Attachment A

CEQA – Initial Study Checklist

3 INITIAL STUDY CHECKLIST

1. Project title:	Cordeniz Basin Project
2. Lead agency:	Tulare Irrigation District 6826 Avenue 240 Tulare, CA 93274
3. Contact person:	Aaron Fukuda, District Engineer (559) 686-3425
4. Project location:	The Project site is located in western Tulare County, central California, approximately 200 miles southeast of Sacramento and 65 miles northwest of Bakersfield within Section 29, Township 19 South, Range 24 East, M.D.B&M. The Proposed Action/Proposed Project will be constructed on the northwest corner of Avenue 248 (Cartmill Street) and Road 84 (Enterprise Street).
5. Latitude, Longitude:	Cordinez Basin: 36° 14’ 31.855” N, 119° 23’ 13.985” W Monitoring Well 1: N 36°12’38.436” W -119°24’59.427” Monitoring Well 2: N 36°13’31.191” W -119°24’9.65” Monitoring Well 3: N 36°13’40.226” W -119°21’44.27” Monitoring Well 4: N 36°15’41.95” W -119°23’39.466” Monitoring Well 5: N 36°15'43.595'' W -119°21'44.898''
6. General Plan designation:	Rural Valley Lands Plan Area
7. Zoning:	Exclusive Agricultural Zone – 40 acres (AE-40)
8. Description of project:	See Section 1.2, Purpose and Need
9. Surrounding land uses and setting:	See Section 1.2, Purpose and Need
10. Other public agencies whose approval is required	United States Bureau of Reclamation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION: (To be completed by the Lead Agency)
On the basis of this initial evaluation:

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

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

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

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

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

_____ _____
Signature Date

_____ _____
Printed name For

ISSUES:

I. AESTHETICS **Would the project:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

SETTING

Environmental Setting

The Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells. The Proposed Action/Proposed Project components are located 0.5 to 2.5 miles west to northwest of the City of Tulare, within a region dominated by agricultural uses. The proposed basin site is bounded by Road 84/Enterprise Street on the east, Serpa West ditch to the west, Avenue 248/West Cartmill Avenue to the south, and an existing recharge pond and farm access road to the north. The aesthetic features of the existing visual environment in the Proposed Action/Proposed Project area are agricultural-related, with the site surrounded by vacant land, canals, agricultural fields, rural residences and an existing recharge basin located adjacent to the north of the property. The closest scenic resource is the Kaweah River, which is approximately 6.1 miles north, and is not visible from the basin site. There are no other scenic resources or scenic vistas in the area.

State Routes (SR) in the Proposed Action/Proposed Project vicinity include SR 99 approximately two miles east, SR 43 approximately 12 miles west, SR 198 approximately six miles north, and SR 137 approximately three miles south of the Proposed Action/Proposed Project site. There are several rural residences to the east, west and south of the basin site, with two residences located adjacent to the District owned Serpa Ditch which divides the proposed basin site. One residence is located on the north side of the ditch and the other is on the south side and both are adjacent to Road 84/Enterprise Street.

Regulatory Setting

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/ Proposed Action is not subject to any of these regulations since there are no federally designated lands or rivers in the vicinity.

State

Nighttime Sky – Title 24 Outdoor Lighting Standards

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. While not Designated State Scenic Highways, two Eligible State Scenic Highways occur in Tulare County, State Route (SR) 198 and SR 190. However, these highways are not visible from the Proposed Action/ Proposed Project site. However, these highways are not visible from the Proposed Action/ Proposed Project site.

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.

RESPONSES

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

No Impact. The Proposed Action/Proposed Project area is located on the San Joaquin Valley floor in western Tulare County. The Project area was previously in agricultural production and is surrounded by vacant land, canals, agricultural fields, rural residences and an existing recharge basin. Agricultural-related resources dominate the aesthetics of the surrounding area. The site and its surrounding area are flat and there are no designated scenic resources within a visible distance from the Proposed Action/Proposed Project vicinity. Therefore, the Proposed Action/ Proposed 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 California 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. Four state routes are located near or within the Proposed Action/Proposed Project site; State Route 99 (SR 99), State Route 198 (SR 198), State Route 137 (SR 137) and State Route 43 (SR 43). According to Caltrans, SR 99, SR 137 and SR 43 are not designated eligible State Scenic Highways in this area. State Route 198 is an Eligible State Scenic Highway; however, it has not been officially designated. There would be no impact.

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

Less Than Significant. The Proposed Action/Proposed Project area is comprised of irrigated agricultural land. Crops generally grown on the property included corn and wheat. The Proposed Action/Proposed Project site is surrounded by vacant land, canals, agricultural fields, rural residences and an existing recharge basin. The Tulare County General Plan recognizes agricultural lands as Working Landscapes and provides for protection of views of working and natural landscapes. The Proposed Action/Proposed Project is essentially an extension of the existing recharge basin located north of the Proposed Action/Proposed Project site and will include facilities similar to what is already existing in the Project area. Each basin cell will include SCADA equipment which will require installation of a radio antenna with a solar panel mounted to the antenna to be located in the basins. The basin cells will be approximately seven feet deep with a two to four foot levee around the perimeter. The Proposed Action/Proposed Project is consistent with surrounding agricultural landscapes, as it is an agricultural support operation. However, the physical characteristics of the site will change from agricultural productive lands to basins and associated project components. Therefore, the 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?

Less Than Significant. The proposed basins may create a minor source of light or glare, as a result of new reflective water surfaces. However, these surfaces will not be visible from highways, county roads or residences because the surrounding levees would block the glare path. The Proposed Action/Proposed Project does not include onsite lighting. The accessory project components would not consist of lighting nor would they result in reflective surfaces that would result in glare. Therefore, the impacts would be less than significant.

II. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	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?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

SETTING

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. Agriculture is the largest private employer in the County with farm employment accounting for nearly a quarter of all jobs. In 2013, Tulare County totaled a gross production value of over 7.8 billion dollars in agriculture related productions. In 2013, the Agricultural Crop and Livestock Report identified Milk as the leading agricultural commodity in Tulare County with a total gross value of 2.1 billion dollars. Additionally grapes, oranges, cattle, pistachio, walnuts, almonds, corn, nectarines, and alfalfa rank among Tulare County's 2013 top ten list of agriculture commodities that generated over one million dollars in production. One in every five jobs in the San Joaquin Valley is directly related to agriculture[1].

In 2013, Tulare County covered over 120 different agricultural commodities of which forty-five commodities generate over one million dollars annually. Tulare County continues to produce high quality crops that provide food and fiber to more than 83 countries throughout the world[2].

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 Proposed Action/Proposed Project basin site is designated as Prime Farmland. Surrounding properties are also designated as Prime Farmland, with the exception of the existing recharge basins which are designated as Urban and Built-up Land. The FMMP provides statistics on conversion of farmland to nonagricultural uses for Tulare County, where the project site is located. Of the total land area that was inventoried (1,585,869 acres) in 2010, Tulare County had approximately 859,991 acres of Important Farmlands (including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance) and an additional 440,042 acres of grazing land. The remaining 285,836 acres of land were Urban and Built-up Land, Other Land, and Water Area. In the period between 2008 and 2010, Prime Farmlands had shown a net decrease of 4,870 acres within the County[3].

Historically, land use at the Proposed Action/Proposed Project site has been furrow irrigated agricultural land and canal road right-of-way. Crops generally grown on the basin site included corn and wheat. According to the FMMP, the land is designated as Prime Farmland. No forest or timber land is present at the Proposed Action/Proposed Project site or in the Proposed Action/Proposed Project vicinity. According to the United States Department of Agriculture Natural Resources Conservation Service, there is predominantly one soil type present on the basin portion of the site, which is Nord fine sandy loam (78.1 acres) with Tagus loam covering approximately 2.4 acres (Appendix A). The Nord soil series originates from alluvial fans with a parent material of mixed alluvium derived mainly from granitic rock sources[4]. Nord fine sandy loam soils are nonsaline (0.0 to 2.0 mmhos/cm), well drained, and have a moderate available water capacity, with no documented cases of ponding.

[1] Tulare County Ag Commissioner's Annual Crop Report. http://agcomm.co.tulare.ca.us/default/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2013-crop-report-pdf/. Site accessed December 2014.
[2] Ibid.
[3] California Department of Conservation. FMMP – Report and Statistics. http://www.conservation.ca.gov/dlrp/fmmp/products/Pages/ReportsStatistics.aspx. Site accessed December 2014.
[4] United States Department of Agriculture Natural Resources Conservation Service. Soil Survey of Tulare County, California Western Part, pg. 71.

Regulatory Setting

Federal

Farmland Protection 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 procures to implement the FPPA every two years[5].

2014 Farm Bill: The Agricultural Act of 2014 (the Act), also known as the 2014 Farm Bill, was signed by President Obama on Feb. 7, 2014. The Act repeals certain programs, continues some programs with modifications, and authorizes several new programs administered by the Farm Service Agency (FSA). Most of these programs are authorized and funded through 2018.

The new Farm Bill builds on historic economic gains in rural America over the past five years, while achieving meaningful reform and billions of dollars in savings for the taxpayer. It allows USDA to continue record accomplishments on behalf of the American people, while providing new opportunity and creating jobs across rural America. Additionally, it enables the USDA to further expand markets for agricultural products at home and abroad, strengthen conservation efforts, create new opportunities for local and regional food systems and grow the biobased economy. It provides a dependable safety net for America's farmers, ranchers and growers. It maintains important agricultural research, and ensure access to safe and nutritious food for all Americans.

Land Evaluation and Site Assessment: The Land Evaluation and Site Assessment (LESA) system ranks lands for suitability and inclusion in the Farmland Protection Policy (FPP). LESA evaluates several factors, including soil potential for agricultural use, location, market access, and adjacent land use. These factors are used to numerically rank the suitability of parcels based on local resource evaluation and site considerations[6].

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.

California Department of Conservation, Division of Land Resource Protection: The California Department of Conservation (DOC) applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands, and these agricultural designations are used in planning for

[5] USDA-NRCS, 2011 Website accessed: http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/
[6] NRCS LESA. Website accessed: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/?cid=nrcs143_008438

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 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.

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 is referred to as Farmland[7].

- **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 groves 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 six 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

[7] California Department of Conservation. FMMP – Important Farmland Map Categories. http://www.consrv.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx. Site accessed December 2014.

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 Department of Conservation (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 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 landowners[8].

Sustainable Groundwater Management Act of 2014: The California Legislature recently enacted the Sustainable Groundwater Management Act of 2014 ("Act"). The Act provides authority for local agency management of groundwater, and requires implementation of plans to meet the goal of groundwater sustainability established by the Act within basins of high- and medium-priority which includes the basin underlying the District (Groundwater Sub-Basin number 5-22.11 (Kaweah Basin), within the Tulare Lake Hydrologic Region Kaweah is considered high priority), The Act's goal of sustainability is met by implementation of sustainability plans that identify and cause implementation of measures targeted to ensure that the applicable basin is operated within its safe yield. (Water Code § 10721(t).) Safe yield is defined as the maximum quantity of water that can be withdrawn annually from the groundwater supply without causing an undesirable result, and includes within the definition of "undesirable result" chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply and significant and unreasonable reduction in groundwater storage. (Water Code § 10721(w).) The Act recognizes that fallowing of agricultural lands and reduction of pumping may be required to achieve groundwater sustainability. (Water Code §§ 10726.2(c), 10726.4(a).)

Forestry Resources: State regulations regarding forestry resources are not relevant to the Proposed Action/Proposed Project because no forestry resources exist at the project site.

Governor's Emergency Drought Declaration: With California facing one of the most severe droughts on record, Governor Brown declared a drought State of Emergency in January 2014 and directed state officials to take all necessary actions to prepare for water shortages[9].

California Water Plan: The California Water Plan provides a collaborative planning framework for elected officials, agencies, tribes, water and resource managers, businesses, academia, stakeholders, and the public to develop findings and recommendations and make informed decisions for California's

[8] California Department of Conservation. Williamson Act Program. http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx. Accessed January 2015.
[9] California Drought Update. http://ca.gov/drought/ Accessed March 16, 2015.

water future. The plan, updated every five years, presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The California Water Plan also evaluates different combinations of regional and statewide resource management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. The evaluations and assessments performed for the plan help identify effective actions and policies for meeting California's resource management objectives in the near term and for several decades to come.

Update 2013 of the California Water Plan is State government's strategic plan for understanding, managing and developing water resources statewide for current and future generations. Prepared over the past five years with the involvement of dozens of State and federal agencies and hundreds of stakeholders from diverse communities, it sets forth a suite of actions that together would improve the resilience and sustainability of our regional water resources into the future. The multi-volume plan also serves as a compendium of facts about where California gets its water, how it is used, who pays for it, and the many risks and opportunities of our complex, interconnected water management system.

Update 2013 advances the Governor's Water Action Plan, released by the administration of Governor Edmund G. Brown Jr. in January 2014. The governor's five-year plan sets forth 10 priority actions to meet urgent needs and set the foundation for sustainable management of California's water resources. The California Water Plan Update 2013 plans to the year 2050. There are 17 cross-cutting objectives and over 300 specific actions to reinforce the implementation of the Governor's Water Action Plan. The goals of that Plan are to make conservation a way of life, provide safe drinking water and expand water storage capacity, improve public safety and secure wastewater systems for all communities, and foster environmental stewardship. A hallmark of the Update 2013 plan is the focus on the need for stable, effective funding sources to invest in water innovation and infrastructure (natural and built).[10]

California Water Action Plan: The California Water Action Plan – released by Governor Brown in January 2014 – is a roadmap for the first five years of the state's journey toward sustainable water management. Implementation during the first year was marked by significant achievements. In 2014 we saw overwhelming voter approval for a $7.545 billion water bond (Proposition 1 in November 2014) and passage of historic groundwater legislation that will provide much needed tools, financial assistance and technical support to assist regions across the state in achieving sustainable groundwater management at the local level. Additionally, 2014 brought a renewed focus on the importance of reinvesting in our water management systems and watersheds in order to address the current drought challenges and prepare for future uncertainties. State agencies undertook numerous actions in response to the drought, including stepping up conservation programs to encourage Californians to reduce their water use by at least 20 percent and enacting measures to protect water supply and water quality. A review of state agency actions throughout 2014 shows that more than 100 efforts furthering the Action Plan were either continued or initiated. This report details the origins of the Action Plan, highlights achievements to date, and outlines activities for the next four years.

Key actions identified in the Plan include:

- Make conservation a California way of life.

[10] California Department of Water Resources. DWR-led Process Updates California's Strategic Water Roadmap. October 20, 2014. http://www.waterplan.water.ca.gov/cwpu2013/final/index.cfm

- Increase regional self-reliance and integrated water management across all levels of government.
- Achieve the co-equal goals for the Delta.
- Protect and restore important ecosystems.
- Manage and prepare for dry periods.
- Expand water storage capacity and improve groundwater management.
- Provide safe water for all communities.
- Increase flood protection.
- Increase operational and regulatory efficiency.
- Identify sustainable and integrated financing opportunities.[11]

Forestry Resources: State regulations regarding forestry resources are not relevant to the Proposed Action/Proposed Project because no forestry resources exist at the Proposed Action/Proposed Project site.

Local

Tulare County General Plan Policies

- 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.

[11] State of California Natural Resources Agency, California Department of Food & Agriculture and California Environmental Protection Agency. California Water Action Plan. January 2014. http://resources.ca.gov/california_water_action_plan/

RESPONSES

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?

Less Than Significant Impact. The Proposed Action/Proposed Project site is designated by the FMMP as Prime Farmland. While the Proposed Action/Proposed Project is considered to be an agricultural-related operation, construction of the project would result in changes to the physical characteristics of the site from agricultural productive lands to basins and accessory project components. The construction of the proposed project would result in the removal of productive agricultural land. According to the FMMP mapping practices, this could result in the conversion of the mapping designation of 80 acres from Prime Farmland to what is designated by the California Department of Conservation as a non-agricultural use.

The Proposed Action/Proposed Project would be compatible with the goals and policies of the Tulare County General Plan for protecting and enhancing surface and groundwater resources critical to agriculture (AG-1.17), reducing and ultimately reversing groundwater overdraft conditions in the county (WR-1.11), and encouraging 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 (WR-3.1)[12]. The Proposed Action/Proposed Project, through the beneficial use of percolation basins, would contribute towards the creation of a sustainable water supply to retain agricultural land throughout the groundwater basin.

