs, and support of other projects and programs that intend to increase the water resources available to the County and reduce the individual demands of urban and agricultural users.
 - WR-3.10: Diversion of Surface Water – Diversions of surface water or runoff from precipitation should be prevented where such diversions may cause a reduction in water available for groundwater recharge.

1.9.3 Impact Assessment

IX-a Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. According to the Tulare County General Plan the assurance of water quality requires the review of major land uses and development plans to prevent soil erosion; direct discharge of potentially-harmful substances; ground-leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site. The Project would not result in any of the above-mentioned water-quality-deteriorating events. During construction of the Project, implementation of erosion control measures described by the Tulare County Development Standards and mandated in the Stormwater Pollution Prevention Program would minimize any potential impacts to less than significant. The impact would be less than significant.

IX-b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

No Impact. The Project site is located in the Tulare Lake Basin and is in an area significantly affected by overdraft. The DWR has estimated the groundwater by hydrologic region and for the Tulare Lake Basin, the total overdraft is estimated at 820,000 acre-feet per year, the greatest overdraft projected in the state, and 56 percent of the statewide total overdraft. Within the Tule Sub-basin portion of the regional area it is estimated to be about 20,000 to 30,000 acre-feet per year. The District imports a significant amount of water from the Friant Unit of the CVP to help offset this ongoing overdraft.

The Project includes the construction of open-channel and pipeline, with above-ground turnouts located approximately every one-quarter mile along the 15,000 LF of conveyance facilities. No extraction wells would

be constructed as a part of the Project thus it would result in a net increase in groundwater supplies through surface water irrigation. There would be no impact.

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

Less than Significant Impact. The proposed Project would minimally change drainage patterns as a result of Project build-out. Conveyance facilities would be constructed in previously-developed road rights-of-way. Impacts would be less than significant.

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

Less than Significant Impact. As noted in response to Impact Assessment IX-c, the completion of the proposed Project would not substantially alter the sites' existing drainage patterns. During construction, however, a Stormwater Pollution Prevention Plan would be implemented. The selected general contractor would be required to submit a Notice of Intent to comply with the General Permit order to discharge storm water associated with construction activities (WQ Order No. 2009-0009 DWQ) with the State Water Resources Control Board. The proposed Project would be accomplished with minimal modification of site drainage patterns or change to drainage pathways or disturb the channels' volume. As a result, potential impacts are anticipated to be less than significant.

IX-e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact. See remarks under response to Impact Assessment IX-d.

IX-f) Otherwise substantially degrade water quality?

Less than Significant Impact. The proposed Project would not lead to degraded water quality. Compliance with SWPPP conditions would avoid any adverse water-quality discharge events. The impact would be less than significant.

IX-g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. As shown in **Figure 1-5** and **1-6**, the proposed Project is not located within a 100-year flood hazard area, and does not propose the construction of any housing. Therefore, no impacts would occur.

IX-h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less than Significant Impact. . According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), Neither Service Area 1 or Service Area 2 are located within a 100-year flood zone, as noted in **Figure 1-5** and **Figure 1-6**³⁹. There would be no significant impact.

³⁹ Federal Emergency Management Agency, On-line Map Service Center, Map ID #06019C2025H, <http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=91114935&IFIT=1>

IX-i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less than Significant Impact. As previously noted, the Project sites are located within the 2-3 hour zone of the Lake Success Dam failure zone. However, as the proposed Project would not construct any dwelling units or necessitate permanent onsite staffing it would not result in the exposure of people or significant structures to flood related risks. Impacts would be less than significant.

IX-j) Inundation by seiche, tsunami, or mudflow?

No Impact. The proposed Project area is located more than 85 miles east of the Pacific Ocean and is not subject to inundation by tsunami. The existing conveyance facilities, which would convey waters to the proposed Project area, are not located in an enclosed body of water, which indicates that inundation by seiche would not occur. The proposed Project is located on level ground. Therefore, a mudflow emergency is not likely to occur. There would be no impact.