The Proposed Action/Proposed Project is consistent with the County's General Plan land use designation and Zoning as Exclusive Agriculture (AE-40 and AE-20). Recharge basins, such as the proposed 80 acre recharge basin, well fields and regulating basins, are permitted uses in agricultural zoning districts and agricultural preserves. Local land use authorities do not recognize the Proposed Action/Proposed Project as a conversion of farmland to non-agricultural use, but rather see the Project as an agricultural or agricultural-support operation. The Proposed Action/Proposed Project would not indirectly induce loss of farmland in the Project area, as is typical of projects that convert agricultural lands to residential or commercial uses. By recharging the groundwater basin, more groundwater will be available, reducing the need to fallow lands and to sustain otherwise declining groundwater levels. Therefore, the impacts to agricultural resources would be less than significant.

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

No Impact. The Proposed Action/ Proposed Project site is zoned for agricultural uses and is not under a Williamson Act contract. There are properties to the north, southeast and southwest of the Proposed Action/Proposed Project site that are under Williamson Act contracts. However, the construction and operation of the Proposed Action/ Proposed Project will not affect existing zoning or Williamson Act contracts. 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

[12] Tulare County General Plan 2030 Update. Goals and Policies Report. Chapter 2 and 11.

4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The Proposed Action/Proposed Project site consists of productive agricultural lands and accessory uses. There are no forest land or timberlands within the vicinity of the Proposed Action/ Proposed Project. Therefore, the Proposed Action/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. The Proposed Action/Proposed Project site consists of productive agricultural lands and accessory uses. There are no forest lands within the Proposed Action/Proposed Project area. Therefore, the Proposed Action/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. The Proposed Action/Proposed Project site consists of productive agricultural lands and accessory uses. There are no forest lands within the Project area. The Proposed Action/Proposed Project will support agricultural production and promote long-term preservation of agricultural lands by protecting and enhancing groundwater resources critical to agriculture. Therefore, the Proposed Action/Proposed 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.

III. 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.

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?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

SETTING

Environmental Setting

According to the San Joaquin Valley Air Pollution Control District's 2014 Draft Guidance for Assessing and Mitigating Air Quality Impacts,

"The San Joaquin Valley Air Basin (SJVAB) consists of eight counties: Fresno, Kern (western and central), Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Cumulatively, these counties represent approximately 16 percent of California's geographic area, making the SJVAB the second largest air quality basin (based on area) as delineated by the California Air Resources Board (ARB). Air pollution in the SJVAB can be attributed to both human-related (anthropogenic) and natural (non-anthropogenic) activities that produce emissions. Air pollution from significant anthropogenic activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources.

Activities that tend to increase mobile activity include increases in population, increases in general traffic activity (including automobiles, trucks, aircraft, and rail), urban sprawl (which will increase commuter driving distances), and general local land management practices as they pertain to modes of commuter transportation. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The San Joaquin Valley's (SJV) topography and meteorology provide ideal conditions for trapping air pollution for long periods of time and producing harmful levels of air pollutants, including ozone and particulate matter. Low precipitation levels, cloudless days, high temperatures, and light winds

during the summer in the SJV are conducive to high ozone levels resulting from the photochemical reaction of nitrogen oxides (NOx) and volatile organic compounds (VOC). Inversion layers in the atmosphere during the winter can trap emissions of directly emitted PM2.5 (particulate matter that is 2.5 microns or less in diameter) and PM2.5 precursors (such as NOx and sulfur dioxide (SO2)) within the SJV for several days, accumulating to unhealthy levels.

The region also houses the State's major arteries for goods and people movement, I-5 to the west and CA Highway 99 through the Central Valley (Valley), thereby attracting a large volume of vehicular traffic. Another compounding factor is the region's historically high rate of population growth compared to other regions of California. Increased population typically results in an even greater increase in vehicle activity and more consumer product use, leading to increased emissions of air pollution, including NOx. In fact, mobile sources account for about 80% of the Valley's total NOx emissions inventory. Since NOx is a significant precursor for both ozone and PM2.5, reducing NOx from mobile sources is critical for progressing the Valley towards attainment of ozone and PM2.5 standards.

The geography of mountainous areas to the east, west and south, in combination with long summers and relatively short winters, contributes to local climate episodes that prevent the dispersion of pollutants. Transport, as affected by wind flows and inversions, also plays a role in the creation of air pollution[13].

Regulatory Setting

Federal

United States 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 FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Clean Air Act

The FCAA required the U.S. EPA to establish National Ambient Air Quality Standards (NAAQS), and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions.

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has responsibility to review all state SIPs to determine conformance with the mandates

[13] 2014 Draft SJVAPCD GAMAQI, http://www.valleyair.org/transportation/GAMAQI-2014/DRAFT_GAMAQI_2014_July_7.pdf

of the FCAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures.

State

California Air Resources Board

The California Air Resources Board (CARB) is the state agency responsible for implementing the federal and state Clean Air Acts. CARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen Sulfide (H2S), and vinyl chloride.

The Proposed Action/Proposed Project is located within the San Joaquin Valley Air Basin, which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and parts of Kern counties and is managed by the SJVUAPCD.

Air basins are classified as attainment, nonattainment, or unclassified. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

Standards and attainment status for listed pollutants in the Air District can be found in Table 1. Note that both state and federal standards are presented.

Additional State regulations include:

- **CARB Portable Equipment Registration Program** – This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.
- **U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program** – The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NO_X) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NO_X emissions from existing off-road diesel equipment throughout the state.
- **California Global Warming Solutions Act** – Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions levels.

Table 1
State and Federal Attainment Status and Standards

San Joaquin Valley Attainment Status for Criteria Pollutants[14] Criteria Pollutants				SJVAB - Air Quality Attainment Status		Primary Sources of Criteria Pollutants
Contaminant and Averaging Period		National Standard	State Standard	National Standards	State Standards	
Ozone (O_3)	1-Hour	------	0.09 ppm	----------	Nonattainment	Ozone is not emitted directly into the atmosphere, but is formed by a complex series of photochemical reactions between VOC and NOx (primarily NO).
	8 Hour	0.08 ppm	0.07 ppm	Nonattainment	Nonattainment	
NO_2	1-Hour	-----	0.25 ppm	Attainment/ Unclassified	Attainment	NO2 is a member of a family of gaseous nitrogen compounds (NOx) and is a precursor to ozone formation. NO2 results primarily from combustion of fossil fuels.
	Annual	.053 ppm	-----	Attainment/ Unclassified	Attainment	
CO	1-Hour	35 ppm	20 ppm	Attainment/ Unclassified	Attainment/ Unclassified	CO is formed by the incomplete combustion of fuels. Under most conditions CO does not persist in the atmosphere. Most CO emissions come from motor vehicles.
	8-Hour	9 ppm	9.0 ppm	Attainment/ Unclassified	Attainment/ Unclassified	
PM 10	24-Hour	150 ug/m^3	50 ug/m^3	----------	Nonattainment	PM10 is comprised of dust, sand, salt spray, metallic, and mineral particles, pollen, smoke, mist, and acid fumes. PM10 may also include sulfate and nitrate aerosols.
	Annual	50 ug/m^3	20 ug/m^3	Attainment	Nonattainment	
PM 2.5	24-Hour	35 ug/m^3	-----	Nonattainment	----------	PM2.5 is typically emitted from combustion sources. PM2.5 also includes aerosols that may be formed in the atmosphere.
	Annual	12 ug/m^3	12 ug/m^3	Nonattainment	Nonattainment	
SO_2	1-Hour	75 ppb	0.25 ppm	Attainment	Attainment	Sulfur dioxide (SO2) is formed primarily by the combustion of sulfur-containing fossil fuels. SO2 concentrations in the SJVAB are only about 4 percent of the standard.
	24-Hour	0.14 ppm	0.04 ppm	Attainment	Attainment	
	Annual	0.03 ppm	------	Attainment	Attainment	
Lead (Pb)	Month	-----	1.5 ug/m^3	Attainment	Attainment	Primary sources of lead are smelters and battery manufacturing and recycling. In the past, combustion of leaded gasoline contributed to ambient concentrations.
	Quarter	1.5 ug/m^3	-----	Attainment	Attainment	

ppb = parts per billion; ppm = parts per million; ug/m^3 = micrograms per cubic meter

[14] California Air Resources Board, SJVAPCD, 2013

Local

San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Unified Air Pollution Control District (Air District) is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. The Air District has several rules and regulations that may apply to the Project:

- **Rule 3135 (Dust Control Plan Fees)** – This rule requires the project applicant to submit a fee in addition to a Dust Control Plan. The purpose of this rule is to recover the Air District's cost for reviewing these plans and conducting compliance inspections.
- **Rules 4101 (Visible Emissions) and 4102 (Nuisance)** – These rules apply to any source of air contaminants and prohibits the visible emissions of air contaminants or any activity which creates a public nuisance.
- **Rule 4601 (Architectural Coatings)** – This rule limits volatile organic compounds (VOC) from architectural coatings. This rule specifies architectural coatings storage, clean up, and labeling requirements. It is applicable to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures any architectural coating for use within the district.
- **Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations)**– This rule applies to use of asphalt for paving new roadways or restoring existing roadways disturbed by project activities.
- **Regulation VIII (Fugitive PM10 Prohibitions)** – This regulation, a series of eight regulations, is designed to reduce PM_{10} emissions by reducing fugitive dust. Regulation VIII requires implementation of control measures to ensure that visible dust emissions are substantially reduced. The control measures are summarized in Table 2.

Table 2
San Joaquin Valley Unified Air Pollution Control District
Regulation VIII Control Measures for Construction Related Emissions of PM10

The following are required to be implemented at all construction sites:
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.

Tulare County General Plan Policies

- AQ-1: To improve air quality through a regional approach and interagency cooperation.
- AQ-2: To improve air quality by reducing air emissions related to transportation.
- 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.

RESPONSE

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

Less Than Significant Impact. The Proposed Action/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 Action/Proposed Project will continue to apply. A Fugitive Dust Control Plan will be submitted to the Air District to comply with Regulation VIII (Table 2) prior to the initiation of construction. Therefore, the Proposed Action/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 (NOX) and reactive organic gases (ROG) or Volatile Organic Compounds (VOC), particulate matter less than 10 microns in diameter (PM10), and PM2.5, as well as sulfur oxides (SOX). 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 Table 3.

Table 3
SJVAPCD Thresholds of Significance

Pollutant	Construction Emissions (tons/yr)	Operation Emissions (tons/yr)
ROG	10	10
NOx	10	10
CO	100	100
Sox	27	27
PM10	15	15
PM2.5	15	15

Source: SJVAPCD, May 2012.

Construction-Related Emissions:

The Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells. The Proposed Action/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. Proposed Action/Proposed Project construction activities also represent sources of fugitive dust, which includes PM emissions. The estimated construction period (two – phases, approximately 10 months and 12 months) 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 Action/Proposed Project is in a nonattainment area for ozone and PM.

Construction of the Proposed Action/Proposed Project is estimated to require a maximum of 20 workers who would work in single shifts, five days per week. Construction is estimated to start in 2015 and would be completed within approximately 22 months, in two phases. These phases could run concurrently, but for the purposes of this document we will cover a 22 month construction period. An estimated 20 total construction worker truck trips (10 round-trips) are anticipated, with a maximum of 5 daily truck trips (2.5 roundtrips) for materials delivery during construction of the Proposed Action/Proposed Project.

The Proposed Action/Proposed Project will comply with Air District Rule 8021 for construction and earthmoving activities.

The Proposed Action/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. However, as the Proposed Action/Proposed Project is not a typical land use in CalEEMod, project-specific data was input into the model (e.g., construction phases and timing, equipment, vehicle trips, etc.). The Proposed Action/Proposed Project's unmitigated construction-related emissions have been estimated using CalEEMod and are presented in Table 4 and the output files can be seen in Appendix B.

Table 4
Maximum Unmitigated Proposed Action/Proposed Project Construction-Related Emissions

Pollutant	2015 Project Construction Emissions (tons/yr)	2016 Project Construction Emissions (tons/yr)	2017 Project Construction Emissions (tons/yr)	SJVAPCD Thresholds of Significance (tons/yr)
ROG (VOC)	0.3579	0.7995	0.1933	10
NO_x	3.8266	8.2874	1.4675	10
CO	2.6503	5.5703	1.0687	100
SO_x	0.0003	0.0007	0.0002	27
PM_{10}	1.5887	1.4289	0.1080	15
$PM_{2.5}$	1.7892	0.8437	0.0944	15

Source: CalEEMod, May 2015 (see Appendix B).

Operational Emissions

Upon completion of construction the basin and accessory project components would be monitored by field visits during rain events (approximately 30 days per year). Emissions resulting from daily basin operation are negligible because no fuels are combusted. Approximately 60 total vehicle trips (30 round-trips) would be made to the Proposed Action/Proposed Project site per year during the

long-term operation of the Proposed Action/Proposed Project. Site visits would likely include monitoring of water levels, and the opening and closing of gate valves during rain events. Because the Proposed Action/Proposed Project operations are mostly passive and would not involve typical operations that would involve operational fuel combustion, energy usage, waste generation, or water usage, emissions associated with mobile sources would be the primary operational source of air pollutant emissions.

In order to ensure the approximately 30 round trips per year required for the operation of the Proposed Action/Proposed Project would not cause ROG, NOX, or any other criteria pollutant emissions to exceed the SJVAPCD's applicable thresholds of significance or degrade the region's air quality, the Proposed Action/Proposed Project's operational emissions were estimated using CalEEMod. As shown in Table 5, the operational emissions of the Proposed Action/Proposed Project would be well below the applicable thresholds of significance. Therefore, the Proposed Action/Proposed Project's 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.

Table 5
Maximum Unmitigated Proposed Action/Proposed Project Operational Emissions

Pollutant	Project Operational Emissions (tons/yr)	SJVAPCD Thresholds of Significance (tons/yr)
ROG (VOC)	0.0186	10
NO_x	0.0199	10
CO	0.0672	100
SO_2	0.0001	27
PM_{10}	0.0007	15
$PM_{2.5}$	0.0002	15

Source: CalEEMod, May 2015 (see Appendix B).

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 Proposed Action/Proposed 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?

d) 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 receptors[15]. The nearest sensitive receptor to the Proposed Action/Proposed Project site is located approximately 70 feet from the Proposed Action/ Proposed Project basin site.

As discussed in Impact III-b, the Proposed Action/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 Plan[16], 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 percent[17].

So, any risk of cancer from exposure to diesel particulate matter at 70 feet to a construction site for approximately 22 months is negligible, at best, since exposure for 70 continuous years creates a risk of only about 0.005 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. Table 6 below shows common types of facilities that have been known to produce odors in the San Joaquin Valley.

Table 6
Screening Levels for Potential Odor Sources

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

Sources: GAMAQI, July 2014, Table 6, Pg 102

[15] GAMAQI, July 2014, Pg. 65.
[16] 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.
[17] 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

The Proposed Action/Proposed Project does not involve any of the aforementioned facilities, and a groundwater recharge basin 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 risks[18]. However, as discussed in Impact III-b, the Proposed Action/Proposed Project would not exceed SJVAPCD thresholds of significance for particulate matter or other criteria pollutants. Additionally, with the nearest sensitive receptors are about 70 feet away and construction expected to be completed in two phases over approximately 22 months, health risks associated with DPM are minimal. By way of comparison, the risk of developing cancer after being exposed for 70 years to a truck stop at a distance of 60 meters (approximately 200 feet) is 0.005 percent[1920]. Therefore, impacts associated with DMP will be less than significant.

No significant odor impacts related to Proposed Action/Proposed 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 Proposed Action/Proposed Project will have a less than significant impact associated with the creation of objectionable odors affecting a substantial number of people.

[18]United States Department of Labor. Occupational Safety & Health Administration. https://www.osha.gov/dts/hazardalerts/diesel_exhaust_hazard_alert.html Accessed September 2014.
[19] 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.
[20] 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

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

SETTING

Environmental Setting

The Proposed Action/Proposed Project site is located in the interior of the Southern San Joaquin Valley of California. The San Joaquin 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 (Appendix C).