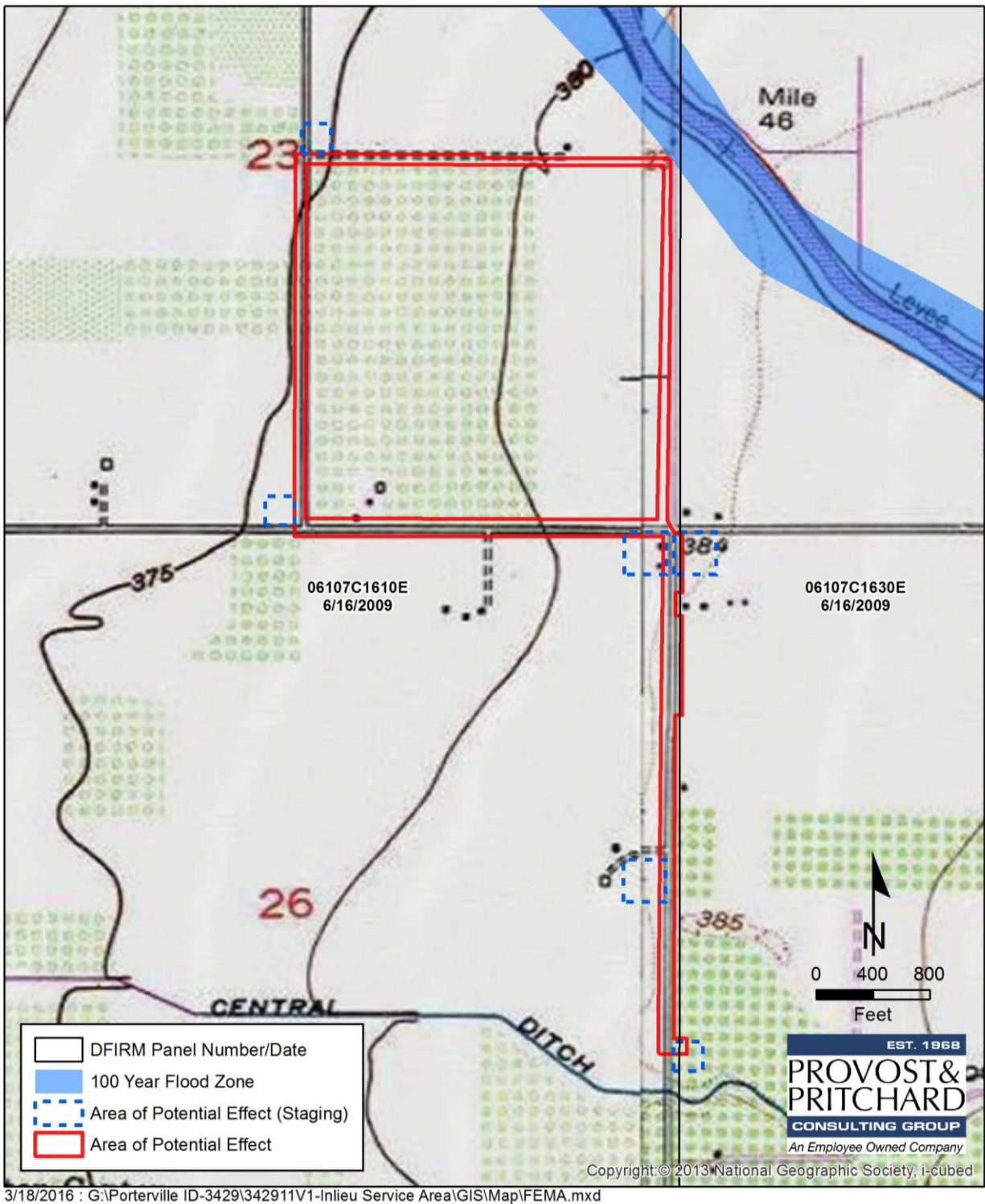


Figure 1-4: FEMA Map – Service Area 1

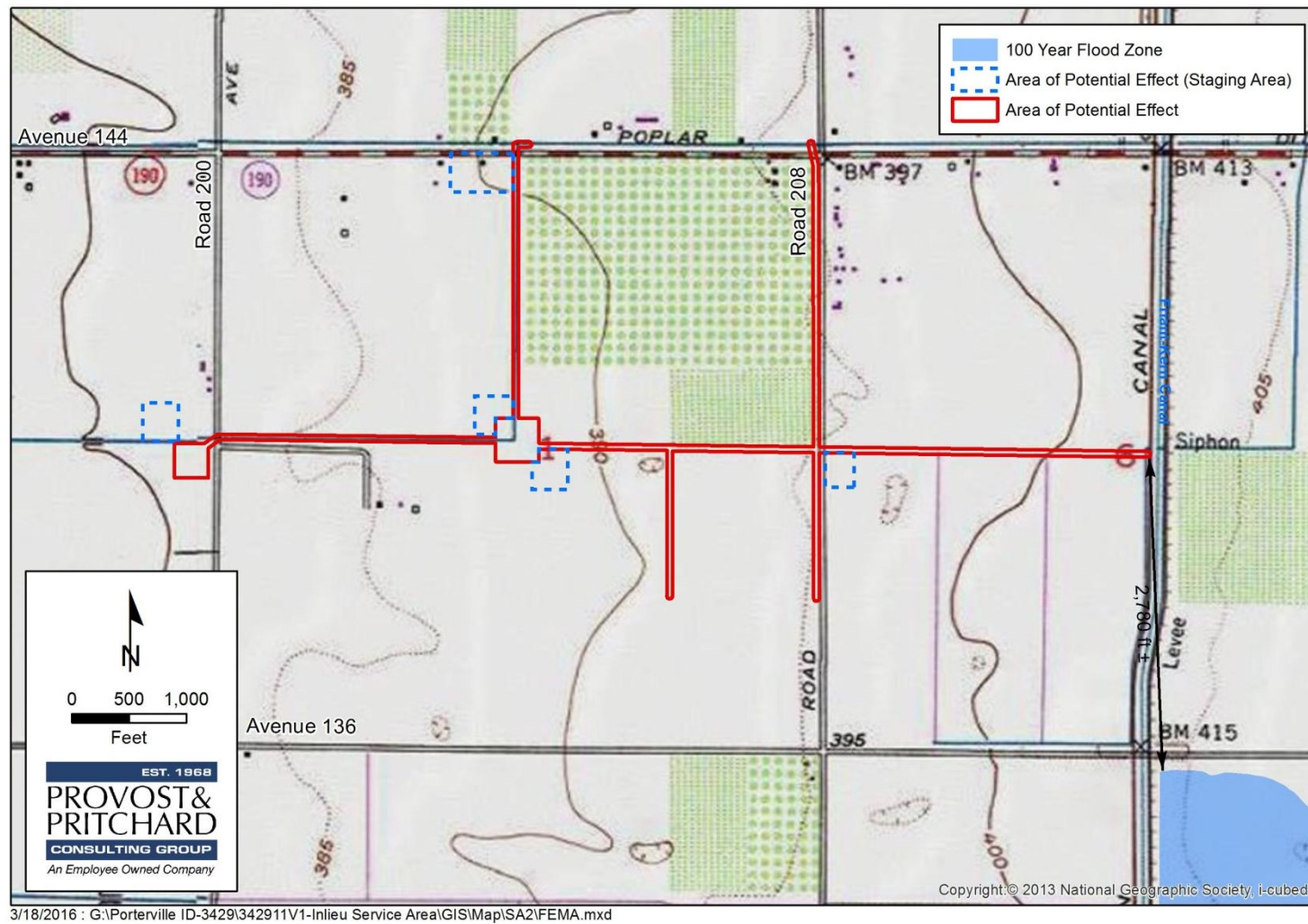


Figure 1-5: FEMA Map – Service Area 2

1.10 Land Use and Planning

Table 1-18: Land Use and Planning

Land Use and Planning				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.10.1 Environmental Setting

The proposed Project sites are located in Tulare County approximately 2.86 miles west of the City of Porterville. Tulare County lies south of the Sacramento-San Joaquin Delta, and is approximately 4,840 square miles in area. The County is bordered by Fresno County to the north, Kings County to the west, Kern County to the south, and Inyo County to the east.

Lands in the vicinity of the Project Service Areas consist of furrow-irrigated agricultural land, tree crops, and rural residences. Crops generally grown around Service Area 1 are mostly tree crops, while Service Area 2's vicinity includes mostly corn and wheat.

The County of Tulare General Plan designates both Service Areas of the proposed Project site as Agriculture, and both are within the AE-20 agricultural zone district and Service Area 1 abuts lands zoned AE-40 as shown in **Figure 1-7** and **Figure 1-8**.

No forest or timberland is present at the proposed Project site or in the vicinity.

1.10.2 Regulatory Setting

1.10.2.1 Federal

There are no relevant federal or State regulations pertaining to land use.

1.10.2.2 State

This proposed Project is being evaluated pursuant to CEQA; however, there are no state regulations, plans, programs, or guidelines associated with land use and planning that are applicable.

1.10.2.3 Local

Tulare County General Plan

- **PF-1:** To provide a planning framework that promotes the viability of communities, hamlets, and cities while protecting the agricultural, open space, scenic, cultural, historic, and natural resource heritage of the County.
- **LU-1:** To encourage the overall economic and social growth of the County while maintaining its quality of life standards and highly efficient land use.
- **LU-2:** To provide for the long-term conservation of productive and natural resource lands including agricultural, foothill, mountain, and riparian areas and to accommodate services and related activities that support the continued viability and conservation resource lands.
 - **LU-2.1: Agricultural Lands** – The County shall maintain agriculturally designated areas for agriculture use by directing urban development away from valuable agricultural lands to cities, unincorporated communities, hamlets, and planned community areas where public facilities and infrastructure are available.
 - **LU-2.5: Agricultural Support Facilities** – The County shall encourage beneficial reuse of existing or vacant agricultural support facilities for new businesses (including non-agricultural uses).
- **RVLP-1:** To sustain the viability of Tulare County’s agriculture by restraining division and use of land which is harmful to continued agricultural use of non-replaceable resources.

1.10.3 Impact Assessment

X-a) Would the project physically divide an established community?

No Impact. There are no communities within or adjacent to the Project sites. Additionally, the Project would not include any physical improvements such as new streets that would potentially divide any established community. There would be no impact.

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

No Impact. The Project involves construction of open-channel and pipeline water conveyance facilities with above ground turnouts located approximately every one-quarter mile. According to the California Government Code §51238 (a)(1), the construction of water facilities are determined to be compatible uses within any agricultural preserve. The Project would include the construction of facilities to be used by the District to expand its groundwater recharge efforts to stabilize groundwater levels by reducing groundwater overdraft. The proposed Project would provide mutual benefit to the District and the City of Porterville as both draw water from the same aquifer. There would be no impact.