Like most of California, the southern San Joaquin Valley (including the Proposed Action/Proposed Project site) experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures in the Proposed Action/Proposed Project vicinity commonly exceed 100 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit. Annual precipitation in the Proposed Action/Proposed Project vicinity is about 10 to 12 inches, about 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain. The Proposed Action/Proposed Project site is situated within the historic flood plain of the Kaweah and Tule Rivers. These river systems have been dammed, channelized and diverted for agricultural and flood control purposes. Both of these rivers originate in the Sierra Nevada and flow in an east-west direction. Historically these rivers drained to Tulare Lake west of the Proposed Action/Proposed Project site, which has since been drained and converted to agricultural and urban uses. The nearest natural drainage is Packwood Creek approximately 1 mile to the north of the northernmost of the well locations. Current land use within the region is agriculture and urban development (Appendix C).

Lands surrounding the project site consist of orchards, agricultural fields, residential/industrial uses, and a livestock facility. The urban center of the City of Tulare lies between 0.5 to 2.5 miles southeast of the Proposed Action/Proposed Project site (Appendix C).

At the time of the survey, the Proposed Action/Proposed Project site consisted of agricultural land and the existing Enterprise Basin (Figure 3). The topography of the Proposed Action/Proposed Project site is relatively flat with an elevation of approximately 283 feet National Geodetic Vertical Datum (NGVD) (Appendix C).

The Proposed Action/Proposed Project site contains three soil mapping units representing three soil series: Colpien loam, 0 to 2 percent slopes; Nord fine sandy loam, 0 to 2 percent slopes; and Tagus loam, 0 to 2 percent slopes. None of these soil mapping units are classified as hydric in the California Hydric Soils List. Furthermore, all soils of the site have been significantly altered through decades of agricultural and water conveyance and storage practices such as grading, discing, and excavation. As such, any native soil characteristics potentially supporting sensitive biological resources have been destroyed or significantly altered (Appendix C).

Five habitat/land use types were observed on the Proposed Action/Proposed Project site during the December 2014 biological field survey; agricultural field, recharge basin, canal, residential, and ruderal. Only one habitat/land use type, ruderal, was observed on the five well sites. A list of the vascular plant species observed within the Proposed Action/Proposed Project site and the terrestrial vertebrates using, or potentially using, the site are provided in the Biological Evaluation, Appendices A and B, respectively. Photos of the Proposed Action/Proposed Project site are presented in Appendix B, of the Biological Evaluation (Appendix C).

Regulatory Setting

Federal

Federal Endangered Species Act

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 (16USC1538). 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

The 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 part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the CDFG Code.

Federal Clean Water Act

The Federal CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States, which include oceans, bays, rivers, streams, lakes, ponds, and wetlands. Project proponents must obtain a permit from the U.S Army Corps of Engineers (USACE) for all discharges of dredged or fill material into waters of the United States before proceeding with a proposed activity. Before any actions that may impact surface waters are carried out, a delineation of jurisdictional waters of the United States must be completed following USACE protocols (Environmental Laboratory 1987) to determine whether a particular Project Area encompasses wetlands or other waters of the United States that qualify for CWA protection. These include any or all of the following:

- Areas within the ordinary high water mark of a stream, including non-perennial streams with a defined bed and bank, and any stream channel that conveys natural runoff, even if it has been realigned; or

- Seasonal and perennial wetlands, including coastal wetlands.

Wetlands are defined for regulatory purposes as areas "inundated or saturated by surface or ground water 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; 40 CFR 230.3).

Under the CWA 404 permit program, general permits (known as nationwide permits) have been adopted, and coverage under nationwide permits is possible when the amount of fill is relatively small (usually less than 0.5 acre).

State

California Endangered Species Act: 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 CDFG Code 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 CDFG Code 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 CDFG 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 CDFG administers the act and authorizes take through Section 2081 agreements (except for designated fully protected species).

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 (CDFG Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act: Regarding listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (CDFG Code 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 the 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 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 CDFG Code require that a Lake and Streambed Alteration Program Notification Package be submitted to the CDFG 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 CDFG 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 CDFG 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.

Local

Tulare County General Plan Policies

- 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.
    - 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.

RESPONSE

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 Game or U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation Incorporation. The Proposed Action/Proposed Project site is located within the United States Geological Survey (USGS) Paige 7.5-minute topographic quadrangle. A review of information from the California Department of Fish and Game Natural Diversity Database (CNDDB) RareFind3 data (2014a) was conducted for the Paige USGS quadrangle, and for the eight surrounding quadrangles (*Tulare*, *Tipton*, *Taylor Weir*, *Corcoran*, *Waukena*, *Remnoy*, *Goshen*, and *Visalia*) using the CNDDB Rarefind 2014a. The United States Fish and Wildlife Service Sacramento Office's *Endangered Species List Generator* (USFWS 2014) was queried for federally listed species with the potential to be affected by projects in the same nine quadrangles. These species, and their potential to occur on the Proposed Action/Proposed Project site, are listed in Table 7 on the following pages.

Table 7
List of Special Status Species that Could Occur in the Proposed Action/Proposed Project Vicinity

Species	Status	Habitat	*Occurrence on the Project site
PLANTS			
California Jewel-flower (*Caulanthus californicus*)	FE, CE, CNPS 1B.1	Chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland at elevations up to 3000 ft. Blooms February-May.	**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.
Hoover's Spurge (*Euphorbia hooveri*)	FT, CNPS 1B.2	Occurs in vernal pools of California's Central Valley; blooms July-September; elevation 80-820 ft.	**Absent.** Vernal pools are absent from the project site and adjacent lands.
San Joaquin Valley Orcutt Grass (*Orcuttia inaequalis*)	FT, CE, CNPS 1B.1	Occurs in vernal pools of the Central Valley; blooms April-September; elevation 100-2480 ft.	**Absent.** Vernal pools are absent from the project site and adjacent lands.
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE, CNPS 1B.1	Occurs in grasslands of the western foothills of the Sierra Nevada in heavy clay soils of the Porterville, Cibo, Mt. Olive and Centerville series. Blooms March-April.	**Absent.** The habitat and soils occurring onsite are unsuitable for this species.
Heartscale (*Atriplex cordulata var. cordulata*)	CNPS 1B.2	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; saline or alkaline soils; blooms April-October; elevations below 1,230 ft.	**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.
Earlimart Orache (*Atriplex cordulata var. erecticaulis*)	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.
Brittlescale (*Atriplex depressa*)	CNPS 1B.2	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, valley grasslands, and vernal pools of the Central Valley.	**Absent.** The habitat and soils occurring onsite are unsuitable for this species.
Lesser Saltscale (*Atriplex minuscula*)	CNPS 1B.1	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils; blooms May-October; elevation 50-660 ft.	**Absent.** 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.
Vernal Pool Smallscale (*Atriplex persistens*)	CNPS 1B.2	Occurs in alkaline vernal pools; blooms July-October; elevations below 400 ft.	**Absent.** Vernal pools are absent from the project site and adjacent lands.

Species	Status	Habitat	*Occurrence on the Project site
Subtle Orache (*Atriplex subtilis*)	CNPS 1B.2	Occurs in valley and foothill grasslands of the San Joaquin Valley; blooms August-October; elevation 130-330 ft.	**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.
Recurved Larkspur (*Delphinium recurvatum*)	CNPS 1B.2	Occurs in cismontane woodland and valley and foothill grass-lands; blooms March-June; alkaline soils; elevations below 2,500 ft.	**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.
Spiny-sepaled Button-celery (*Eryngium spinosepalum*)	CNPS 1B.2	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.** 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.
ANIMALS			
Conservancy Fairy Shrimp (*Branchinecta conservatio*)	FE	Occurs in vernal pools of California's Central Valley.	**Absent.** Vernal pools required by this species are absent from the project site. Furthermore, this species has never been documented in Tulare County.
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools of California.	**Absent.** Vernal pool habitat required by this species is absent from the project site and adjacent lands.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools of California's Central Valley.	**Absent.** Vernal pool habitat required by this species is absent from the project site and adjacent lands.
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT	Lives in 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.
Delta Smelt (*Hypomesus transpacificus*)	FT	This slender-bodied fish is endemic to the San Francisco Bay and Sacramento-San Joaquin Delta upstream through Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties.	**Absent.** The project site is situated well outside of the known distribution of this species.
Little Kern Golden Trout (*Oncorhynchus aguabonita whitei*)	FT	Native to high elevation streams and lakes in the Little Kern River in the southern Sierra Nevada.	**Absent.** The project site is situated well outside of the known distribution of this species.
California Tiger Salamander (*Ambystoma californiense*)	FT , CSC	Found primarily in annual grasslands. Breeds in vernal/ seasonal pools or perennial pools which lack fish or bullfrogs. Requires rodent burrows for refuge.	**Absent.** Historic and current use of the project site has rendered it unsuitable for this species. Breeding pools required by this species are absent from the project site and surrounding lands. Furthermore, the project site is well south of this species' known range within the San Joaquin Valley.

Species	Status	Habitat	*Occurrence on the Project site
California Red-Legged Frog (*Rana aurora draytonii*)	FT	Perennial rivers, creeks and stock ponds of the Coast Range and northern Sierra foothills with overhanging vegetation.	**Absent.** The project site does not provide suitable habitat for this species and is outside of its current known range.
Blunt-nosed Leopard Llizard (*Gambelia silus*)	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.
Giant Garter Snake (*Thamnophis gigas*)	FT	Occurs in marshes, sloughs, drainage canals, irrigation ditches, rice fields, and adjacent uplands. Occasionally found in slow-moving creeks. Prefers locations with emergent vegetation for cover and open areas for basking.	**Absent.** The project site does not provide suitable habitat for this species and is outside of this species' current known range.
Swainson's Hawk (*Buteo swainsoni*)	CT	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Possible.** The CNDDB lists three recorded observations of nesting Swainson's hawks within 3 miles of the project site. The 60 acres of onsite wheat fields and the existing 20-acre Enterprise Basin provide suitable foraging habitat for this species. The onsite trees provide atypical nesting habitat due to the proximity of the trees to active residences. Suitable foraging and nesting habitat for this species is absent from the five proposed well sites.
Tricolored Blackbird (*Agelaius tricolor*)	CE, CSC	Breeds near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	**Possible.** Potential foraging habitat for this species occurs on the Cordeniz Basin site. Marginal breeding habitat occurs in the form of onsite wheat fields.
Fresno Kangaroo Rat (*Dipodomys nitratoides exilis*)	FE, CE	Inhabits grassland on gentle slopes generally less than 10°, with friable, sandy-loam soils.	**Absent.** Habitats required by this species are absent from the project site and surrounding agricultural lands due to intensive agricultural use.
Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*)	FE, CE	Inhabits grassland on gentle slopes generally less than 10°, with friable, sandy-loam soils.	**Absent.** Habitats required by this species are absent from the project site and surrounding agricultural lands due to intensive agricultural use.
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (4 to 10 inches in diameter) ground squirrel burrows as denning habitat.	**Unlikely.** No burrows of suitable size for kit fox were observed on the project site during the field surveys. The project site has been highly modified for agricultural and water conveyance uses and, as a result, provides only marginal foraging habitat for the kit fox. Therefore, kit fox are not expected to breed or regularly forage on the site, but may pass through during dispersal movements.
Western Spadefoot (*Scaphiopus hammondii*)	CSC	Primarily occurs in grasslands, but also occurs in valley and foothill hardwood woodlands. Requires vernal pools or other temporary wetlands for breeding.	**Absent.** No vernal pool habitat required by this species occurs on the project site or surrounding lands.

Species	Status	Habitat	*Occurrence on the Project site
Western Pond Turtle (*Actinemys marmorata*)	CSC	Intermittent and permanent waterways including streams, marshes, rivers, ponds and lakes possessing basking habitat.	**Unlikely.** The recharge basin and irrigation canal of the Cordeniz Basin provide extremely marginal habitat for this species, due to irregular inundation of these features. Suitable habitat is absent from the five well sites.
Northern Harrier (Nesting) (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	**Absent (nesting).** While northern harriers may occasionally forage over the Cordeniz Basin site, suitable nesting habitat is absent.
White-tailed Kite (*Elanus leucurus*)	CFP	Open grasslands and agricultural areas throughout central California.	**Possible.** Suitable foraging habitat and atypical breeding habitat occurs on the Cordeniz Basin site. Suitable habitat is absent from the five well sites.
Mountain Plover (*Charadrius montanus*)	CSC	Forages in short grasslands and freshly plowed fields of the Central Valley.	**Possible.** The Cordeniz Basin site provides suitable winter foraging habitat for this species. This species breeds outside of California.
Burrowing Owl (*Athene cunicularia*)	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.	**Unlikely.** The intensively managed habitats of the Cordeniz Basin site and five well sites are marginal to unsuitable for the burrowing owl. Suitable burrows were absent from all but the Well No. 5 site, where several California ground squirrel burrows occurred in the levee road. Burrowing owls would not be expected to nest or roost in burrows on this or other actively-traveled roads. Burrowing owls are relatively uncommon in the project vicinity; the CNDDB lists only one occurrence within a 10 mile radius, located approximately 7 miles southwest of the Well No. 1 site.
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, bare ground, and low herbaceous cover. Can often be found in cropland.	**Possible.** Suitable foraging and nesting habitat occurs on the Cordeniz Basin site.
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	**Possible.** The project site provides no roosting habitat for this species, but bats could forage in the agricultural fields of the Cordeniz Basin site.
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)	CSC	Frequents open, semi-arid to arid habitats, including conifer, and deciduous woodlands, coastal scrub, grasslands, palm oasis, chaparral and urban. Roosts in cliff faces, high buildings, trees and tunnels.	**Possible.** The project site provides no roosting habitat for this species, but bats could forage over any of the six disjunct locations of the site.

Species	Status	Habitat	*Occurrence on the Project site
American Badger (*Taxidea taxus*)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	**Unlikely.** No burrows of the size and shape suitable for the badger were observed on the project site. The regular agricultural and water conveyance practices occurring on the project site create unsuitable conditions for the badger.

***Explanation of Occurrence Designations and Status Codes**
Present: Species observed on the sites 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 sites, but it could occur there from time to time.
Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FC	Federal Candidate	CP	California Fully Protected
		CSC	California Species of Special Concern
CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	3	Plants about which we need more information – a review list
1B	Plants Rare, Threatened, or Endangered in California and elseware	4	Plants of limited distribution – a watch list
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere		

In addition to the sensitive species identified by the CNDDB, in December of 2014 and April of 2015, LOA surveyed the site for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law. The Proposed Action/Proposed Project site contained disturbed lands consisting of wheat fields, disced Enterprise Basin, Serpa Irrigation Ditch, ruderal land, and residential land. The Proposed Action/Proposed Project site is situated within a region dominated by agricultural land uses (Appendix C).

Any native habitats once present on the site have been heavily altered by human enterprise such that the site no longer provides suitable habitat for any locally occurring special status plant species; hence, the Proposed Action/Proposed Project will not impact special status plants. Project impacts will have no adverse effect on wildlife movement corridors, jurisdictional waters, sensitive habitats, and many special status animal species that may occasionally forage on the Proposed Action/Proposed Project site. Potential Proposed Action/Proposed Project impacts to Swainson's hawk foraging habitat have been analyzed and determined to have little to no effect on Swainson's hawks. However, Proposed Action/Proposed Project construction during the nesting season has a small potential to result in disturbance to nesting Swainson's hawks such that nest failure may result. Mitigations to reduce or eliminate direct and indirect impacts to nesting Swainson's hawks include avoidance of Proposed Action/Proposed Project construction during the nesting season, and preconstruction surveys and buffers around active nests if construction activity is to occur within the nesting season (Appendix C).

The Proposed Action/Proposed Project may also result in impacts to nesting birds protected under the federal Migratory Bird Treaty Act. Birds nesting on or adjacent to the Proposed Action/Proposed Project site have the potential to be killed or disturbed by construction activities. Preconstruction

surveys and avoidance, should active nests be found, will reduce impacts to raptors, and other nesting birds that are protected by the federal Migratory Bird Treaty Act, to a less than significant level. Preconstruction surveys and avoidance or passive relocation will reduce impacts to burrowing owls to a less then significant level. Construction related mortality of San Joaquin kit fox poses a potentially significant impact/adverse effect. Preconstruction surveys and avoidance and minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* will reduce the magnitude of these impacts to a less than significant level (Appendix C).