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

No Impact. There are two habitat conservation plans that could apply in Tulare County; the Kern Water Habitat Conservation Plan and the Recovery Plan for Upland Species in the San Joaquin Valley. The proposed Project site is not within the Kern Water Habitat Conservation Plan area and therefore, the Project site is not subject to this plan. The Recovery Plan for Upland Species in the San Joaquin Valley identifies 94 public and conservation lands within their planning area. The closest conservation land to the Project site is the Creighton Ranch Preserve located approximately 12 miles southwest of the proposed Project site. The

Project will not conflict with any adopted habitat conservation plans or natural community conservation plans. Therefore, there would be no impact

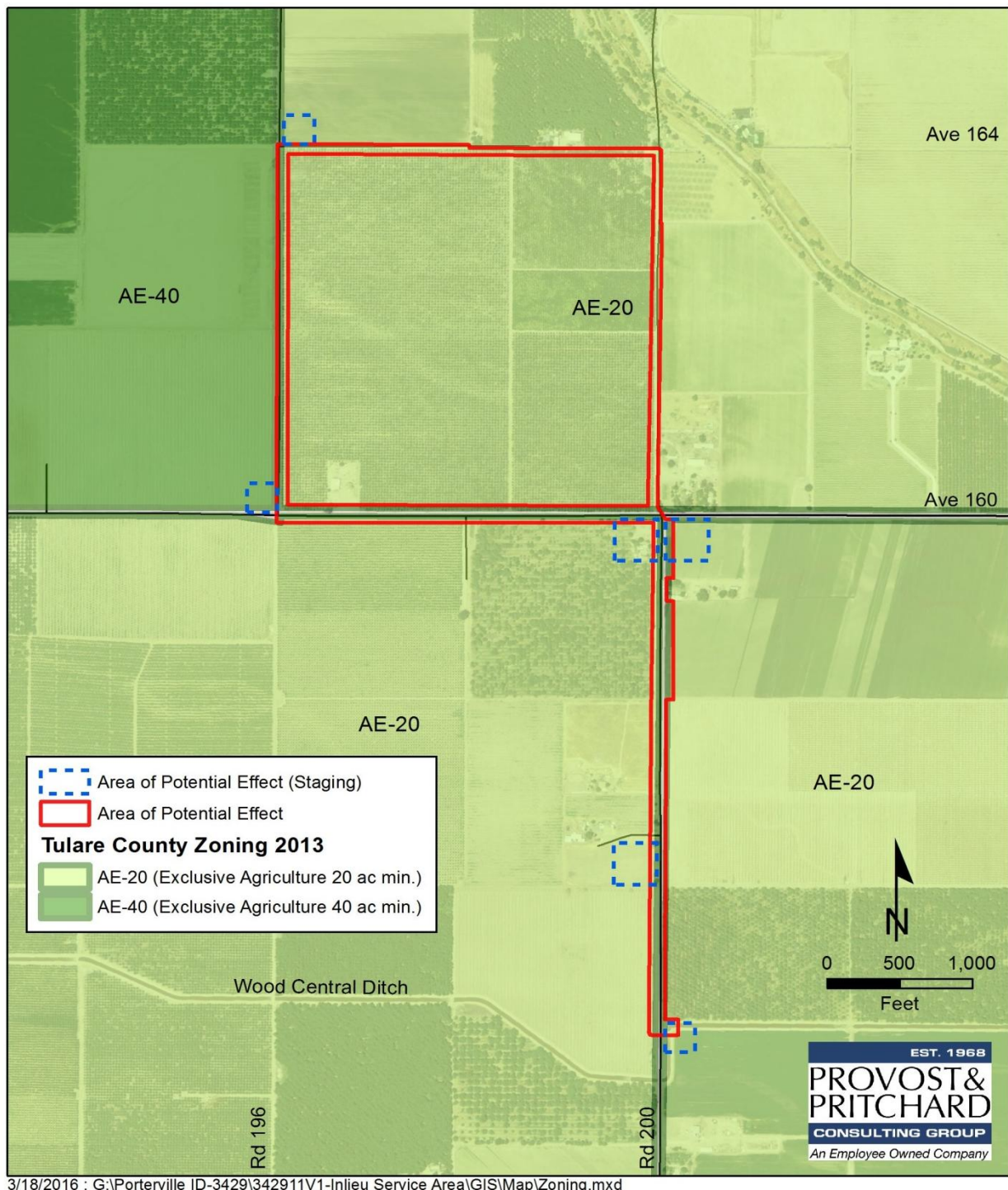


Figure 1-6: Tulare County Zoning Map – Service Area 1

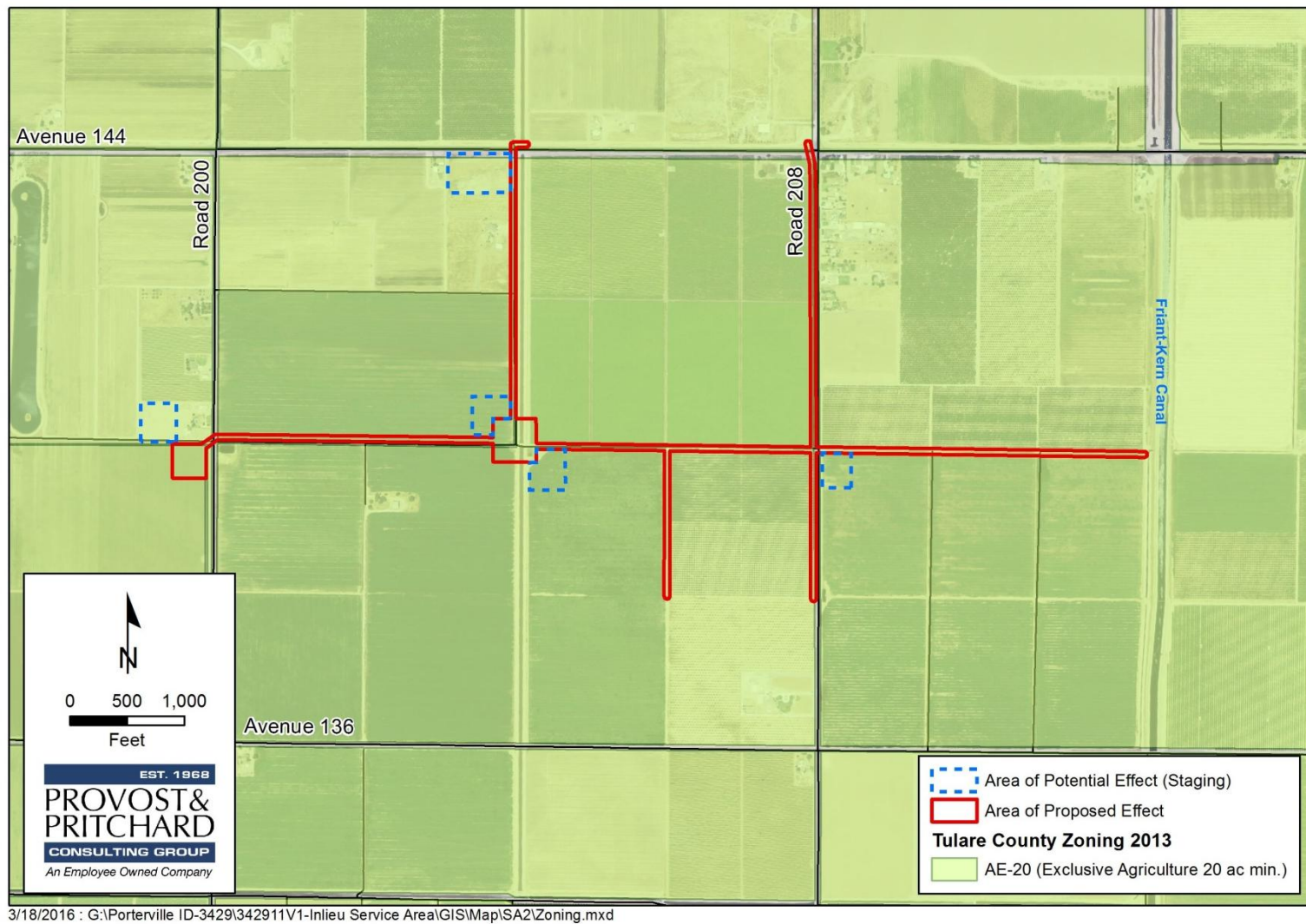


Figure 1-7: Tulare County Zoning Map – Service Area 2

1.11 Mineral Resources

Table 1-19: Mineral Resources

Mineral Resources				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.11.1 Environmental Setting

Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains encompassing the majority of the eastern portion of the County and the Central Valley encompassing the majority of the western portion. The foothill area of the County lies between these two regions and is essentially a transition area. The proposed Project site is located within the Central Valley region in the western portion of the County. The central and western parts of the County are underlain by marine and non-marine sedimentary rocks. The Central Valley is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting and erosion of the mountains⁴⁰.

Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. Aggregate resources are the most valuable mineral resources in the County because they are essential to constructing roads and buildings, and to providing for other infrastructure needs. There are three streams that have provided the main source of high-quality sand and gravel in Tulare County; the Kaweah River, Lewis Creek, and the Tule River. The highest-quality deposits are located at the Kaweah and Tule Rivers. Construction material is also mined in the hard rock deposits of the foothills⁴¹.

The California Department of Conservation, Office of Mine Reclamation (OMR) provides mine information to the public through the Mines Online (MOL) website. The website is an interactive tool designed to provide information such as mine name, operational status, commodities sold, and mine locations. According to the MOL geographic information system (GIS), there are no mines in the Project vicinity⁴².

California Department of Conservation's Division of Oil, Gas and Geothermal Resources (DOGGR) maintains a database of oil wells in the Project area. According to the DOGGR Well Finder there are approximately four oil wells within approximately one mile of the Service Area 1 Project site and approximately six oil wells within approximately one mile of the Service Area 2 Project site⁴³.

⁴⁰ Tulare County General Plan 2030 Update Recirculated Environmental Impact Report, Page 3.7-4

⁴¹ Ibid, Page 3.7-9

⁴² State of California, Department of Conservation, <http://maps.conservation.ca.gov/mol/mol-app.html>

⁴³ State of California Department of Conservation, Division of Oil, Gas & Geothermal Resources Well Finder <http://maps.conservation.ca.gov/doggr/index.html#close> Site Accessed March 2016.

1.11.2 Regulatory Setting

1.11.2.1 Federal

There are no federal regulations pertaining to mineral resources relevant to the proposed Project.

1.11.2.2 State

California Surface Mining and Reclamation Act of 1975: Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code Section 2710 *et seq.*, ensures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California. The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- **MRZ-1.** Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- **MRZ-2.** Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.
- **MRZ-3.** Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.
- **MRZ-4.** Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production are not covered by SMARA.

1.11.2.3 Local

Tulare County General Plan:

- **ERM-2:** To conserve protect and encourage the development of areas containing mineral deposits while considering values relating to water resources, air quality, agriculture, traffic, biotic, recreation, aesthetic enjoyment, and other public interest values.
 - **ERM-2.1:** Conserve Mineral Deposits – The County will encourage the conservation of identified and/or potential mineral deposits recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate.
- **ERM-3.1:** To protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment.

- ERM-7: To preserve and protect soil resources in the County for agricultural and timber productivity and protect public health and safety.

1.11.3 Impact Assessment

XI-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. The proposed Project site is not designated by the State Department of Mines and Geology as a site with known rock and sand resources and requiring protection from development. The proposed Project does not bring about the loss of any known mineral resources, nor would it result in the loss of access to known mineral resources of value to the region. Such designation has not been conferred on the sites and the proposed Project does not restrict access to the sites for any purpose in the future. There would be no impact.

XI-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. The Project site is not delineated on a local land use plan as a locally-important mineral resource recovery site; therefore, the Project would not result in the loss of availability of any mineral resources. There would be no impact.

1.12 Noise

Table 1-20: Noise

Noise				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.12.1 Environmental Setting

Service Areas 1 and 2 are surrounded by vacant land, canals, agricultural fields, and rural residences. Typical noises in the vicinity of both sites consist of agricultural equipment and light traffic.

Maximum noise levels generated by farm-related equipment typically range from 77 to 85 db at a distance of 50 feet from the equipment, depending on engine horsepower and operating conditions. Due to the seasonal nature of the agricultural industry, there are often extended periods of time when no noise is generated at the proposed Project site, followed by short-term periods of intensive mechanical equipment usage and corresponding noise generation.

1.12.2 Regulatory Setting

1.12.2.1 Federal

Federal Vibration Policies: The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be

exposed to ground-borne vibration levels of 90 VdB without experiencing structural damage⁴⁴. The FTA has identified the human annoyance response to vibration levels as 75 VdB.⁴⁵

1.12.2.2 State

California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

1.12.2.3 Local

Tulare County has conducted noise measurements for several types of equipment used in agricultural operation in the County; the results are summarized in the table below and present a range of levels that may be expected⁴⁶:

Table 1-21: Noise Measurements for Various Agricultural Equipment.

Noise Measurements for Various Agricultural Equipment		
Equipment	At 50 feet	Other Distances
Wind Machine (Ground Power)	91-92 dBA	61-71 dBA at 350 feet
Wind Machine (Electric)	73-87 dBA	56-67 dBA at 350 feet
Diesel Engines on Wells	75-85 dBA	
Aerial Application Aircraft	97-100 dBA	85-88 dBA at 600 feet
Cotton Picker		72-75 dBA at 150 feet
Larger diesel-powered wheel tractor pulling a 20-foot disk		72-75 dBA at 150 feet
Smaller diesel-powered wheel tractor pulling a furrowing appliance	69-79 dBA	
Randall weed sprayer with one cylinder diesel engine	74-75 dBA	
FMC Bean 267 engine-driven speed sprayer	92-97 dBA	
Aerolan 391 speed sprayer		74-76 dBA at 100-300 feet

Generally, a diesel engine will produce noise levels of 75 to 85 dBA at approximately 50 feet. Although farming operations occasionally generate significant noise levels, such levels generally do not last more than a few hours at a given location unless a stationary piece of equipment such as a pump master (or engine) is involved. For this reason, significant cumulative noise exposure as defined by the Day-Night Average Level (Ldn) would not generally be expected to result from typical farming operations within Tulare County⁴⁷.

The Tulare County General Plan identifies the following maximum acceptable noise levels for various land uses:

⁴⁴ Federal Railway Administration, High-Speed Ground Transportation Noise and Vibration Impact Assessment, September 2012.

⁴⁵ Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

⁴⁶ Tulare County General Plan Background Report, Pages 8-71 through 8-73

⁴⁷ Tulare County General Plan Background Report, Page 8-73

Table 1-22: Maximum Acceptable Ambient Noise Exposure for Various Land Uses.

Maximum Acceptable Ambient Noise Exposure for Various Land Uses ⁴⁸	
Land Use	Suggested Maximum Ldn
Residential – low density	60
Residential – high density	65
Transient lodging	65
Schools, libraries, churches, hospitals	65
Playground, parks	65
Commercial	70
Industrial	75

Measuring and reporting noise levels involves accounting for variations in sensitivity to noise during the daytime versus nighttime hours. Noise descriptors used for analysis need to factor in human sensitivity to nighttime noise when background noise levels are generally lower than in the daytime and outside noise intrusions are more noticeable. Common descriptors include the Community Noise Equivalent Level (CNEL) and the Ldn. Both reflect noise exposure over an average day with weighting to reflect the increased sensitivity to noise during the evening and night. The two descriptors are roughly equivalent. The CNEL descriptor is used in relation to major continuous noise sources, such as aircraft or traffic, and is the reference level for the Noise Element under State planning law. The following table includes noise and land use compatibility standards for various land uses as provided in the State of California General Plan Guidelines, 2003.

Table 1-23: Land Use Compatibility for Community Noise Environments.