Cumulative impacts to sensitive or federally regulated biological resources are considered insignificant (Appendix C).

Endangered, Threatened, or Special Status Plant and Animal Species Meriting Further Discussion
Swainson's Hawk (*Buteo swainsoni*). Federal Listing Status: None; State Listing Status: Threatened.

The Swainson's hawk is designated as a California Threatened species. The loss of agricultural lands (i.e., foraging habitat) to urban development and additional threats such as riverbank protection projects have contributed to its decline. However, in recent years the Central Valley Swainson's hawk population has been increasing (Appendix C).

Swainson's hawks are large, broad-winged, broad-tailed hawks and have a high degree of mate and territorial fidelity. They arrive at their nesting sites in March or April. In the Central Valley, Swainson's hawks typically nest in large trees in or peripherally to riparian systems adjacent to suitable foraging habitats. The young hatch sometime between March and July and do not leave the nest until some 4 to 6 weeks later. Other suitable nest sites include lone trees, groves of trees such as oaks, other trees in agricultural fields, and mature roadside trees. Central Valley Swainson's hawks forage in large, open fields with abundant prey, including grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. Their primary food source during the breeding season is voles; however they also prey on other small mammals, birds, and insects during this time (Appendix C).

***Potential to occur onsite*.** Swainson's hawks are known to nest and forage in areas surrounding the Proposed Action/Proposed Project site (CDFW 2014a). The medium sized trees within the residential area of the project site provide atypical nesting habitat. The 60 acres of wheat fields and 20-acre recharge basin on the site provide suitable foraging habitat. LOA investigators drove public roads in the vicinity of the site up to three miles from the site to note the regional abundance of Swainson's hawk foraging habitat. The results of this survey found that suitable Swainson's hawk foraging habitat was plentiful on surrounding lands in the form of alfalfa fields, winter grain, and fallow fields. In conclusion, the site provides approximately 80 acres of regionally abundant foraging habitat that may be used by Swainson's hawks. Onsite residential trees provide atypical nesting habitat, not generally utilized by Swainson's hawks due to the proximity of regular human activity (Appendix C).

Potential Impacts. Swainson's hawks are known to forage and nest within the vicinity of the Proposed Action/Proposed Project site. The nearest recorded Swainson's hawk nest is located approximately 2 miles north of the Well No. 4 site. However, an investigation of the reported nest site found no stick nests in trees at that location, and no trees of the species identified in the CNDDB report as containing the nest (cypress). Suitable foraging habitat occurs on the Cordeniz Basin site in

the form of wheat fields and the existing recharge basin. A typical nesting habitat occurs in the valley oak trees within the residential areas of the Cordeniz Basin site. Trees in such close proximity to human activity are seldom used by Swainson's hawks for nesting (M. Bradbury, pers. comm., 2012). No stick nests were observed in these trees by the LOA field investigator. Construction activities will avoid all trees on the Proposed Action/Proposed Project site with the possible exception of the removal of a diseased non-native chinaberry tree overhanging the Serpa Ditch. However, in the unlikely event that a Swainson's hawk happens to nest in the onsite trees prior to construction, construction activities near these trees could result in the abandonment of active Swainson's hawk nests or direct mortality to these birds. Project-related mortality of individual Swainson's hawks would violate the federal Migratory Bird Treaty Act, related state laws, and the California Endangered Species Act, and is considered a potentially adverse effect/significant impact of this Proposed Action/Proposed Project (Appendix C).

The construction of an 80-acre recharge basin would, at most, provide slightly lower quality foraging habitat for the Swainson's hawk because foraging opportunities would not be available during periods of inundation. According to the District engineer, the basins will be designed to percolate, rather than hold, water; therefore, they will be dry during most of the year. Moreover, because the source of water in the basins will be excess water during above average rainfall years, the basins can be expected to experience little to no inundation in drier years. Therefore, habitat for small mammals and invertebrates, and therefore foraging habitat for Swainson's hawks, should be available for the most part of most years. Additionally, a driving survey of surrounding lands by LOA identified thousands of acres of similar foraging habitat consisting of alfalfa, winter grain, and fallow fields. Given the regional abundance of foraging habitat, and the foraging opportunities that will remain on the site after construction, Proposed Action/Proposed Project impacts to Swainson's hawk foraging habitat are considered less than significant. Implementation of the following mitigations will ensure that the Proposed Action/Proposed Project does not adversely affect Swainson's hawks through construction-related mortality or disturbance, and that the Proposed Action/Proposed Project is in compliance with state and federal laws protecting this species (Appendix C).

Mitigation Measures. Prior to the construction of the Proposed Action/Proposed Project one or more of the following measures will be implemented.

BIO -1: Swainson's hawk

- **(*Avoidance*).** In order to avoid impacts to Swainson's hawk all onsite Proposed Action/Proposed Project activities will commence after the nesting season has concluded (August 31st). Major construction (i.e. PV panel installation, perimeter fencing, trenching, excavating, or any activity that would require the use of heavy equipment) will occur before the start of the nesting season (April 1st).

- ***(Pre-construction Surveys).*** If Proposed Action/Proposed Project delays occur and construction must be initiated during the nesting season, prior to any construction related activity, preconstruction surveys will be conducted on the Proposed Action/Proposed Project site and adjacent lands within 0.5 mile of the site to identify any nesting pairs of Swainson's hawks that may be present. These surveys will conform to the requirements of CDFW as presented in *Recommended Timing And Methodology For Swainson's Hawk Nesting Surveys In California's Central Valley,* Swainson's Hawk Technical Advisory

Committee, May 31, 2000 (see Appendix D of Appendix C). If no nesting pairs are found on or within the vicinity of the Proposed Action/Proposed Project site, no further mitigation is required.

- ***(Establish buffers).*** Should any active nests be discovered in or near proposed construction zones, they shall be avoided by one-quarter mile in accordance with CDFW's 1994 Staff Report Regarding Mitigation for Impacts to Swainson's Hawks in the Central Valley. All other nests shall be protected from all construction activities within 50 feet of the nest site. In the event that nests cannot be successfully avoided, the applicant may be required to obtain authorization from CDFW or USFWS. This buffer will be identified on the ground with flagging or fencing, and will be maintained until the biologist has determined that the young have fledged.

Implementation of these measures would reduce impacts to Swainson's hawks to a less then significant level.

Disturbance to Migratory Birds That May Nest on or Immediately Adjacent to the Site

Potential Impacts. The Cordeniz Basin site contains several small to medium sized ornamental trees that could be used for nesting by white-tailed kites, loggerhead shrikes, and other migratory birds. Onsite wheat fields provide potential nesting habitat for the tricolored blackbird, which was recently afforded provisional protection under the California Endangered Species Act. Ground-nesting birds such as the western meadowlark (*Sturnella neglecta*) could nest in the recharge basin or field margins, and the killdeer could nest in even the most disturbed habitats of the Proposed Action/Proposed Project site. If nesting birds are present at the time of construction, construction activities would have the potential to destroy nests, eggs, and chicks. Construction activities may also disturb nesting birds such that they would abandon their nests, leading to the mortality of nestlings. Activities that result in the mortality of nesting birds would be in violation of the federal Migratory Bird Treaty Act, related state laws, and/or the California Endangered Species Act. Mortality/disturbance of nesting migratory birds is considered a potentially adverse effect/significant impact of the Proposed Action/Proposed Project. (Appendix C).

Mitigation Measures. In order to minimize construction disturbance to migratory bird nests, the applicant will implement the following measure prior to Proposed Action/Proposed Project construction:

BIO -2: Migratory Bird Nests

- **(*Avoidance*).** In order to avoid impacts to all nesting birds from grading and construction, these activities will occur outside of the typical avian nesting season, or between September 1 and January 31.

- **(*Pre-construction surveys*).** If the Proposed Action/Proposed Project must be initiated during the typical avian nesting season (February 1 to August 31), a qualified biologist will conduct pre-construction surveys for active migratory bird nests within 14 days of the onset of construction. Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. This

buffer will be identified on the ground with flagging or fencing, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measure will ensure that the Proposed Action/Proposed Project does not adversely affect white-tailed kites, loggerhead shrikes, tricolored blackbirds, and other migratory birds, and that the Proposed Action/Proposed Project is in compliance with state and federal laws protecting these species.

Project Impacts to Burrowing Owls from Construction Mortality

Potential Impacts. While potentially suitable burrowing owl foraging habitat is located on the Proposed Action/Proposed Project site, no ground squirrel burrows or any other burrows were found on the site or surrounding lands that would be large enough to be occupied by burrowing owls. Furthermore, no sign of this species such as whitewash, cough pellets, and feathers was observed. Although it is unlikely that burrowing owls ever use the site, a small chance remains that a burrowing owl may take up residence prior to construction. In this unlikely event, Proposed Action/Proposed Project activities could result in nest failure or mortality of individual owls. These small raptors are protected under the FMBTA and California Fish and Game Code. Mortality of individual birds would be a violation of state and federal law, and would constitute a potentially adverse effect/significant impact of this Proposed Action/Proposed Project (Appendix C).

Mitigation Measures. Prior to Proposed Action/Proposed Project construction the following measure will be implemented as necessary, which will reduce impacts to the burrowing owl to a less than significant level:

BIO-3: Burrowing Owl

- ***(Take Avoidance Surveys).*** A pre-construction "take avoidance" survey will be conducted by a qualified biologist for burrowing owls no less than 14 days from the onset of construction according to methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

- ***(Avoidance of Active Nests).*** If take avoidance surveys and subsequent Proposed Action/Proposed Project activities are undertaken during the breeding season (February 1 to August 31) and active nest burrows are located within or near construction zones, a suitable construction-free buffer will be established around all active burrowing owl nests. The buffer areas will be enclosed with temporary fencing to prevent the entry of construction equipment and workers. 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.

- ***(Passive Relocation of Resident Owls).*** In the unlikely event that burrowing owls occupy areas proposed for development, they may be relocated to alternative habitat during the non-breeding season (September 1 to January 31). The relocation of resident burrowing owls must be conducted according to a relocation plan prepared by a qualified biologist. Passive relocation will be the preferred method of relocation.

Compliance with the above mitigation measure will ensure that the Proposed Action/Proposed Project does not adversely affect burrowing owl individuals or regional populations, and that the Proposed Action/Proposed Project is in compliance with state and federal laws protecting this species.

Project Impacts to San Joaquin Kit Foxes from Construction Mortality

Potential to Occur Onsite.

The six disjunct locations of the project site consist of lands managed for decades for agricultural and water conveyance purposes. All six locations are surrounded by intensively managed lands, including agricultural fields, orchards, industrial/residential uses, and a livestock facility. Such uses are not generally compatible with the life history and habitat requirements of the San Joaquin kit fox. At the time of the field surveys, burrows of suitable dimensions for the San Joaquin kit fox were absent from the project site, and it appeared that regular discing of the on-site fields and recharge basin and ongoing maintenance of roads and other ruderal areas of the project site was limiting burrowing mammal activity. These practices, combined with high levels of ambient disturbance, make it unlikely that kit fox would den on-site. Moreover, the highly-modified habitats of the project site appear to support a limited prey base that would make them marginal, at best, as kit fox foraging habitat.

Of primary interest for this assessment are kit fox occurrence records and survey results from the project vicinity. The CNDDB lists 12 historical sightings within 10 miles of the six disjunct locations of the project site (Figure 4) (CDFW 2015). Nine of these sightings occurred in 1975, one in 1973, one in 1992 within the City of Tulare, and one in 2003. Surveys using dogs trained to detect kit fox scat found no scat evidence of kit fox in Tulare County (Smith, et al. 2006). According to these surveys, the nearest kit fox populations occur in western Kern County.

In summary, although kit fox have historically been present in the project vicinity, the marginal habitats of the project site and surrounding lands are marginal, at best, for the San Joaquin kit fox. Considering the highly disturbed condition of the project site, its isolation from extant kit fox populations, its marginal to poor suitability as foraging habitat, and the absence of suitable denning habitat, the kit fox is not considered resident on the project site. However, the project site may occasionally be used for dispersal of individual kit fox from known populations (Appendix C).

Potential Impacts. Kit fox are unlikely to occur on the study area and surrounding lands. Although unlikely, an individual kit fox may pass through and possibly forage on the site from time to time during regular dispersal movements. If kit fox were present at the time of construction, then construction related activities have the potential to cause kit fox mortality. Construction-related injury or mortality of any kit fox would constitute a violation of the state and federal Endangered Species Acts, and is considered a potentially adverse effect/significant impact of the Proposed Action/Proposed Project.

Mitigation Measures. Prior to, or during (as appropriate), Proposed Action/Proposed Project construction the following measure will be implemented. The Proposed Action/Proposed Project should also implement protection measures as outlined in the "U.S. Fish and Wildlife Service standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance," provided in Appendix D of the Biological Report.

Bio-4: San Joaquin kit fox

- ***(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 Action/Proposed Project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS Standard Recommendations. The primary objective is to identify kit fox habitat features (e.g., potential dens and refugia) on the Proposed Action/Proposed Project site and evaluate their use by kit foxes. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS shall be contacted immediately to determine the best course of action.

- ***(Avoidance).*** Should kit fox be found using the site during preconstruction surveys the Proposed Action/Proposed Project will avoid the habitat occupied by kit fox in accordance with the USFWS Standard Recommendations and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.

- ***(Minimization)*****.** Permanent and temporary construction activities and other types of Proposed Action/Proposed Project-related activities should be carried out in a manner that minimizes disturbance to kit foxes. In accordance with the USFWS Standard Recommendations, minimization measures include, but are not limited to:

- Restriction of Proposed Action/Proposed Project-related vehicle traffic to established roads, construction areas, and other designated areas, with a speed limit no greater than 20 mph;

- All construction pipes, culverts, or similar structures with a diameter of 4 inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the Service has been consulted. If necessary, and under the direct supervision of a biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped;

    - Restriction of rodenticide and herbicide use, if rodent control must be conducted, zinc phosphide shall be used because of a proven lower risk to kit fox; 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 Action/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 Proposed Action/Proposed 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 Proposed Action/Proposed Project construction and implementation.

- ***(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 to a San Joaquin kit fox during Proposed Action/Proposed 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.

Implementation of these measures will reduce impacts to the San Joaquin kit fox to a less than significant level and would minimize the risk that construction activities during Proposed Action/Proposed Project development would result in mortality to individual kit foxes.

Implementation of mitigation measures **BIO-1** through **BIO-4** would reduce any potential impacts to sensitive or special status species to less than significant.

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 Game or U.S. Fish and Wildlife Service?

No Impact. Riparian habitat is absent from the site. Because riparian and other habitats of special concern are absent, future Proposed Action/Proposed Project construction will have no impact on these habitats.

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 U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the California Regional Water Quality Control Board (RWQCB).

The nearest known Water of the U.S. is Packwood Creek north of the Proposed Action/Proposed Project site. The Serpa Ditch running through the Cordeniz Basin site is a small irrigation canal that receives water from the Rocky Ford Ditch. The Serpa Ditch feeds the onsite Enterprise recharge basin and local agricultural fields. It has no downstream connection with any natural drainage features. Therefore, the onsite ditch and recharge basin do not meet the USACE definition of a Water of the U.S. The CDFW typically only asserts jurisdiction over ponds, lakes, and natural drainages or manmade features that replace natural drainages. Therefore, the onsite basin and ditch appear to not meet CDFW jurisdictional requirements. In conclusion, alteration of the Serpa Ditch and Enterprise Recharge Basin are unlikely to be regulated by the USACE or CDFW. However, the RWQCB generally requires notification prior to any alteration of surface waters. Any impacts would 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. Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and interpopulation movements. Movement corridors in California are typically associated

with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. The small size and the lack of vegetation along the small Serpa Ditch would not be conducive to significant terrestrial wildlife movements, and the ditch would therefore not be considered a movement corridor. The Pacific flyway, one of four major bird migration routes in North America, passes over the Proposed Action/Proposed Project site and much of the rest of California (Appendix C). Therefore, this Proposed Action/Proposed Project will result in a less than significant effect on regional wildlife movements.

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

V. CULTURAL RESOURCES **Would the project:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

SETTING

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 Archai Periods has proven difficult based on erosion and depositional pattern of the San Joaquin. 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[21].

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. Smith[22], with statistical information provided by the California Native American Heritage Commission.

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 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 to 4,000-foot elevations. The Tubatulabal inhabited the Sierra Nevada Mountains, at the higher

[21] County of Tulare. 2010. General Plan Background Report. Page 9-53.
[22] Ibid. Page 9-54.

elevations, near Mt. Whitney in the east, extending westward along the drainages of the Kern River, and the Kern River-South Fork. The Monache were comprised of six small groups that lived in the Sierras east of the Foothill Yokuts, in locations ranging between 3,000 to 7,000 foot elevations[23].

Regulatory Setting

Federal

Section 106 of the National Historic Preservation Act: The NHPA of 1966 is the primary Federal legislation which outlines the Federal government's responsibility to cultural resources. More specifically, Reclamation will be consulting under Title 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation (NHPA) and its implementing regulations located at 36 CFR Part 800, outline the Federal government's responsibility in identifying and evaluating cultural resources. Other applicable Federal cultural resources laws and regulations that could apply include, but are not limited to, the Native American Graves Protection and Repatriation Act (NAGPRA), and the Archaeological Resources Protection Act (ARPA).

Section 106 of the NHPA requires the Federal government to take into account the effects of an undertaking on cultural resources listed on or eligible for listing on the National Register of Historic Places (National Register) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties. The 36 CFR Part 800 regulations describe the Section 106 process. They outline the steps the Federal agency takes to identify cultural resources and the level of effect that the proposed undertaking will have on historic properties. An undertaking is defined as any:

"…project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including:

A) those carried out by or on behalf of the agency;

B) those carried out with Federal assistance;

C) those requiring a Federal permit, license, or approval; and

D) those subject to state or local regulation administered pursuant to a delegation or approval by a Federal agency [Section 301(7) 16 U.S.C. 470w(7)]"

It is the initiating of an undertaking that begins the Section 106 process. Once an undertaking is initiated the Federal agency must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action that has the potential to affect historic properties, the Federal agency must; 1) identify the area APE, 2) determine if historic properties are present within that APE, 3) determine the effect that the undertaking will have on historic properties, and 4) consult with the State Historic Preservation Office (SHPO) to seek concurrence on Federal agencies findings. In addition, the Federal agency is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and to consult with individuals or groups who are entitled to be consulting

[23] County of Tulare. 2010. General Plan Background Report. Page 9-54.

parties or have requested to be consulting parties. If the undertaking will result in adverse effects to historic properties, these adverse effects must be resolved in consultation with the SHPO and other parties identified during the Section 106 process before the undertaking can proceed to implementation.

American Indian Religious Freedom Act of 1978: 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 Sections 1996–1996a) requires that locations identified as central to American Indian religious practice be protected.

State

The Proposed Action/Proposed Project is subject to CEQA which requires public or private projects financed or approved by public agencies to assess their effects on historical resources. CEQA uses the term "historical resources" to include buildings, sites, structures, objects or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. CEQA states that if implementation of a project results in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (CCR 15064.5, 15126.4). For the purposes of this CEQA document, a significant impact would occur if project implementation:

- Causes a substantial change in the significance of a historical resource
- Causes a substantial adverse change in the significance of an archaeological resource
- Disturbs any human remains, including those interred outside of formal cemeteries

Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined. CEQA guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR)
- If the resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5(a))

Each of these ways of qualifying as a historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC 5020.1(k), 5024.1, 5024.1(g)).

A historical resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Is associated with the lives of persons important in our past

- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history Properties that area listed in or eligible for listing in the National Register of Historic Places are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

Public Resources Code §5097.5: California Public Resources Code §5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

American Indian Human Remains: Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper and dignified treatment of the remains and associated grave artifacts.

Paleontological Resources: Paleontological resources are the fossilized remains of plants and animals and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources[24].

CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). California Public Resources Code §5097.5 (see above) also applies to paleontological resources.

Local

Tulare County General Plan Policies

- ERM-6: To manage and protect sites of cultural and archaeological importance for the benefit of present and future generations.

[24] Society of Vertebrate Paleontology. Comfortable Impact Mitigation Guidelines Committee Policy Statements. http://www.vertpaleo.org/ConformableImpactMitigationGuidelinesCommittee.htm.

- ERM-6.1: Evaluation of Cultural and Archaeological Resources – The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

- ERM-6.2: Protection of Resources with Potential State or Federal Designations – The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

- ERM-6.4: Mitigation – If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

- ERM-6-6: Historic Structures and Sites – the County shall support public and private efforts to preserve, rehabilitate, and continue the use of historic structures, sites, and parks. Where applicable, preservation efforts shall conform to the current Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

- ERM-6.7: Cooperation of Property Owners – The County should encourage the cooperation of property owners to treat cultural resources as assets rather than liabilities, and encourage public support for the preservation of these resources.

- ERM-6.8: Solicit Input from Local Native Americans – The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.

- ERM-6.9: Confidentiality of Archaeological Sites – The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal or artifacts.

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

RESPONSE

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 Cordinez Basin study area, located near Tulare, Tulare County, California. A records search of site files and maps was conducted at the Southern San Joaquin Valley AIC and a search of the NAHC *Sacred Lands File* was completed. These investigations determined that the study area had not been previously surveyed in its entirety and no sites had been recorded within or near it. No Native American sacred sites or cultural landscapes had been identified within or immediately adjacent to the study area.

An intensive Phase I survey of the study area resulted in the identification and recording of one cultural resource, the Serpa 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 Serpa Ditch is recommended not eligible as an individual resource nor as a contributor to a potential historic district under NRHP/CRHR Criteria A/1, B/2, C/3, or D/4. As such, it does not qualify as a CEQA historical resource pursuant to Section 15064.5. Nor does this property need to be considered as a historic resource under the NHPA. The Proposed Action/Proposed Project will not result in any direct impacts to historic properties or resources.

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

CUL-1: If, in the course of Proposed Action/Proposed Project construction or operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within one hundred (100) feet of the find shall be ceased and the Tulare County Resource Management Agency shall be notified immediately. The Proposed Action/Proposed Project proponent shall retain a qualified archaeologist to assess the significance of the find and make mitigation recommendations, if warranted. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System (CHRIS). The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

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 with Mitigation Incorporated. On October 21, 2014, a record search was conducted with the Southern San Joaquin Valley Information Center (SSJVIC) of the California

Historical Resources Information System (CHRIS). No known paleontological resources are known to exist within the Proposed Action/Proposed Project area, nor are there any known geologic features in the Project area. Proposed Action/Proposed 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 Proposed Action/Proposed Project site; however, in accordance with State Health and Safety Code Section 7050.5 and Public Resource Code Section 5097.98, if human remains are unearthed during Proposed Action/Proposed 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 Native American Heritage Commission (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.

VI. GEOLOGY AND SOILS **Would the project:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

SETTING

Environmental Setting

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 of the mountains.[25].

[25] County of Tulare. 2010. General Plan Background Report. Page 8-4

Faulting and Seismicity

The Proposed Action/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 Action/Proposed Project site. An unnamed fault is approximately 26.6 miles southeast (near Terra Bella), Poso Creek Fault is 33.9 miles south, San Andreas Fault, Parkfield section is approximately 61 miles southwest of the Proposed Action/Proposed Project site. Ground shaking 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 ground shaking intensities than areas located on hard rock[26]. 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 Valley[27]."

Soils

According to the United States Department of Agriculture Natural Resources Conservation Service, there is predominantly one soil type present on the Proposed Action/Proposed Project site, which is Nord fine sandy loam (78.1 acres) with Tagus loam covering approximately 2.4 acres (Appendix A). The Nord soil series originates from alluvial fans with a parent material of mixed alluvium derived mainly from granitic rock sources[28]. Nord fine sandy loam soils are nonsaline (0.0 to 2.0 mmhos/cm), well drained, and have a moderate available water capacity, with no documented cases of ponding[29].

Regulatory Setting

Federal

Historic Sites Act of 1935: This Act became law on August 21, 1935 (49 Stat. 666; 16 U.S.C. 461-467) and has been amended eight times. This Act establishes as a national policy to preserve for public use historic sites, buildings and objects, including geologic formations.

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

County of Tulare. 2010. General Plan Background Report. Page 8-7
[27] Ibid. Page 8-6 and 7
[28] United States Department of Agriculture Natural Resources Conservation Service. Soil Survey of Tulare County, California Western Part, pg. 71.
[29] Appendix A- Soils Report

coordination with the FEMA Regions, the States, the earthquake consortia, and other public and private partners.

State

Alquist-Priolo Earthquake Fault Zoning Act: The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was passed in order to protect the public from surface rupture hazards from faults displacing the ground surface. The California Geological Survey (CGS), previously known as the California Division of Mines and Geology (CDMG) has compiled Special Publication 42 – Fault Rupture Hazard Zones in California, (Alquist-Priolo Earthquake Zoning Act With Index to Earthquake Fault Zones Maps) to delineate and define active fault traces and zones that require specific studies to address rupture hazards with respect to "structure[s] for human occupancy" (CGS, 2007; see Leighton, 2010a). CGS, Note 49, Guidelines for Evaluating the Hazard of Surface Fault Rupture is intended as a guideline to assist geologists that conduct fault studies in delineated Earthquake Fault Zones.

Seismic Hazards Mapping Act of 1990: The Seismic Hazards Mapping Act of 1990 was enacted in order to "protect the public safety from effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes" (CGS, 1997; see Leighton, 2010a). CGS has issued *Special Publication 117 – Guidelines for Evaluating and Mitigating Seismic Hazards in California,* which mandates that site specific evaluations must be performed in order to address seismic hazards. CGS uses *Special Publication 118 – Recommended Criteria for Delineating Seismic Hazard Zones in California* to delineate areas that are prone to liquefaction and seismically induced landslides. CGS has published several seismic hazard reports and maps covering quadrangles in the most populous places in California; however, no seismic hazard reports are available for areas within the Proposed Action/Proposed Project area at this time.

Uniform 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 Uniform Building Code with necessary California amendments. The Uniform Building Code is a widely adopted model building code in the United States published by the International Conference of Building Officials. About one-third of the text within the California Building Code has been tailored for California earthquake conditions.

Local

Local regulations, plans, programs, or guidelines associated with geology and soils that are applicable to the Proposed Action/Proposed Project are listed below:

Tulare County General Plan Policies

- 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.

- HS-2: To reduce the risk to like 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.
    - HS2.4: 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.

RESPONSE

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.

Less Than Significant Impact. No substantial faults are known to exist in Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation. Additionally, the Proposed Action/ Proposed Project does not involve components that would expose people or structures to substantial adverse effects. Impacts would be less than significant.

VI-a-ii) Strong seismic ground shaking?

Less Than Significant Impact. 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 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.

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

Less Than Significant Impact. Seismic ground failure (liquefaction) occurs during intense prolonged ground shaking (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 conductive 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. The impact would be less than significant.

VI-a-iv) Landslides?

No Impact. The site is relatively flat and 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. Grading activities associated with the construction of the Proposed Action/ Proposed Project would involve earthmoving, excavation, stockpiling, drilling 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.

The site is 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 used in part for construction of the earthen levees of the recharge basin. This would ensure that organic matter, the existing seed bank, and topsoil texture are maintained for soil-stabilizing efforts at the Proposed Action/Proposed 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 Proposed Action/Proposed Project in accordance with the State Water Resources Control Board 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.

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?

No Impact. The soil conditions at the site 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. Soil conditions at the site are susceptible to mild effects of subsidence and have seen a total subsidence of 0.5 to 1.0 foot from 2007 to 2011[30]. Water recharge from the Proposed Action/Proposed Project would help to replenish ground water within the Proposed Action/Proposed Project area, which may assist with reducing potential subsidence in the immediate area. The potential for the Proposed

[30] Luhdorff & Scalmanini Consulting Engineers. Report of Findings: Land Subsidence from Groundwater Use in California. April 2014. Page 14.

Action/Proposed Project to result in on, or offsite landslides, lateral spreading, subsidence, liquefaction or collapse would be result in no impact.

VI -d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?

No Impact. According to the United States Department of Agriculture Natural Resources Conservation Service, the site contains three soil mapping units representing three soil series. Colpien loam, 0 to 2 percent slopes; Nord fine sandy loam, 0 to 2 percent slopes; and Tagus loam, 0 to 2 percent slopes. None of these soil mapping units are classified as hydric in the California Hydric Soils List. Furthermore, all soils of the site have been significantly altered through decades of agricultural and water conveyance and storage practices such as grading, discing, and excavation. 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 Action/Proposed Project does not require septic tanks. There would be no impact.

VII GREENHOUSE GAS EMISSIONS **Would the project:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

SETTING

Environmental Setting

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*[31].

Greenhouse Gases

According to the San Joaquin Valley Air Pollution Control District's 2014 Draft 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 (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated carbons*[32].

Regulatory Setting

Federal

Although climate change and GHG reduction is a concern at the federal level; currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the U.S. EPA nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. However, the FHWA recommends that climate change impacts and strategies to reduce GHG emissions should considered and integrated throughout the transportation decision-making process. Such strategies include implementation of improved transportation system efficiency, use of cleaner fuels and cleaner vehicles, and a reduction in the growth of vehicle hours travelled. Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - Federal Leadership in Environmental, Energy and Economic Performance (Caltrans 2013).

Executive Order 13514: Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate

[31] http://www.climatechange.ca.gov/climate_action_team/reports/CLEAN_CAT_research_plan_final_draft_05June14.pdf
http://oehha.ca.gov/multimedia/epic/pdf/ClimateChangeIndicatorsReport2013.pdf
[32] http://www.valleyair.org/Workshops/postings/2014/07-23-14_GAMAQI/DRAFT_GAMAQI_2014_July_7.pdf

in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change (Caltrans 2013).

On April 2, 2007, in Massachusetts v. EPA, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6)—in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010 the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO2 per mile, (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles.

State

Assembly Bill 1493: Assembly Bill (AB) 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the California Air Resources Board (ARB) to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the Clean Air Act, to allow the State to require reduced tailpipe emissions of CO_2. In late 2007, the USEPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the USEPA related to this denial.

In January 2009, President Obama instructed the USEPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the USEPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order No. S-3-05: Executive Order No. S-3-05 was signed on June 1, 2005, by former Governor Arnold Schwarzenegger. The goal of this EO is to reduce California's GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Executive Order S-6-06: Executive Order S-6-06 (State of California), signed on April 25, 2006, established two primary goals related to the use of biofuels within California, including: (1) by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and (2) by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the state, maintaining this level through 2020.

Assembly Bill 32 - California Global Warming Solutions Act of 2006: AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that

will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan: In October 2008, ARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of 169 million metric tons (MMT) of CO_2e, or approximately 30 percent from the state's projected 2020 emissions level of 596 $MMTCO_2e$ under a business-as-usual scenario (this is a reduction of 42 $MMTCO_2e$, or almost 10 percent, from 2002–2004 average emissions). The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 $MMTCO_2e$), implementation of the Low Carbon Fuel Standard (15.0 $MMTCO_2e$) program, energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 $MMTCO_2e$), and a renewable portfolio standard for electricity production (21.3 $MMTCO_2e$). The 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.

A key component of the Scoping Plan is the Renewable Portfolio Standard, which is intended to increase the percentage of renewables in California's electricity mix to 33 percent by year 2020, resulting in a reduction of 21.3 $MMTCO_2e$. Sources of renewable energy include, but are not limited to, biomass, wind, solar, geothermal, hydroelectric, and anaerobic digestion. Increasing the use of renewables will decrease California's reliance on fossil fuels, thus reducing GHG emissions.

The Scoping Plan states that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. (Meanwhile, ARB is also developing an additional protocol for community emissions.) ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects approximately 5.0 $MMTCO_2e$ will be achieved associated with implementation of Senate Bill 375, which is discussed further below. The Climate Change Proposed Scoping Plan was approved by ARB on December 11, 2008.

The First Update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals. ARB's Key Action for the Waste Sector focused on eliminating organics from the landfill starting in 2016 and financing the in-state infrastructure development of composting and anaerobic digestion facilities. ARB's Key Action for Short-lived Climate Pollutants such as methane is to develop a comprehensive strategy by 2015 which will focus on methane generated at landfills from the disposal of organic wastes.