Land Use Compatibility for Community Noise Environments ⁴⁹				
Land Use Category	Community Noise Exposure, Ldn or CNEL dB			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low density single family, duplex, mobile homes	<60 (<45 Interior)	55 – 70	70 – 75	>75 (>45 Interior)
Residential – Multiple family	<65 (<45 Interior)	60 – 70	70 – 75	>75 (>45 Interior)
Schools, libraries, churches, hospitals, nursing homes	<70	60 – 75	70 – 80	>80
Industrial, manufacturing, utilities, agriculture	<75	70 – 80	75 – 85	No levels identified

Interpretation: Normally acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

⁴⁸ Ibid, Page 8-50

⁴⁹ State of California Governor's Office of Planning and Research General Plan Guidelines, 2003 p. 250

Conditionally acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally unacceptable – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly unacceptable – New construction or development should generally not be undertaken.

Tulare County General Plan:

- **HS-8:** To protect County residents and visitors from the harmful effects of excessive noise while promoting the County economic base.
 - **HS-8.6:** Noise Level Criteria – 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).
 - **HS-8.13:** Noise Analysis – The County shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation or stationary sources have the potential to exceed the adopted noise policies of the Health and Safety Element, where there is development of new noise sensitive land uses or the development of potential noise generating land uses near existing sensitive land uses. The noise analysis shall be the responsibility of the project applicant and be prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California, etc.) The analysis shall include recommendations and evidence to establish mitigation that will reduce noise exposure to acceptable levels (such as those referenced in Table 10-1 of the Health and Safety Element).
 - **HS-8.18:** Construction Noise – The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7 pm, Monday through Saturday when construction activities are located near sensitive receptors. No Construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.
 - **HS-8.19:** Construction Noise Control – The County shall ensure that construction contractors implement best practices guidelines (i.e., berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

1.12.3 Impact Assessment

XII-a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. The Project would involve temporary noise sources associated with general construction activity. Typical construction equipment would include scrapers, backhoes, compactors, trucks and miscellaneous equipment (i.e. pneumatic tools, generators and portable air compressors). Typical noise levels generated by this type of construction equipment at various distances from the noise source are listed in **Table 1-24** below:

Table 1-24: Typical Construction Noise Levels.

Typical Construction Noise Levels ⁵⁰	
Construction Equipment Noise Source	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	81
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane Derrick	88
Crane Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Paver	89
Pile Driver (Impact)	101
Pile Driver (Sonic)	96
Pneumatic Tool	85
Pump	76
Rail Saw	90
Rock Drill	98
Roller	74
Saw	76
Scarifier	83
Scraper	89
Shovel	82
Spike Driver	77
Tie Cutter	84

⁵⁰ U.S. Department of Transportation, 2015. Construction Noise Handbook.
https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm Accessed March 2016.

Typical Construction Noise Levels ⁵⁰	
Construction Equipment Noise Source	Typical Noise Level (dBA) 50 ft from Source
Tie Handler	80
Tie Inserter	85
Truck	88

Noise levels generated by the equipment would range from 76 to 88 dBA at a distance of 50 feet from the noise source; at 100 feet, the noise levels would range from 70 to 82 dBA. There are several rural residences located between 50 and 100 from the proposed water conveyance facilities. Noise from construction activities would exceed the Tulare County General Plan Noise Element (2012) “normally acceptable” noise standards of 75 dBA at the exterior of nearby residences. However, noise from construction activities is considered temporary and construction activities will be limited to the hours of 7 AM to 7 PM, Monday through Friday, and best practices guidelines will be implemented as appropriate and feasible in accordance with Tulare County General Plan policies. The impact would be less than significant.

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

Less than Significant Impact. Vibration is the periodic oscillation of a medium or object. Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS), as in RMS vibration velocity. The PPV and RMS (VbA) vibration velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal and is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings⁵¹. Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. As it takes some time for the human body to respond to vibration signals, it is more prudent to use vibration velocity when measuring human response. The vibration velocity level (L_v) is reported in decibels relative to a level of 1×10^{-6} inches per second and is denoted as VdB. The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely-perceptible and distinctly-perceptible levels⁵².

Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. The approximate threshold of vibration perception is 65 VdB, while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day⁵³. **Table 1-24** describes the typical construction equipment vibration levels.

⁵¹ U.S. Department of Transportation, Federal Transit Administration, Transit Noise & Vibration Impact Assessment, May 2006, 2-16 to 12-10.

⁵² Ibid.

⁵³ Ibid.

Table 1-25: Typical Construction Equipment Vibration Levels.

Typical Construction Equipment Vibration Levels ⁵⁴		
Equipment	PPV at 25-feet (in/sec)	Approximate L _v at 25-feet
Pile Driver (Impact)	0.644	112
Pile Driver (Sonic)	0.170	93
Vibratory Roller	0.210	94
Large Bulldozer	0.089	87
Small Bulldozer	0.003	58
Jackhammer	0.035	79

The Project would involve temporary vibration sources associated with general construction activity. There would be no long-term operational sources of vibration once construction is completed. Temporary construction vibrations would not exceed the FTA threshold for the nearest residence, approximately 50 feet away from the Project site. The impact would be less than significant.

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

Less than Significant Impact. Upon completion of construction activities, the majority of proposed Project operational activity will be passive. Potential noise sources resulting from proposed Project implementation include noise associated with vehicular trips for facility operation and maintenance activities. Maintenance activities would occur infrequently and are not expected to substantially increase ambient noise levels in the area above existing levels without the Project. The impact would be less than significant.

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

Less than Significant Impact. As discussed in Impact XII-a, the proposed Project will not create a substantial permanent increase in ambient noise levels in the Project's vicinity that would affect the existing environment. During construction phases the proposed Project could temporarily increase noise levels; however, construction is temporary in nature and will comply with the Noise Standards of the Tulare County General Plan. In addition, there will not be any increase in ambient noise levels in the Project vicinity above existing levels. Therefore, impacts to noise levels will be less than significant.

XII-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 expose people residing or working in the project area to excessive noise levels?

No Impact. The Project is not located within an airport land use plan. The closest airports to the Project sites are the Porterville Municipal Airport located 3.7 miles to the southeast and the Mefford Field Airport located approximately 11.4 miles to the northwest. Neither service area is located within a noise contour of these airports. Additionally, the Project would not permanently staff onsite employees. Therefore, the Project would not expose residents or employees to noises associated with public or private airport use. There would be no impact.

⁵⁴ Ibid.

XII-f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. Any impacts regarding the noise levels associated with private airstrips have been discussed in Impact XI-e. There would be no impact.

1.13 Population/Housing

Table 1-26: Population/Housing

Population and Housing				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.13.1 Environmental Setting

According to the California Department of Finance (DOF) population estimates, between 1990 and 2000, Tulare County grew by about 18 percent, an average population growth average of 1.7 percent per year. Between 2000 and 2007 the County experienced an average yearly population growth of 2.2 percent for a total population of 429,010 in 2007. This growth has slowed in recent years; Tulare County grew by a rate of 0.7% between 2014 and 2015, from a population of 458,827 to 462,189. The City of Porterville grew at a slightly slower rate, increasing by 0.5%⁵⁵. ⁵⁶.

1.13.2 Regulatory Setting

There are no federal, State, or local regulations, plans, programs or guidelines associated with population or housing that are applicable to the proposed Project.

1.13.3 Impact Assessment

XIII-a) Induce substantial 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)?

No Impact. The proposed Project involves the construction of open-channel and pipeline water conveyance facilities in Tulare County within the District, expanding its groundwater recharge efforts to stabilize groundwater levels by supplying surface water resources to nearby landowners. According to the County of Tulare General Plan, the County has established policies to cooperate with water agencies in the management of groundwater resources including recharge with the goal of reducing and ultimately reversing groundwater

⁵⁵ California Department of Finance, 2016. Cities, Counties, and the State Population Estimates with Annual Percent Change. <http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/documents/E-12015InternetVersion.xls>. Site Accessed March 2016.

⁵⁶ Tulare County General Plan Background Report, Page 2-30

overdraft conditions in the County. These conveyance facilities will not induce population growth. There will be no impact.