Senate Bill 97 - CEQA: Greenhouse Gas Emissions: Senate Bill 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, by July 1, 2009. The Resources Agency is required to certify or adopt those guidelines by January 1, 2010. Amendments to the CEQA guidelines took effect March 18, 2010. The revisions include a new section (Sec. 15064.4) that specifically addresses the potential significance of GHG emissions. Section 15064.4 calls for a "good-faith effort" to "describe, calculate or estimate" GHG emissions; Section 15064.4 further states that the analysis of the significance of any GHG impacts should include consideration of the extent to which the project would increase or reduce GHG emissions; exceed a locally applicable threshold of significance; and comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions." The guidelines also state that a project may be found to have a less-than-significant impact on GHG emissions if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (Sec. 15064(h)(3)). However, the guidelines do not require or recommend a specific analytical methodology or provide quantitative criteria for determining the significance of GHG emissions.

This bill also protected projects until January 1, 2010 that were funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E) from claims of inadequate analysis of GHG as a legitimate cause of action. Thus, this "protection" is highly limited to a handful of projects and for a short time period (CAPCOA 2008).

Senate Bill 1368: Senate Bill (SB) 1368 (codified at Public Utilities Code Chapter 3) is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission (CPUC) to establish a greenhouse gas emissions performance standard for baseload generation from investor-owned utilities by February 1, 2007. The bill also required the California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural-gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and the CEC.

Senate Bill 1078 and Governor's Order S-14-08 (California Renewables Portfolio Standards): Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. The proposed

project area would receive energy service from the investor-owned Pacific Gas and Electric Company.

Prior to the Executive Order, the CPUC and the CEC were responsible for implementing and overseeing the Renewables Portfolio Standard. The Executive Order shifted that responsibility to ARB, requiring it to adopt regulations by July 31, 2010. ARB is required by current law, AB 32 of 2006, to regulate sources of greenhouse gases to meet a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The CEC and CPUC are expected to serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. Additionally, the CEC and CPUC will continue their implementation and administration of the 20 percent requirement. The Executive Order also stipulates that ARB may delegate to the CPUC and CEC any policy development or program implementation responsibilities that would reduce duplication and improve consistency with other energy programs. ARB is also authorized to increase the target and accelerate and expand the time frame.

The general definition under the State Renewables Portfolio Standard for biomass is any organic material not derived from fossil fuels, including agricultural crops, agricultural wastes and residues, waste pallets, crates, dunnage, manufacturing, and construction wood wastes, landscape and right-of-way tree trimmings, mill residues that result from milling lumber, rangeland maintenance residues, sludge derived from organic matter, and wood and wood waste from timbering operations. Biomass feedstock from state and national forests is allowable under the definition.

Executive Order S-13-08: The Climate Adaptation and Sea Level Rise Planning Directive: On November 14, 2008, Governor Schwarzenegger issued Executive Order S-13-08 in order to reduce and assess California's vulnerability to climate change and sea level rise. The Executive Order initiated four major actions:

Initiate California's first statewide climate change adaptation strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable, and recommend climate adaptation policies by early 2009.

Request the National Academy of Sciences establish an expert panel to report on sea level rise impacts in California to inform state planning and development efforts.

Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects.

Initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise. This report was released in 2009 as the California Adaptation Strategy (CNRA 2009).

Mandatory Reporting of Greenhouse Gas Emissions*:* Reporting of greenhouse gases by major sources is required by the California Global Warming Solutions Act (AB 32, 2006). Revisions to the existing ARB mandatory GHG reporting regulation were considered at the board hearing on December 16, 2010. The revised regulation was approved by the California Office of Administrative Law and became effective on January 1, 2012. The revised regulation affects industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

Cap-and-Trade Regulation: The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013 and apply to large electric power plants and large industrial plants. In 2015, they will extend to fuel distributors (including distributors of heating and transportation fuels). At that stage, the program will encompass nearly 85 percent of the state's total greenhouse gas emissions.

GHG emissions addressed by the cap-and-trade regulation are subject to an industry-wide cap on overall GHG emissions. The cap-and-trade regulation sets a firm limit or cap on GHGs, which declines approximately 3 percent each year beginning in 2013. Any growth in emissions must be accounted for under the cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. The cap-and-trade regulation will help California achieve its goal of reducing GHG emissions to 1990 levels by the year 2020, and ultimately achieving an 80% reduction from 1990 levels by 2050. As such, the ARB has determined that the cap-and-trade regulation meets the requirements of AB 32.

Local

San Joaquin Valley Air Pollution Control District: The San Joaquin Valley Air Pollution Control District 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)[33].

[33] http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf

Tulare County General Plan Policies

- 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 gas emissions in the most current year available, and those projected for year 2020, and
        - 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 offsets to reduce greenhouse gas emissions.
- AQ-2: To improve air quality by reducing air emissions related to transportation.
- AQ-4: To implement the best available controls and monitoring necessary to regulate air emissions.

RESPONSES

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

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. The Proposed Project / Proposed Action would generate GHG emissions through construction activities and maintenance activities, but greatly reduce GHG emissions associated with energy generation due to its energy conservation benefits. The period of construction would be short-term, and construction-phase GHG emissions would occur directly from the off-road heavy-duty equipment and the on-road motor vehicles needed to mobilize crew, equipment, and materials, and to construct the Proposed Project/ Proposed Action which includes a recharge basin, pipeline installation, and other water management facilities.

Greenhouse gas (GHG) impacts are considered to be cumulative impacts by California Air Resources Board (CARB) since any increase in greenhouse gas emissions would add to the existing inventory of

gases that could contribute to climate change. The estimated unmitigated overall GHG emission due to temporary Project construction activities (see Appendix B -Air Quality / Greenhouse Gases) is 1,101.38 metric tons of carbon dioxide equivalents. The estimated unmitigated overall GHG emissions due to on-going operational activities are 9.87 metric tons of carbon dioxide equivalents. Since the combined amount of GHGs emitted from the Proposed Project is well below 25,000 metric tons/year, no report is required to be submitted to the U.S. EPA and CARB.

According to the San Joaquin Valley Air Pollution Control District's Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA, projects implementing Best Performance Standards in accordance with District guidance are determined to have a less than significant individual and cumulative impact on global climate change and do not require project specific quantification of GHG emissions. The Proposed Project / Proposed Action would implement the following Best Management Practices for Construction:

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).

On-going operation and maintenance of the basin would result in a very small number of vehicle trips associated with maintenance. Therefore, with implementation of the above BMP for construction related impacts, impacts would be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS **Would the project:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☐	☒

SETTING

Environmental Setting

The Proposed Action/ Proposed Project is located in western Tulare County approximately 200 miles southeast of Sacramento and 65 miles northwest of Bakersfield, respectively. The Proposed Action/Proposed Project site is located within the Tulare Irrigation District. The cities of Tulare,

Visalia, and Hanford are approximately one and a half miles, four and a half miles, and 14.5 miles, respectively, southeast, northeast and northwest of the Proposed Action/Proposed Project basin site.

The closest airstrip is Visalia Airport located approximately 5.1 miles north, while Mefford Field Airport is located approximately 6.5 miles southeast of the basin site.

The Visalia Landfill is approximately 13.1 miles north of the Proposed Action/Proposed Project site, while the Woodville Landfill is located approximately 14.4 miles southeast of the basin site.

The nearest schools are Heritage Elementary School located approximately two miles southeast of the Proposed Action/Proposed Project site and Oak Valley Elementary School located approximately two and a half miles southwest of the basin site.

The basin site was previously operated as furrow irrigated agricultural land. Crops generally grown on the property included corn and wheat. The surrounding area is primarily agricultural fields, vacant land, canals and rural residential. An existing recharge basin is located adjacent to the Proposed Action/Proposed Project site to the north.

Regulatory Setting

Federal

Hazardous Materials - U.S. Environmental Protection Agency: The U.S. Environmental Protection Agency (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 (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 (Title 40, Code of Federal Regulation [CFR], Part 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 Title 40 of the CFR, Part 112 (Title 40 CFR, Part 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 above ground 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 Title 40, CFR, Chapter 1, Subchapter D – Water Programs and Subchapter I – Solid Wastes. Title 40, CFR, Chapter 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act. Title 40, CFR, Part 116 sets forth a determination of the reportable quantity for each substance that is designated as hazardous. Title 40, CFR, Part 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.

State

Hazardous Materials - Hazardous Materials Release Response Plans and Inventory Act of 1985: The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs.

Hazardous materials are defined as unsafe raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those relating to hazardous waste.

Hazardous Waste Control Act: The Hazardous Waste Control Act created the state hazardous waste management program, which is similar to but more stringent than the federal Resource Conservation and Recovery Act program. The act is implemented by regulations contained in Title 26 of the CCR, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;

- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the California Department of Toxic Substances and Control.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program: The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a Certified Unified Program Agency (CUPA). Though established by the State, the Program Elements are implemented by the Kern County Environmental Health Services Department (KCEHSD), which serves as the CUPA for the County of Kern. Therefore, the Program Elements implemented by KCEHSD are explained further under the Kern County regulatory setting.

California Education Code: The California Education Code Section 17213(a)(3) prohibits the approval of a school site if the site "contains one or more pipelines, situated underground or aboveground, which carries hazardous substances, acutely hazardous substances, or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood." California Education Code Section 17213.1 requires DTSC to be involved in the environmental review process for the acquisition or construction of a school property utilizing state funding. The responsible school board is required to contract with an environmental assessor to supervise the preparation of a site evaluation to determine the potential for hazards or hazardous materials to exist on or near the site that could affect future staff and students, prior to acquiring a school site.

California Environmental Protection Agency: The California Environmental Protection Agency (Cal/EPA) was created in 1991. It unifies California's environmental authority in a single cabinet-level agency and brings together the California Air Resources Board (CARB), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), and Department of Toxic Substances Control (DTSC), Office of Environmental Health Hazard Assessment (OEHHA), and Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the Cal/EPA "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Their mission is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substances Control: 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, 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.

California Office of Emergency Services: In order to protect the public health and safety and the environment, the California OES is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and the health risks) needs to be available to firefighters, public safety officers, and regulatory agencies needs to be included in business plans in order to prevent or mitigate the damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of the California Health and Safety Code Article 1–Hazardous Materials Release Response and Inventory Program (Sections 25500 to 25520) and Article 2– Hazardous Materials Management (Sections 25531 to 25543.3). CCR Title 19, Public Safety, Division 2, Office of Emergency Services, Chapter 4–Hazardous Material Release Reporting, Inventory, And Response Plans, Article 4 (Minimum Standards for Business Plans) establishes minimum statewide standards for Hazardous Materials Business Plans (HMBPs). These plans shall include the following: (1) a hazardous material inventory in accordance with Sections 2729.2 to 2729.7; (2) emergency response plans and procedures in accordance with Section 2731; and (3) training program information in accordance with Section 2732.

Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state. Each business shall prepare a HMBP if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to the following:

- 500 pounds of a solid substance
- 55 gallons of a liquid
- 200 cubic feet of compressed gas
- A hazardous compressed gas in any amount
- Hazardous waste in any quantity.

Local

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 Unified 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 (EHD) through the County of Tulare is the CUPA for all cities and unincorporated areas within Tulare County[34].

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

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

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 education[35].

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 f the 100-year flood plain[36].

Tulare County General Plan Policies

- 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.
- 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.

[35] Ibid.
[36] County of Tulare. 2010. Recirculated Draft Environmental Impact Report, SCH No. 2006041162. Page 3.8-5 – 3.8-6

- HS-6.12: Weed Abatement – The County shall continue to encourage weed abatement programs throughout the County in order to promote fire safety.

- HS-7: To provide effective emergency response to natural or human-made hazards and disasters.

    - HS-7.3: Maintain Emergency Evacuation Plans – The County shall continue to create, revise, and maintain emergency plan for the broad range of natural and human-made disasters and response activities that could foreseeably impact Tulare County.

RESPONSE

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 Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of accessory, SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells. During construction of the Proposed Action/Proposed Project it will be necessary to use, transport and possibly store incidental amounts of fuel and equipment 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, impact 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 Proposed Action/Proposed Project would not create a significant hazard to the public or the environment as the Proposed Action/Proposed 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 are two schools located approximately two miles southeast and two and a half miles southwest of the basin site. The Proposed Action/Proposed Project would not emit hazardous emissions, involve hazardous materials, or create a hazard to the schools 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 Proposed Action/Proposed 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 the Department of Toxic Substances Control. 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 basin site is located approximately five miles south of the Visalia Airport and approximately six and a half miles northwest of the Mefford Field Airport in the City of Tulare. 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 Proposed Action/Proposed 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 Action/Proposed Project would not result in the permanent closure of any roadways. Temporary lane closures may be required for installation of the pipeline on the west side of Road 84. Road 84 is a rural road which terminates approximately two miles north of the Proposed Action/Proposed Project. 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 Proposed Action/Proposed Project site and the surrounding lands are in intensive agricultural production and are not considered wildlands. According to the Fire Threat map (Figure 8-2) in the Tulare County General Plan Background Report the Project site is not located in a fire threat area. There would be no impact.

IX. 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?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

SETTING

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. Normal annual precipitation is between approximately 6 to 11 inches in the valley portion. 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 Watershed[37]. The Proposed Action/Proposed Project is located within the Kaweah Watershed.

Groundwater in Tulare County occurs in an unconfined state throughout, and in a confined state beneath its 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 overdraft[38].

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 aquifer[39].

In most areas of Tulare County, groundwater quality is acceptable for agricultural and urban uses through normal treatment and delivery operations. The Kaweah sub-basin has high nitrate areas on its eastern side where TDS values typically range from 300-600 mg/L[40].

According to the Tulare County General Plan Update Figure 3.6-5 Flood Hazards, the Proposed Action/Proposed Project site is not located within the FEMA 100-Year or 500-Year Flood Zones. The Project site is also not located within a dam failure inundation zone.

[37] County of Tulare. 2010. Recirculated Draft Environmental Impact Report, SCH No. 2006041162. Page 3.6-14 – 3.6-15
[38] Ibid, Pages 3.6-21 and 3.6-22
[39] Ibid, Page 3.6-27
[40] Ibid, Page 3.6-28

Regulatory Framework

Federal

Federal Emergency Management Agency (FEMA) Flood Zones: 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. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. 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 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 (unshaded).

Clean Water Act: The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

National Pollutant Discharge Elimination System (NPDES): 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. Environmental Protection Agency (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 EPA to develop permitting regulations for stormwater discharges from municipal separate storm sewers (MS4s) and industrial facilities, including construction sites.

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

Impaired Water Bodies: Section 303(d) of the Clean Water Act require states to identify water bodies that do not meet, or are not expected to meet, water quality standards (i.e., impaired water bodies). The affected water body, and associated pollutant or stressor, is then prioritized in the

303(d) List. The Clean Water Act further requires the development of a Total Maximum Daily Load (TMDL) for each listing. California's current list, approved by the 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 Water Board in June 2009 and has been submitted to the State Water Resources Control Board for inclusion in a statewide 2008/2010 California Integrated Report.

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 Action/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.

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 supply development and management agency for water and the State Water Resources Control Board (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 DWR Water Plan divides the state into 12 hydrologic regions, the Proposed Action/Proposed Project is located in the Tulare Lake Hydrologic Region.

State Water Resources Control Board: The State Water Resources Control Board (SWRCB), located in Sacramento, is the agency with jurisdiction over water quality issues in the State of 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 which may affect the quality of waters of the State to attain the highest quality which 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 Action/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.

AB3030 (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 resources[41].

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. The Sustainable Groundwater Management Act 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 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. For more information, please visit: http://ca.gov/drought/topstory/top-story-13.html.

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 Rivers and excluding the Tulare and Buena Vista Basins. The Flood Board exercises jurisdiction over State and federal levees, of which Tulare County has none[42].

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 Policies:

- HS-5: To minimize the possibility for 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).

[41] Tulare County General Plan 2030 Update, Page 3.6-8
[42] Tulare County General Plan 2030 Update, Page 3.6-7

- HS-5.1: Multi-Purpose Flood Control Measures – The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the sue of flood and/or stormwater retention facilities for use as groundwater recharge facilities.

- HS-5.5: Development in Dam and Seiche Inundation Zones – The County shall review projects for their exposure to inundation due to dam failure. If a project presents a direct threat to human life, appropriate mitigation measures shall be taken, including restriction of development in the subject area.

- HS-5.9: Floodplain Development Restrictions – The County shall ensure that riparian areas and drainage areas within 100-year floodplains are free from development that may adversely impact floodway capacity or characteristics of natural/riparian areas or natural groundwater recharge areas.

- 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.

- 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.

RESPONSE

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 Proposed Action/Proposed Project would not result in any of the above mentioned water quality deteriorating events. Water delivered to the Proposed Action/Proposed Project would be delivered from the Friant-Kern Canal through various conveyance facilities and ultimately from the Serpa Ditch. The Friant-Kern Canal water quality is periodically tested and is required to meet the Bureau of Reclamation's water quality standards. 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)?

Less Than Significant Impact. The Proposed Action/Proposed Project site is located in the Tulare Lake Basin and is in an area significantly affected by overdraft. The Department of Water Resources (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 Kaweah Subbasin 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 Central Valley Project (CVP) to help offset this ongoing overdraft.

The Proposed Action/Proposed Project includes the construction of a recharge basin consisting of a southern cell, approximately 39 acres, and a northern cell, approximately 38 acres, which would recharge an average about 20 acre feet per day and the relocation of a portion of the Serpa Ditch to facilitate efficient conveyance of surface water to the basin. Five monitoring wells would also be placed within a 2.6 mile radius of the basin site. The five proposed monitoring wells will be placed to the north, east, and southwest of the Cordeniz Basin. Due to the groundwater gradient within the District generally flows from northeast to southwest, placing the monitoring wells along a northeast-to-southwest trajectory centered on the Cordeniz Basin should allow the District to monitor the Proposed Action/Proposed Project's deep percolation and changes in groundwater gradient. No extraction wells would be constructed as a part of the project thus the Proposed Action/Proposed Project would result in a net increase in groundwater supplies. There would be a less than significant 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. Drainage patterns would change as a result of Proposed Action/Proposed Project buildout. Construction of the proposed groundwater recharge basin would consist of excavating seven feet in depth and using the excavated materials for embankments to be installed around the perimeter of the basins extending approximately two to four feet above the existing grade. Each of the two basin cells will be outfitted with inlet facilities from the Serpa Ditch. 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 five monitoring wells are not anticipated to impact any drainage patterns. There would be a less than significant impact.

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. There are no streams or rivers on the Project site. Any impacts regarding the alteration of drainage patterns to increase runoff water that would potentially induce

flooding have been discussed in the impact analysis for Impact VIII-c. The impact would 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. Any impacts regarding the creation or contribution to runoff water that would potentially exceed the capacity of existing stormwater drainage systems have been discussed in the impact analysis for Impact VIII-c. The impact would be less than significant.

IX-f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Any impacts to water quality have been discussed in the impact analysis for Impact VIII-a. 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. According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) Map Number 06107C1250E dated June 16, 2009, Panel No. 1250, the basin site is located within Zone X, outside the 0.2% annual chance floodplain. The Project site is not within a flood hazard area as shown on the Tulare County General Plan Flood Hazard Map. There would be no impact with regards to flood related events.

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

No Impact. The Proposed Action/Proposed Project site is not located within a 100-Year flood hazard area. Any impacts regarding the placement of structures in a 100-year flood hazard area that would impede or redirect flood flows have been discussed in the analysis of Impact VIII-g. There would be no impact.

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?

No Impact. The dam potentially affecting the Proposed Action/Proposed Project site, Terminus Dam, is approximately 24 miles to the northeast of the Proposed Action/Proposed Project site. According to the Tulare County General Plan Flood Hazard Map the inundation flow from dam failure would not affect the Proposed Action/Proposed Project site. There would be no impact.

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

No Impact. Due to the lack of a significant water body near the Proposed Action/Proposed Project site, there would be no potential for seiche or tsunami to occur. There would be no impact.

X. LAND USE AND PLANNING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) 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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

SETTING

Environmental Setting

The Proposed Action/Proposed Project site is located in western Tulare county approximately one and a half miles west of the City of Tulare. Tulare County lies south of the Sacramento-San Joaquin Delta, and is comprised of 4,840 square miles. 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.

The Proposed Action/Proposed Project area is comprised of furrow irrigated agricultural land. Crops generally grown on the property included corn and wheat. The Project site is surrounded by vacant land, canals, agricultural fields, rural residences and an existing recharge basin. The cities of Tulare, Visalia and Hanford are approximately 1.5 miles, 4 miles, and 14 miles, respectively, east, northeast and northwest of the Proposed Action/Proposed Project site.

Existing land uses in Tulare County have been organized into generalized categories that are summarized below on Table 8.

Table 8

Summary of Assessed Land by Generalized Use Categories, Tulare County, 2008[43]

Generalized Land Use Category	Square Miles	Percentage
Residential	110	2%
Commercial	10	Less than 1%
Industrial	10	Less than 1%
Agricultural	2,150	44%
Public (including airports, churches, government owned land, hospitals, and schools)	420	9%
Open Space	1,230	25%
Unclassified (includes streets and highways, rivers, canals, etc.)	780	16%
Incorporated Cities	130	3%
Total County	**4,840**	**100%**

Area plans have been prepared for two of the three major geographic regions of the County: the Rural Valley Lands Plan (RVLP) for the San Joaquin rural valley floor and the Foothill Growth Management Plan for the foothills. The Proposed Action/Proposed Project is designated Valley Agricultural within the Rural Valley Lands Plan area.

The RVLP utilizes five exclusive agriculture (AE) zones, each requiring a different minimum parcel size (ranging from five to eighty acres). These zones are as follows: AE, AE-10, AE-20, AE-40 and AE-80. The majority of land in the RVLP area is zoned AE-40[44].

The County of Tulare General Plan designates the Proposed Action/Proposed Project site as AE-40 and AE-20, Agricultural Zones. The basin site is located in Section 29, Township 19 South, Range 24 East, M. D. B. & M. on Assessor Parcel Number (APN) 148-040-045 with a portion of the Serpa Ditch located on APN 149-100-002.

No forest or timber land is present at the Proposed Action/Proposed Project site or in the Proposed Action/Proposed Project vicinity.

Regulatory Setting

Federal

There are no federal regulations pertaining to land use relevant to the Proposed Action/Proposed Project.

State

There are no state regulations pertaining to land use relevant to the Proposed Action/Proposed Project.

[43] Tulare County General Plan, Page 3.1-6
[44] Tulare County General Plan 2030 Update Recirculated Environmental Impact Report, Page 3.1-7

Local

Tulare County General Plan Policies:

- 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.

RESPONSE

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

No Impact. There are no communities within or adjacent to the Proposed Action/Proposed Project site. Additionally, the Project would not include any physical improvements such as new streets that would potentially divide any established community. The Proposed Action/Proposed Project will not physically 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 Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells. 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 Proposed Action/Proposed Project would include the construction of facilities to be used by the Tulare Irrigation District to expand their groundwater recharge efforts to stabilize groundwater levels by

reducing groundwater overdraft. The Proposed Action/Proposed Project world provide mutual benefit to the District and the City of Tulare 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 Action/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 Action/Proposed Project site. The Proposed Action/Proposed Project will not conflict with any adopted habitat conservation plans or natural community conservation plans. Therefore, there would be no impact.

XI. MINERAL RESOURCES **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

SETTING

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 Action/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 of the mountains[45].

Economically, the most important minerals that are extracted n 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, buildings, and 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 Kawaeh River, Lewis Creek and the Tule River. The highest quality deposits are located at the Kaweah and Tule Rivers. Other sources of construction material are also mined in the hard rock deposits of the foothills[46].

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 web map designed to provide information such as mine name, operation status, commodities sold, and mine locations. According to the MOL geographic information system (GIS), the closest mine to the Proposed Action/Proposed Project Site is an inactive mine located approximately seven miles east of the Project Site (Mine ID: 91-54-0032). According to the OMR GIS, the mine operator, K & G Ranches provided specialty sand. The mine is now closed with no intent to resume[47].

[45] Tulare County General Plan 2030 Update Recirculated Environmental Impact Report, Page 3.7-4
[46] Ibid, Page 3.7-9
[47] State of California, Department of Conservation, http://maps.conservation.ca.gov/mol/mol-app.html

California Department of Conservation's Division of Oil, Gas and Geothermal Resources maintains a database of oil wells in the Project area (DOGGR). According to the DOGGR Well Finder there are three inactive oil wells within approximately one mile of the Project site[48].

Regulatory Setting

Federal

There are no federal or local regulations pertaining to mineral resources relevant to the Proposed Action/Proposed Project.

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., insures 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 is not covered by SMARA.

[48] State of California Department of Conservation, Division of Oil, Gas & Geothermal Resources Well Finder http://maps.conservation.ca.gov/doggr/index.html#close

California Laws for Conservation of Petroleum and Gas: Division 3 Section 3000 et seq., of the Public Resources Code includes the California Laws for Conservation of Petroleum and Gas. These regulations include laws relating to the conservation, utilization, and supervision of oil and gas resources[49].

Local

Tulare County General Plan Policies:

- 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.

RESPONSE

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. According to the California Department of Conservation's Mines Online website the closest mine to the Proposed Action/ Proposed Project site is an inactive mine located approximately seven miles to the east (Mine ID: 91-54-0032). The mine previously provide specialty sand and is now closed with no intent to resume. Additionally, California Department of Conservation's DOGGR Well Finder indicates the closest there are three oils wells within approximately one mile of the Project site. All three wells are inactive. The Proposed Action/Proposed Project would not result in the loss of an available known mineral resource. 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 Proposed Action/Proposed Project site is not delineated on a local land use plan as a locally important mineral resource recovery site. Therefore, the existence of the Proposed Action/Proposed Project would not result in the loss of availability of any mineral resources. There would be no impact.

[49] Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report, Page 3.7-3

XII. 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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

SETTING

Environmental Setting

The proposed basin site is comprised of furrow irrigated agricultural land. Crops generally grown on the property included corn and wheat. The five monitoring wells are located along various canals within a 2.6 mile radius of the proposed basin site. All of these sites are surrounded by vacant land, canals, agricultural fields, rural residences and an existing recharge basin.

Noise levels generated by farm related equipment ranged from 69 to 100 dB at a distance of 50 feet from the equipment according to noise measurements conducted by Tulare County[50]. Due to the seasonal nature of the agricultural industry, there are often extended periods of time when no noise is generated at the Proposed Action/Proposed Project site, followed by short-term periods of intensive mechanical equipment usage and corresponding noise generation.

According to Table 3.5-1 Land Use Compatibility for Community Noise Environment in the Tulare County General Plan Recirculated Draft EIR normally acceptable noise exposure for agricultural zoned property is between 50 and 75 Ldn.

[50] Tulare County General Plan Background Report, Pages 8-71 through 8-73

Regulatory Setting

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 0.5 PPV without experiencing structural damage[51]. The FTA has identified the human annoyance response to vibration levels as 80 RMS22.

Federal Highway Administration (FHWA): The FHWA has developed noise abatement criteria that are used for federally funded roadway projects or projects that require federal review. These criteria are discussed in detail in Title 23 Part 772 of the Federal Code of Regulations.

State

California Noise Control Act: The California Noise Control Act was enacted in 1973 (Health and Safety Code § 46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff will work with the OPR to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). 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.

Local

In addition to General Plan requirements, some jurisdictions have established noise ordinances in their municipal codes. Noise ordinances establish limits for which penalties or enforcement action may be taken. Therefore, a noise ordinance generally must not be exceeded; whereas, General Plan limits are to be taken into consideration during the development of a project and may or may not be strictly applied, depending on the particular circumstances of the Proposed Action/Proposed Project. In preparing the noise element, a city or county must identify local noise sources and analyze and quantify, to the extent practicable, current and projected noise levels for various sources, including highways and freeways; passenger and freight railroad operations; ground rapid transit systems; commercial, general, and military aviation and airport operations; and other ground stationary noise sources.

The Tulare County 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 expected[52]:

[51] U.S. Department of Transportation, Federal Transit Administration. The Noise and Vibration Impact Assessment. May 2006.
[52] Tulare County General Plan Background Report, Pages 8-71 through 8-73

Table 9
Noise Measurements for Various Agricultural Equipment

Equipment	50 feet	Other Distances
Wind Machine (Ground Power)	91 to 92 dBA	61 to 71 dBA at 350 feet
Wind Machine (Electric)	73 to 87 dBA	56 to 67 dBA at 350 feet
Diesel Engines on Wells	75 to 85 dBA	
Aerial Application Aircraft	97 to 100 dBA	85 to 88 dBA at 600 feet
Cotton Picker		58 dBA at 500 feet
Larger diesel-powered wheel tractor pulling a 20-foot disk		72 to 75 dBA at 150 feet
Smaller diesel-powered wheel tractor pulling a furrowing appliance	69 to 79 dBA	
Randall weed sprayer with one cylinder diesel engine	74 to 75 dBA	
FMC Bean 267 engine-driven speed sprayer	92 to 97 dBA	
Aerolan 391 speed sprayer		74 to 76 dBA at 100 to 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 Ldn would not generally be expected to result from typical farming operations within Tulare County[53].

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

Table 10
Maximum Acceptable Ambient Noise Exposure for Various Land Uses[54]

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 Day-Night Average Level (Ldn). Both reflect noise exposure

[53] Tulare County General Plan Background Report, Page 8-73
[54] Ibid, Page 8-50

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 11
Land Use Compatibility for Community Noise Environments[55]

Land Use Category	Community Noise Exposure, L_{dn} or CNEL dB			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low density single family, duplex, mobile homes	<60 (<45 Interior)	55 to 70	70 to 75	>75 (>45 Interior)
Residential – Multiple family	<65 (<45 Interior)	60 to 70	70 to 75	>75 (>45 Interior)
Schools, libraries, churches, hospitals, nursing homes	<70	60 to 75	70 to 80	>80
Industrial, manufacturing, utilities, agriculture	<75	70 to 80	75 to 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.
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 Policies:

- 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

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

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.

RESPONSE

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 Proposed Action/Proposed 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 12 below:

Table 12
Typical Construction Noise Levels

Construction Equipment Noise Source	dBA at 50 ft	dBA at 100 ft	dBA at 1.0 mile
Pneumatic tools	85	79	45
Truck (e.g. dump, water)	88	82	48
Concrete mixer (truck)	85	79	45
Scraper	88	82	48
Bulldozer	87	81	47
Backhoe	85	79	45
Generator	76	70	36
Portable air compressor	81	75	41

Source: Borba Farms Dairy EIR, BASELINE Consulting, 1999, Cunniff 1977

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 approximately 100 feet south of the Proposed Action/Proposed Project site; one residence located approximately 300 feet east of the southeast corner of the Project site and three residences located adjacent to the site within 100 feet. 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 ground-borne vibration or ground-borne 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 (VdB) 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 buildings[56].

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 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 levels[57].

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 day[58].

The Proposed Action/Proposed Project would involve temporary vibration sources associated with general construction activity. Typical vibration levels generated by generic construction equipment that could be used to construct the Proposed Action/Proposed Project are described in Table 13. The levels are calculated at a distance of 25 feet from the vibration sources.

[56] Federal Transit Administration, Transit Noise and Vibration Impact Assessment 2006
[57] Ibid.
[58] Ibid.

Table 13
Typical Construction Vibration Levels[59]

Equipment	VdB at 25 ft[2]
Small Bulldozer	58
Jackhammer	79
Loaded trucks	86
Large Bulldozer	87

Vibration from construction activities would be temporary and would not exceed the Federal Transit Administration (FTA) threshold for the nearest residence, approximately 70 feet away from the Proposed Action/Proposed 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, Proposed Action/Proposed Project operation would not generate a substantial increase in ambient noise levels. Potential noise sources resulting from implementation of the project include noise associated with operation of pumps and periodic vehicular trips for site operation and maintenance. Potential noise sources resulting from project implementation include noise associated with vehicular trips for maintenance/repair activities. Maintenance would involve activities such as clearing debris and dredging recharge basins and vegetation management activities. Maintenance activities would occur infrequently and are not expected to substantially increase ambient noise levels in the area above existing levels without the Proposed Action/Proposed 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. Any impacts regarding the temporary increase in ambient noise levels have been discussed in the analysis of Impact XI-a. The impact would 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 Proposed Action/Proposed Project is not located within an airport land use plan. The closest airports to the Project site are the Visalia Airport located approximately 5 miles north and the Mefford Field Airport located approximately 6.5 miles southeast of the basin site. The site is not located within a noise contour of these airports. Additionally, the Project would not permanently staff onsite employees. Therefore, the Proposed Action/Proposed Project would not expose residents or employees to noises associated with public or private airport use. There would be no impact.