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

No Impact. The water conveyance facilities proposed in the Project will not displace any housing or people. There will be no impact.

XIII-c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. Any impacts regarding the displacement of people have been discussed in Impact XIII-b. There will be no impact.

1.14 Public Services

Table 1-27: Public Services

Public Services				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.14.1 Environmental Setting

The nearest fire station is Tulare County Fire Department Battalion 2 West Olive Fire Station 19, which is approximately 2.9 miles to the east of the proposed Project site. The Tulare County Sheriff's Office is located 6.1 miles east of the site.

Rockford Elementary School is located approximately one mile southeast of the proposed Project site. Burton Ball Fields is located approximately 3.1 miles southeast of the site, while Mooney Grove Park is approximately 6.3 miles northeast of the proposed Project site.

The Teapot Dome Landfill is approximately 6.4 miles northwest of the proposed Project site and the Porterville Wastewater Treatment Plant is located approximately 4.28 miles to the east.

1.14.2 Regulatory Setting

1.14.2.1 Federal

National Fire Protection Association: The National Fire Protection Association (NFPA) is an international nonprofit organization that provides consensus codes and standards, research, training, and education on fire prevention and public safety. The NFPA develops, publishes, and disseminates more than 300 such codes and standards intended to minimize the possibility and effects of fire and other risks. The NFPA publishes the NFPA 1, Uniform Fire Code, which provides requirements to establish a reasonable level of fire safety and property protection in new and existing buildings.

1.14.2.2 State

California Fire Code and Building Code: The 2013 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to fire fighters and emergency responders during emergency operations. The provision of the Fire Code includes regulations regarding fire-resistance rated construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, fire safety during construction and demolition, and wildland urban interface areas.

Under Title 14 of the California Code of Regulations, the California Department of Forestry and Fire Protection (CAL FIRE) has the primary responsibility for fire protection in the 31 million acres of State Responsibility Area in California. In Tulare County, fire protection is contracted out to the Tulare County Fire Department.

1.14.2.3 Local

Tulare County General Plan:

- PF-7: To provide adequate fire and law enforcement facilities and services to ensure the safety of County residents and the protection of County property.
- PF-8: To ensure adequate schools and community facilities are provided and are conveniently located for County residents.

1.14.3 Impact Assessment

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

- **Fire protection?**
- **Police Protection?**
- **Schools?**
- **Parks?**
- **Other public facilities?**

No Impact.

- **Fire Protection:** The Project Service Areas are located within the Tulare County Fire Department (TCFD) the nearest county station is Station 19 located approximately 2.9 miles southeast of the Project site. No residential or commercial construction is identified with this Project and no change in existing land use is associated with this Project, therefore, no additional services would be required from the TCFD. There would be no impact.
- **Police Protection:** The District is located in the Tulare County Sheriff's Department law enforcement service area. There is a Tulare County Sheriff's office approximately 6.1 miles northeast of the Project site. No residential or commercial construction or change in existing land use is proposed in this Project. The Project would not impact existing law enforcement services. There would be no impact.
- **Schools:** The Project sites would not include construction of any residential structures, nor change the existing land use. The Project would not result in an increase of population that would require additional school facilities. There would be no impact.

- Parks: This Project involves the construction of water conveyance facilities and associated appurtenances. The Project will not create a need for additional park or recreational services. There would be no impact.
- Other public facilities: The Project would serve to recharge the underlying groundwater basin through the distribution of surface water to land owners along the new channel and pipeline, benefiting both the City of Porterville and local farmers within the Porterville Irrigation District by reducing groundwater overdraft by both municipal and agricultural uses. The Project would have no sewer needs. Furthermore, the Project would not induce population growth that would require additional need for expanding public facilities. As a result, there would be no impact as a result of Project implementation.

The Project would not rely on the addition or alteration of any public services. The subject sites are located in central Tulare County and would utilize existing services provided by the County. No residential or office construction is proposed for this Project. There would be no impact.

1.15 Recreation

Table 1-28: Recreation

Recreation				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.15.1 Environmental Setting

There are a total of 20 parks and recreation facilities within Tulare County totaling approximately 5,701 acres; 13 are owned and operated by the County, two are State facilities and five are federal facilities. A number of neighborhood parks, play lots, pocket parks and other recreation facilities are also located within the incorporated cities in the County⁵⁷.

The nearest park to the proposed Project sites is Burton Ball Fields, within the City of Porterville. It is located approximately 3.1 miles east of the site.

1.15.2 Regulatory Setting

1.15.2.1 Federal

There are no federal regulations, plans, programs and guidelines associated with recreation that are applicable to the proposed Project.

1.15.2.2 State

There are no State regulations, plans, programs and guidelines associated with recreation that are applicable to the proposed Project.

1.15.2.3 Local

Tulare County General Plan:

- ERM-5: To provide a parks, recreation, and open space system that serves the recreational needs of County residents and visitors, with special emphasis on recreation related to Environmental Resources Management.

⁵⁷ Tulare County General Plan Background Report, Pages 4-3 and 4-4

- ERM-5.15: Open Space Preservation – The County shall preserve natural open space resources through the concentration of development in existing communities , use of cluster development techniques, maintaining large lot sizes in agricultural areas, discouraging conversion of lands currently used for agricultural production, limiting development in areas constrained by natural hazards, and encouraging agricultural and ranching interests to maintain natural habitat in open space areas where the terrain or soil is not conducive to agricultural production.

1.15.3 Impact Assessment

XV-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. As discussed in Impact XIV-a, no residential or commercial construction is identified with this Project and no change in existing land use is associated with this Project. Additionally, no employees will be stationed at the Project site. Therefore, the Project will not increase the demand for recreational facilities nor put a strain on the existing recreational facilities. There would be no impact.

XV-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. The proposed Project does not include the construction or expansion of recreational facilities. There would be no impact.

1.16 Transportation/Traffic

Table 1-29: Transportation/Traffic

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

1.16.1 Environmental Setting

The proposed Project sites are located in Tulare County southeast of the City of Tulare and west of the City of Porterville. Tulare County has two major regional highways, SR 99 and 198, as well as several smaller highways. The proposed Project sites are approximately 10.86 miles east of SR 99, approximately two miles north of SR 190, approximately 4.86 miles west of SR 65, and approximately 16.61 miles south of SR 198. Given their relative distance from the proposed Project site, SR 99 and SR 198 will be largely unaffected. The proposed conveyance facilities for Service Area 1 are located within road right-of-way along Road 200, beginning at Wood Central Ditch and heading north to Avenue 164, where the pipeline turns and heads west along Avenue 164, terminating at Road 196. The proposed conveyance facilities for Service Area 2 are located within the rights of way of Road 208, the Avenue 140 alignment, and the Road 204 alignment.

There are nine public-use airports in Tulare County. The nearest airports to the Project sites are the Porterville Municipal Airport which is located approximately 3.7 miles southeast of the Project sites and Mefford Field Airport located approximately 11.4 miles northwest of the sites.

The Union Pacific Railroad (UPRR), Burlington Northern and Santa Fe (BN&SF) railroad, and San Joaquin Valley Railroad (SJVRR) all provide freight service to Tulare County while AMTRAK provides passenger service. The closest rail corridor to the Project sites is the San Joaquin Valley Railroad which is approximately five miles northeast of the sites.

1.16.2 Regulatory Setting

1.16.2.1 Federal

Several federal regulations govern transportation issues. They include:

- 49 CFR 171-177 governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

Federal Aviation Administration: The Federal Aviation Administration (FAA) regulates aviation at regional, public, and private airports. The FAA regulates objects affecting navigable airspace.

1.16.2.2 State

State of California Transportation Department Transportation Concept Reports: Each District of the State of California Department of Transportation (Caltrans) prepares a Transportation Concept Report (TCR) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted level of service (LOS) and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept".

State Route 99 is designated as Segment 15 in the vicinity of the Project site. The route concept for SR 99 is a minimum six-lane freeway, which is consistent with both District policy to complete a six-lane system and with the Interregional Transportation Strategic Improvement Plan for State Route 99. The ultimate 2025 Concept is for a six-lane freeway plus auxiliary lanes. This route segment currently operates at about an LOS of D and is projected to be at F by 2025 under current conditions. Upon implementation of the 2025 Concept plan this segment is projected to operate at LOS C⁵⁸.

State Route 190 is designated as Segment 2 in the Project vicinity. This segment of Route 190 is classified as Rural/Urban by Caltrans and has a federal functional classification of Minor Arterial. Surrounding land uses for Segment 2 are rural settlements and agricultural lands. The majority of State Route 190, including this segment, is a two-lane conventional highway, with the exception of a four-lane expressway within the City of Porterville. However, the 2035 Concept Facility would include a four-lane expressway within the first two

⁵⁸ Caltrans Traffic Concept Report, <http://www.dot.ca.gov/dist6/planning/tcrs/index.htm>. Site accessed January 2015.

segments. The Route segment currently has an observed LOS of C, although Caltrans intends for this to change to D in 2020⁵⁹.

State Route 65 is designated as Segment 8 in the Project vicinity. It is designated as a Freeway & Expressway and a part of the National Highway System, as well as the Interregional Road System, in this segment. It is designated as Urban and has a federal functional classification of Principal Arterial. Land uses surrounding Segment 8 vary, including residential, commercial, and industrial, and are officially classified as Suburban center. The current LOS for the segment is A, although that is anticipated to change to B for 2020 and 2030 and to C by 2035⁶⁰

1.16.2.3 Local

Tulare County General Plan:

- **TC-1:** To promote an efficient roadway and highway system for the movement of people and goods, which enhances the physical, economic, and social environment while being safe, environmentally friendly, and cost-effective.
 - **TC-1.1:** Provision of an Adequate Public Road Network – The County shall establish and maintain a public road network comprised of the major facilities illustrated on the Tulare County Road Systems to accommodate projected growth in traffic volume.
 - **TC-1.3:** Regional Coordination – the County shall continue to work with State, regional and local agencies to assess transportation needs and goals and support coordinated transportation planning and programming with the Tulare County Association of Governments and other local agencies.
 - **TC-1.5:** Public Road System Maintenance – The County shall give priority for maintenance to roadways identified by the Tulare County Pavement System (PMS) and other inputs relevant to maintaining the safety and integrity of the County roadway system.
 - **TC-1.14:** Roadway Facilities – As part of the development review process, new development shall be conditioned to fund, through impact fees, tonnage fees, and/or other mechanism, the construction and maintenance of roadway facilities impacted by the project. As projects or locations warrant, construction or payment of pro-rata fees for planned road facilities may also be required as a condition of approval.
 - **TC-1.15:** Traffic Impact Study – The County shall require an analysis of traffic impacts for land development projects that may generate increased traffic on County roads. Typically, applicants of projects generating over 100 peak hour trips per day or where LOS “D” or worse occurs, will be required to prepare and submit this study. The traffic impact study will include impacts from all vehicles, including truck traffic.
 - **TC-1.16:** County Level of Service (LOS) Standards – The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of “D” or better in accordance with the LOS definitions established by the highway Capacity Manual.
- **TC-2:** To improve and enhance current rail services that stimulate economic growth and meet the needs of freight and human transportation.
- **TC-3:** To enhance airports in the County to meet the County’s changing needs and demands while minimizing adverse airport related environmental impacts and safety hazards.
- **TC-4:** To support the development of a public transportation system that provides an alternative to the private automobile and meets the needs of those considered “transit dependent”.

⁵⁹ Caltrans Traffic Concept Report, 2015. http://www.dot.ca.gov/dist6/planning/tcrs/sr190tcr/sr190_final_october.pdf. Site accessed March 2016.

⁶⁰ Caltrans Traffic Concept Report, 2014. http://www.dot.ca.gov/dist6/planning/tcrs/sr65tcr/sr65_full_document.pdf. Site accessed March 2016.

- TC-5: To encourage the development of safe, continuous, and easily accessible bicycle and trail systems that facilitate the use of viable transportation alternatives in a safe and financially feasible manner.
 - TC-5.1: Bicycle/Pedestrian Trail System – The County shall coordinate with TCAG and other agencies to develop a Countywide integrated multi-purpose trail system that provides a linked network with access to recreational, cultural, and employment facilities, as well as offering a recreational experience apart from that available at neighborhood and community parks.

1.16.3 Impact Assessment

XVI-a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less than Significant Impact. The Project will consist of the construction of water conveyance facilities and would not require any changes to existing highways, intersections, pedestrian or bike facilities, or construction of any new roadways. The Tulare County General Plan Circulation Element establishes a Level of Service “D” or better for its roadway system.

The proposed Project does not include any permanent onsite employees. It is anticipated that annual trips would be needed for maintenance activities associated with an irrigation run. Typical construction traffic would be temporary and would potentially generate approximately 18 worker trips per day over the course of approximately eight months.

Implementation of the proposed Project would not conflict with any applicable circulation plan or the performance of the circulation system. Construction activities could impact the circulation system but would be temporary. Therefore, any impact to local roadways would be less than significant.

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

Less than Significant Impact. The Project does not require construction of any roadways, but would generate temporary traffic during construction. There is expected to be virtually no change in the operating conditions of the roadways from what currently exists during the operation and maintenance of the Project. Therefore, the impact to the level of service on surrounding roadways due to Project implementation would be less than significant.

XVI-c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

No Impact. The nearest airport to the Project sites are the Porterville Municipal Airport which is located approximately 3.7 miles southeast of the Project sites and Mefford Field Airport located approximately 11.4 miles northwest of the site. The Project would not directly impact any airport facilities; therefore, the project would not cause an increase in air traffic levels or cause a change in air traffic location. There would be no impact.

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

No Impact. No roadway design features are associated with this Project and there is no change in the existing land use that could result in an incompatible use. There would be no impact.

XVI-e) Result in inadequate emergency access?

No Impact. No roads would be modified as a result of this Project. Emergency access would remain the same as currently exists; therefore, there would be no impact to any emergency access.

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

Less than Significant Impact. As discussed in Impact XVI-a, operation and maintenance of the proposed Project would not generate any additional traffic. Typical construction traffic would be temporary and would potentially generate approximately 18 trips per day over the course of approximately eight months. Therefore, any potential impact to the performance or safety of public transit, bicycle, or pedestrian facilities would be less than significant.

1.17 Utilities and Service Systems

Table 1-30: Utilities and Service Systems

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

1.17.1 Environmental Setting

There are a multitude of domestic water service providers (both public and private) in Tulare County including community service districts (CSDs), irrigation districts (IDs), public utility districts (PUDs), sanitary districts, County Service Area (CSAs) zones of benefit, and mutual water companies. Demands for water resources are met from groundwater, local streams and rivers, imported surface water, and imported surface water by exchange. The Project site is located within the Porterville Irrigation District⁶¹.

Sanitary sewer service within the County is generally operated and managed by special districts including CSDs, PUDs, sanitary districts, sewer maintenance districts, and County Service Area zones of benefit. Some agencies provide sewer collection service only and contract with surrounding agencies for wastewater treatment. Some unincorporated areas lack sanitary sewer infrastructure and are served by individual or community septic systems⁶². The Project is located in a rural area without sanitary sewer infrastructure.

⁶¹ Tulare County General Plan Background Report, Pages 7-2 through 7-9

⁶² Tulare County General Plan Background Report, Pages 7-38 and 7-39

The closest landfill to the Project sites is the Teapot Dome landfill located approximately 6.4 miles northwest of the site. This landfill is one of three that serve all of Tulare County as well as parts of surrounding counties and they accept wood, green waste, and tires for recycling purposes in addition to solid waste.