[59] 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.

XIII. 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SETTING

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. The projected average annual growth rate for Tulare County between 2007 and 2030 is expected to be 2.4 percent. Build-out of the 2030 General Plan will accommodate a total County population of approximately 742,970[60].

Regulatory Setting

Federal

There are no federal regulations, plans, programs or guidelines associated with population or housing that are applicable to the Proposed Action/Proposed Project.

State

California Housing Element Law: State law requires each city and county to adopt a general plan for future growth. This plan must include a Housing Element that identifies housing needs for all economic segments and provides opportunities for housing development to meet that need. At the State level, the California Department of Housing and Community Development estimates the relative share of California's projected population growth that could occur in each county in the State based on DOF population projections and historic growth trends. Where there is a regional council of governments, as in Tulare County, the California Department of Housing and Community Development provides the regional housing need to the council. The council then assigns a share of the regional housing need to each of its cities and counties. The process of assigning shares provides cities and counties the opportunity to comment on the proposed allocations.

[60] Tulare County General Plan Background Report, Page 2-30

The California Department of Housing and Community Development oversees the process to ensure that the councils of governments distribute their share of the State's projected housing need.

Each city and county must update its general plan housing element on a regular basis (typically, every five to eight years). Among other things, including incorporating policies, the housing element must identify potential sites that could accommodate the city's share of the regional housing need. Before adopting an update to its housing element, the city or county must submit a draft to the California Department of Housing and Community Development for review. The department advises the local jurisdiction as to whether its housing element complies with the provisions of California housing element law.

The councils of governments are required to assign regional housing shares to the cities and counties within their regions on a similar five-year schedule. At the beginning of each cycle, the California Department of Housing and Community Development provides population projections to the councils of governments, which then allocate shares to their cities and counties. The shares of the regional need are allocated before the end of the cycle so that the cities and counties can amend their housing elements by the deadline.

Local

County of Tulare General Plan: The General Plan is a policy document with planned land use maps and related information designed to provide long-range guidance to City officials making decisions affecting development and the resources of the County's jurisdiction. The General Plan helps to ensure that day-to-day decisions conform to long-range policies designed to protect and further the public interest related to the County's growth and development. The General Plan was most recently updated on August 2012.

Tulare County Association of Governments (TCAG): A council of governments (COG) acts as an area-wide planning agency. COGs assist local governments with multi-jurisdictional issues such as air quality, transportation, water quality, energy, and housing. TCAG serves this purpose for Tulare County. The primary function of the TCAG is to address regional transportation issues, review documents and proposals that affects environmental issues and it also functions as the State designated Census Data Center Affiliate. TCAG and its member agencies include the County of Tulare and the 8 incorporated cities within Tulare County.

RESPONSE

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 Action/Proposed Project involves the construction of a groundwater recharge basin and accessory project components in Tulare County within the Tulare Irrigation District with the goal of expanding their groundwater recharge efforts to stabilize groundwater levels by reducing groundwater overdraft. The Proposed Action/Proposed Project will also include five monitoring wells placed within a 2.6 mile radius of the basin site. 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 overdraft conditions in the County. Recharge related to the Proposed Action/Proposed Project will offset overdraft within the Kaweah Subbasin and will not induce population growth. The District's intent of the recharge basin is to stabilize groundwater levels by reducing groundwater overdraft, and not contribute to population growth. There would be no impact.

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

No Impact. The Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells. No housing or people would be displaced by the Proposed Action/Proposed Project. There would 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 XII-b. There would be no impact.

XIV. 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?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

SETTING

Environmental Setting

The nearest fire station is City of Tulare Fire Station 3, which is approximately 2.1 miles to the east of the Proposed Action/Proposed Project site. The nearest Tulare County Fire Department Station is Station 25 located approximately 7.4 miles southeast of the site. The City of Tulare Police Department is located 3.3 miles southeast of the Proposed Action/Proposed Project site and Tulare County Sheriff's Office is located 9.6 miles northeast of the site.

Heritage Elementary School and Oak Valley Elementary School are located less than 2.0 miles southeast and 2.5 miles southwest of the Proposed Action/Proposed Project site respectively. Prosperity Sports Park is approximately 2.4 miles southeast of the site, while Mooney Grove Park is approximately 6.3 miles northeast of the Proposed Action/Proposed Project site.

The Woodville Landfill is approximately 14.4 miles southeast of the Proposed Action/Proposed Project site and the Visalia Landfill is located approximately 13.1 miles north of the site. The City of Visalia Wastewater Treatment Plant is located approximately 5 miles north of the Project site.

Regulatory Setting

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.

State

California Fire Code and Building Code: The 2007 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.

Local

Tulare County General Plan Policies:

- PFS-7: To provide adequate fire and law enforcement facilities and services to ensure the safety of County residents and the protection of County property.

- PFS-8: To ensure adequate schools and community facilities are provided and are conveniently located for County residents.

RESPONSE

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:

No Impact. The Proposed Action/ Proposed Project would not rely on the addition or alteration of any public services. The subject site is located in western 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.

Fire Protection – The Proposed Action/Proposed Project area is located within the Tulare County Fire Department (TCFD) the nearest county station is Station 25 located approximately 7.4 miles southeast of the Project site. Additionally, there are two City of Tulare Fire Department stations (Stations 3 and 2) located approximately 2.1 miles east and 4.0 miles southeast of the Project site respectively. No residential or commercial construction is identified with this Proposed Action/Proposed 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 9.6 miles northeast of the Project site and a City of Tulare Police Department office approximately 3.3 miles southeast of the site. No residential or commercial construction or change in existing land use is proposed in this Proposed Action/Proposed Project. The Proposed Action/Proposed Project would not impact existing law enforcement services. There would be no impact.

Schools – The Proposed Action/Proposed Project site is within the Oak Valley Union School District and the Tulare Joint Union High School District; however, the Proposed Action/Proposed Project would not include construction of any residential structures, nor change the existing land use. The Proposed Action/Proposed Project would not result in an increase of population that would require additional school facilities. There would be no impact.

Parks - The Proposed Action/Proposed Project site is located within the Tulare County Parks and Recreation Branch. State law requires each new residential development to dedicate land for park facilities or pay an in-lieu fee to cover the cost of acquiring park land elsewhere; however, this Proposed Action/Proposed Project involves the recharge of groundwater utilizing the existing and new infrastructure. The Proposed Action/Proposed Project will not create a need for additional park or recreational services. There would be no impact.

Other public facilities – The Proposed Action/Proposed Project would serve to recharge the underlying groundwater basin through the recharge basin, benefiting both the City of Tulare and local farmers within the Tulare 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 such, there would be no impact as a result of Project implementation.

XV. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

SETTING

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 County[61].

There are several City of Tulare parks within a two mile radius of the Proposed Action/Proposed Project area with the closest one being Prosperity Sports Park located approximately 2.4 miles southeast of the basin. The closest County park is Mooney Grove Park located approximately 6.3 miles northeast of the= site.

Regulatory Setting

Federal

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

State

There are no state regulations, plans, programs and guidelines associated with recreation that are applicable to the Proposed Action/Proposed Project.

Local

County of Tulare General Plan Policies:

- 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.

[61] 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.

RESPONSE

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 Proposed Action/Proposed Project and no change in existing land use is associated with this Proposed Action/Proposed Project. Additionally, no employees will be stationed at the Project site. Therefore, the Proposed Action/Proposed Project will not increase the demand for 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?

b) No Impact. The Proposed Action/Proposed Project does not include the construction or expansion of recreational facilities. There would be no impact.

XVI. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
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?	☐	☐	☒	☐

SETTING

Environmental Setting

The Proposed Action/Proposed Project site is located in western Tulare County west of the City of Tulare. Tulare County has two major regional highways, SR 99 and 198. The Proposed Action/Proposed Project site is approximately two miles west of SR 99, approximately six miles east of SR43 and approximately six miles south of SR 198. The recharge basin site is located on the northwest corner of Avenue 248 and West Cartmill Avenue and Road 84 and Enterprise Street.

There are nine public use airports in Tulare County. The nearest airports to the Project site are the Visalia Airport which is located approximately 5.1 miles north of the Project area and Mefford Field Airport located approximately 6.5 miles southeast of the area.

The Union Pacific (UP), Burlington Northern and Santa Fe (BN&SF) and San Joaquin Valley Railroad (SJVRR) all provide freight service to Tulare County while AMTRAK provides passenger service. The closest railroad to the Project site is the Union Pacific Railroad which runs along the SR99 corridor approximately one and a half miles east of the area.

Regulatory Setting

Federal

Several federal regulations govern transportation issues. They include:

- **Title 49, CFR, Sections 171-177 (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.

State

State of California Transportation Department Transportation Concept Reports: Each District of the State of California Transportation Department (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 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 District policy to complete a 6-lane system and also with the Interregional Transportation Strategic Improvement Plan for 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 C[62].

[62] Caltrans Traffic Concept Report, http://www.dot.ca.gov/dist6/planning/tcrs/index.htm. Site accessed January 2015.

198 is designated as Segment 14 in the Proposed Action/Proposed Project vicinity. Route 198 is classified by Caltrans as urban in this segment. The route is also predominately indicated as a Minor Arterial and Major Collector. Therefore, the Route Concept LOS of D has been assigned to the entire route. Segment 14 is a 4-lane freeway and there are no changes expected to this segment[63].

SR 43 is designated as Segment 17 in the vicinity of the Proposed Action/Proposed Project site and has a LOS of C . The route concept for Segment 17 of Route 43 is described by Caltrans as a two-lane expressway, with improvements potentially being a four-lane expressway by 2030[64].

Local

Tulare County General Plan Policies:

- 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

[63] Caltrans Traffic Concept Report, http://www.dot.ca.gov/dist6/planning/tcrs/index.htm. Site accessed January 2015.
[64] California Department of Transportation. State Route 65 Transportation Concept Report http://www.dot.ca.gov/dist6/planning/tcrs/sr65tcr/sr65_full_document.pdf Site accessed October 2012.

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".
- 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.

RESPONSE

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 Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells. The Proposed Action/Proposed Project would not require any changes to existing highways, intersections, pedestrians 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 Action/Proposed Project does not include any permanent onsite employees. The Proposed Action/Proposed Project location is adjacent to existing District facilities (Enterprise Basin and Serpa Ditch) which receives regular maintenance. Therefore, no additional trips would be needed for maintenance activities at the proposed basin site. Typical construction traffic would be temporary and would potentially generate approximately 18 construction worker trips over the course of approximately 22 months, and 5 delivery trips per day during the construction phase.

The 2010 Tulare County Regional Bicycle Transportation Plan indicates a Class I Bike Facility is proposed for Avenue 248/Cartmill from the City of Tulare to Road 84/Enterprise Street and on Road 84/Enterprise Street between Avenue 248/Cartmill and Clinton (south of the Proposed

Action/Proposed Project site). The Proposed Action/Proposed Project would not interfere with the planned future bicycle route nor the performance or safety of such facility.

Implementation of the Proposed Action/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 Proposed Action/Proposed 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 Proposed Action/ Proposed 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 airports to the site are the Visalia Airport which is located approximately 5.1 miles north of the Project site and Mefford Field Airport located approximately 6.5 miles southeast of the site. The Project would not directly impact any airport facilities; therefore, the Proposed Action/Proposed 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 Proposed Action/Proposed and there is no change in the existing land use which would 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 Proposed Action/Proposed 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?

No Impact. As discussed in Impact XVI-a, a Class I Bike Facility is proposed for Avenue 248/Cartmill from the City of Tulare to Road 84/Enterprise Street and on Road 84/Enterprise Street between Avenue 248/Cartmill and Clinton (south of the Proposed Action/Proposed Project site). Operation

and maintenance of the Proposed Action/Proposed Project would not generate any additional traffic. Typical construction traffic would be temporary and would potentially generate approximately 20 trips per day over the course of approximately 22 months. Therefore, any potential impact to the performance or safety of public transit, bicycle, or pedestrian facilities would be less than significant.

XVII. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

SETTING

Environmental Setting

There are a number 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 Areas (CSAs) 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 Tulare Irrigation District[65].

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 areas. Some agencies provide sewer collection service only and contract with surrounding agencies for

[65] Tulare County General Plan Background Report, Pages 7-2 through 7-9

wastewater treatment. Some unincorporated areas lack sanitary sewer infrastructure and are served by individual or community septic systems[66]. The Project is located in a rural area without sanitary sewer infrastructure.

The closest landfill to the Proposed Action/ Proposed Project site is the Visalia landfill located approximately 13.1 miles north 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 Action/Proposed Project site is located within a rural agricultural area where there is no underground storm drain infrastructure leaving runoff to surface drain.

Regulatory Setting

Federal

National Pollutant Discharge Elimination System: As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NDPES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. In California, it is the responsibility of Regional Water Quality Control Boards (RWQCB) to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits[67.] Tulare County is within the Central Valley RWQCB's jurisdiction.

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 Stormwater Pollution Prevention Plan (SWPPP) and the inclusion of BMPs to control erosion and offsite transport of soils.

State

State Water Resources Control Board (SWRCB): 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 27[68]. Several programs are

[66] Tulare County General Plan Background Report, Pages 7-38 and 7-39
[67] California State Water Resources Control Board. 2011. National Pollutant Discharge Elimination System (NDPES). Site Available: http://www.waterboards.ca.gov/water_issues/programs/npdes/.
[68] 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

administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs.

Department of Resources Recycling and Recovery (CalRecycle): 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.

Regional Water Quality Control Boards: The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (State Board) and nine Regional Water Quality Control Boards. The State Board 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.

California Department of Water Resources: The 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.

Local

Tulare County General Plan Policies:

- 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-2To 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.

RESPONSE

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

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

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 Proposed Action/Proposed Project involves improving groundwater recharge and recapturing efforts which will increase the District's ability to reliably deliver irrigation water to agricultural users within its boundaries during "dry" years. The Proposed Action/ Proposed Project will expand District groundwater recharge efforts to stabilize groundwater levels by reducing groundwater overdraft and provide drought protection for agricultural crops. As discussed in Impact XVII-a, operation of the Proposed Action/Proposed Project would not generate any wastewater. Implementation of the Proposed Action/ Proposed 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. The Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote

monitoring wells. There is no existing storm drainage infrastructure in the vicinity of the Proposed Action/ Proposed Project. The amount of runoff at the Proposed Action/Proposed Project site would not increase as a result of this project. The Proposed Action/ Proposed Project would not result in the need for new or expansion of existing 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 Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells. The Distinct 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 (30,000 acre-feet) and Class 2 (141,000 acre-feet) water from the Friant-Kern Canal and average of 83,000 acre-feet from Kaweah River. The Proposed Action/ Proposed Project would not result in the need for new or expanded 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 Proposed Action/ Proposed Project site is not served by a wastewater treatment provider and as discussed in Impact XVII-a, the Proposed Action/Proposed 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 Proposed Action/Proposed 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 Proposed Action/ Proposed 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 Action/Proposed Project will comply with any federal, state, and local regulations. There would be no impact.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE **Would the project:**	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

RESPONSES

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 Incorporated. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Proposed Action/Proposed Project will have a less than significant effect on the local environment. The Proposed Action/Proposed Project will allow for the construction and operation of an 80-acre groundwater recharge basin and accessory project components including the installation of SCADA equipment, the relocation of the Serpa West Ditch and the construction of five remote monitoring wells.

The potential for impacts to biological and cultural resources from the construction and operation of the Proposed Action/Proposed Project will be less than significant with the incorporation of the mitigation measures stated in the previous impact sections. Accordingly, the Proposed Action/Proposed 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, 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 following 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. As discussed above, the Proposed Action/Proposed Project will result in less than significant impacts to biological and cultural resources with mitigation incorporation. Once operating, the Proposed Action/Proposed Project will generate approximately 30 traffic trips per year. The Proposed Action/Proposed Project 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 following mitigation.

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. The Proposed Action/Proposed Project will not result in substantial adverse effects on human beings, either directly or indirectly. Mitigation measures are provided to reduce the Proposed Action/Proposed Project's potential effects on cultural resources to below the level of significance. No additional mitigation measures will be required. Adverse effects on human beings resulting from Proposed Action/Proposed Project implementation will be less than significant.