Storm drainage infrastructure varies significantly throughout the unincorporated areas of the County. The proposed Project sites are located within a rural agricultural area where there is no underground storm drain infrastructure, leaving runoff to surface drain.

1.17.2 Regulatory Setting

1.17.2.1 Federal

National Pollutant Discharge Elimination System: Discharge of treated wastewater to surface water(s) of the U.S., including wetlands, requires an NPDES permit. In California, the RWQCB administers the issuance of these federal permits.

Obtaining a NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Any future development that exceeds one acre in size would be required to comply with NPDES criteria, including preparation of a SWPPP and the inclusion of BMPs to control erosion and offsite transport of soils.

1.17.2.2 State

State Water Resources Control Board:

- **Waste Discharge Requirements Program.** State regulations pertaining to the treatment, storage, processing, or disposal of solid waste are found in Title 27, CCR, Section 20005 *et seq.* (hereafter Title 27). In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the “Non Chapter 15 (Non 15) Program”) regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27⁶³. Several programs are administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs.

Department of Resources Recycling and Recovery: The Department of Resources Recycling and Recovery (CalRecycle) is the State agency designated to oversee, manage, and track the 76 million tons of waste generated each year in California. CalRecycle develops laws and regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. The board works jointly with local government to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (PRC 40050 *et seq.* or Assembly Bill (AB) 939, codified in PRC 40000), administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

⁶³ California State Water Resources Control Board. Land Disposal Program, General Information, Waste Discharge Requirements Program. Site Available: http://www.swrcb.ca.gov/water_issues/programs/land_disposal/waste_discharge_requirements.shtml

Regional Water Quality Control Boards: The primary responsibility for the protection of water quality in California rests with the SWRCB and nine Regional Water Quality Control Boards. The SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The Regional Boards adopt and implement Water Quality Control Plans (Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities.

- **NPDES Permit.** As authorized by the CWA, NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into water of the United States. In California, it is the responsibility of Regional Water Quality Control Boards to preserve and enhance the quality of the State's waters through the development of water quality control plans and the issuance of WDRs. WDRs for discharges to surface waters also serve as NPDES permits⁶⁴

California Department of Water Resources: DWR is a department within the California Resources Agency. The DWR is responsible for the State of California's management and regulation of water usage.

1.17.2.3 Local

Tulare County General Plan:

- **PFS-1:** To establish and maintain acceptable levels of service, minimize costs, and provide criteria for determining the location, capacity, and timing of existing and future public facilities and services.
 - **PFS-1.2: Maintain Existing Levels of Services** – The County shall ensure new growth and developments do not create significant adverse impacts on existing County-owned and operated facilities.
- **PFS-2:** To ensure the provision of a reliable, safe, and adequate supply of high quality water as well as effective distribution and storage facilities to meet the existing and future needs in the County.
- **PFS-3:** To ensure the provision of adequate wastewater collection, treatment, and disposal within the County.
- **PFS-4:** To ensure the management of stormwater in a safe and environmentally sensitive manner through the provision of adequate storm drainage facilities that protect people and property.
 - **PFS-4.6: Agency Coordination** – The County shall work with the Army Corps of Engineers and other appropriate agencies to develop stormwater detention/retention facilities and recharge facilities that enhance flood protection and improve groundwater recharge.
 - **PFS-4.7: NPDES Enforcement** – The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.
- **PFS-5:** To ensure the safe and efficient disposal and recycling of solid and hazardous waste generated in the County.

1.17.3 Impact Assessment

XVII-a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The Project would not include permanent restroom facilities, require a sewer hookup, or generate any wastewater. The Project would not result in a change to facilities or operations of existing wastewater facilities. There would be no impact.

⁶⁴ California State Water Resources Control Board. National Pollutant Discharge Elimination System (NPDES). Site Available: http://www.waterboards.ca.gov/water_issues/programs/npdes/.

XVII-b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The Project involves improving groundwater recharge capacities and recapturing efforts by reducing the amount of groundwater that local landowners need to pump. The proposed conveyance facilities will enable the District to deliver irrigation water to agricultural users in the vicinity of the channel and pipeline. As discussed in Impact Assessment XVII-a, operation of the Project would not generate any wastewater. Implementation of the Project will not result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. There would be no impact.

XVII-c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. There is no existing storm drainage infrastructure in the vicinity of the Project. The Project will not result in an increase to the amount of runoff or result in the need for new or expanded storm water drainage facilities. There would be no impact.

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

No Impact. The Project involves water conveyance facilities with aboveground turnouts. The District obtains and delivers surface water for the purpose of agricultural irrigation and groundwater recharge from existing entitlements and resources. District annual entitlements include USBR Class 1 (16,000 acre-feet) and Class 2 (30,000 acre-feet) water from the Friant-Kern Canal and access to 10,000 acre-feet from the Tule River. The Project would not result in the need for new or expanded water entitlements. There would be no impact.

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

No Impact. The Project sites are not served by a wastewater treatment provider and as discussed in Impact XVII-a, the Project would not generate wastewater. There would be no impact.

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

Less than Significant Impact. Operation of the Project would not generate any solid waste. Site maintenance would include levee maintenance, weed abatement, trash removal, periodic sediment removal, and water control structure adjustments and maintenance. Some solid waste may be generated during construction activities; however, construction will be temporary. Any impacts as a result of the Project would be less than significant.

XVII-g) Comply with federal, state, and local statutes and regulations related to solid waste?

No impact. The proposed Project will comply with any federal, State, and local regulations. There would be no impact.

1.18 Mandatory Findings of Significance

Table 1-31: Mandatory Findings of Significance

Mandatory Findings of Significance				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.18.1 Impact Assessment

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

Less Than Significant Impact with Mitigation Incorporation. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project will have a less than significant effect on the local environment. The Project includes the development of approximately 15,000 LF of water conveyance facilities, including open channels, pipelines, and above-ground turnouts over two separate services areas.

The potential for impacts to biological, cultural resources and geological resources are addressed in sections IV.-Biological Resources, V.-Cultural Resources, and VI.-Geology and Soils. Impacts of both the construction and operations of the proposed Project will be less than significant to biological, cultural resources, and geological resources with the incorporation of the mitigation measures stated in the previous impact sections. Accordingly, the Project will involve no potential for significant impacts through the degradation of the quality of the environment, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, or the elimination of a plant or animal community or example of a major period of California history or prehistory. The impact will be less than significant with mitigation.

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

Less Than Significant Impact with Mitigation Incorporation. As discussed above, the Project will result in less than significant impacts to biological, cultural resources, and hazards and geological materials with mitigation incorporation as described in sections IV.-Biological Resources, V.-Cultural Resources, and VI. Geology and Soils of this Initial Study. Occasional service and maintenance employees will be scheduled to service the facility on an as-needed basis. As a result, the Project would generate only a minimal number of vehicle trips during operation. The water conveyance facilities will be almost entirely passive and will not result in ongoing impacts that are individually limited or cumulatively considerable. The implementation of the identified Project-specific mitigation measures and compliance with applicable codes, ordinances, laws and other required regulations will reduce the magnitude of any impacts associated with construction activities to a less than significant level.

XVIII-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 Incorporation. Based on the analysis, the proposed Project would not result in substantial adverse effects on human beings, either directly or indirectly. Mitigation measures are provided in sections IV.-Biological Resources, V.-Cultural Resources, and VI. Geology and Soils of this environmental document. The implementation of the identified mitigation measures would reduce the proposed Project’s potential environmental effects on the public and the environment to less than significant levels. No additional mitigation measures will be required. Therefore, less than significant impacts would occur.

Appendix A

USDA, Natural Resource Conservation District Soils Report

Appendix B

CalEEMod Air Quality Model Printouts

Appendix C

Biological Evaluation