

COUNTY OF TULARE RESOURCE MANAGEMENT AGENCY



5961 South Mooney Boulevard
Visalia, CA 93277

Initial Study and Mitigated Negative Declaration

Simon/Dutton/Qualls Project
(GPA 16-005, PZC 16-007, and PPM 16-030)

December 2017

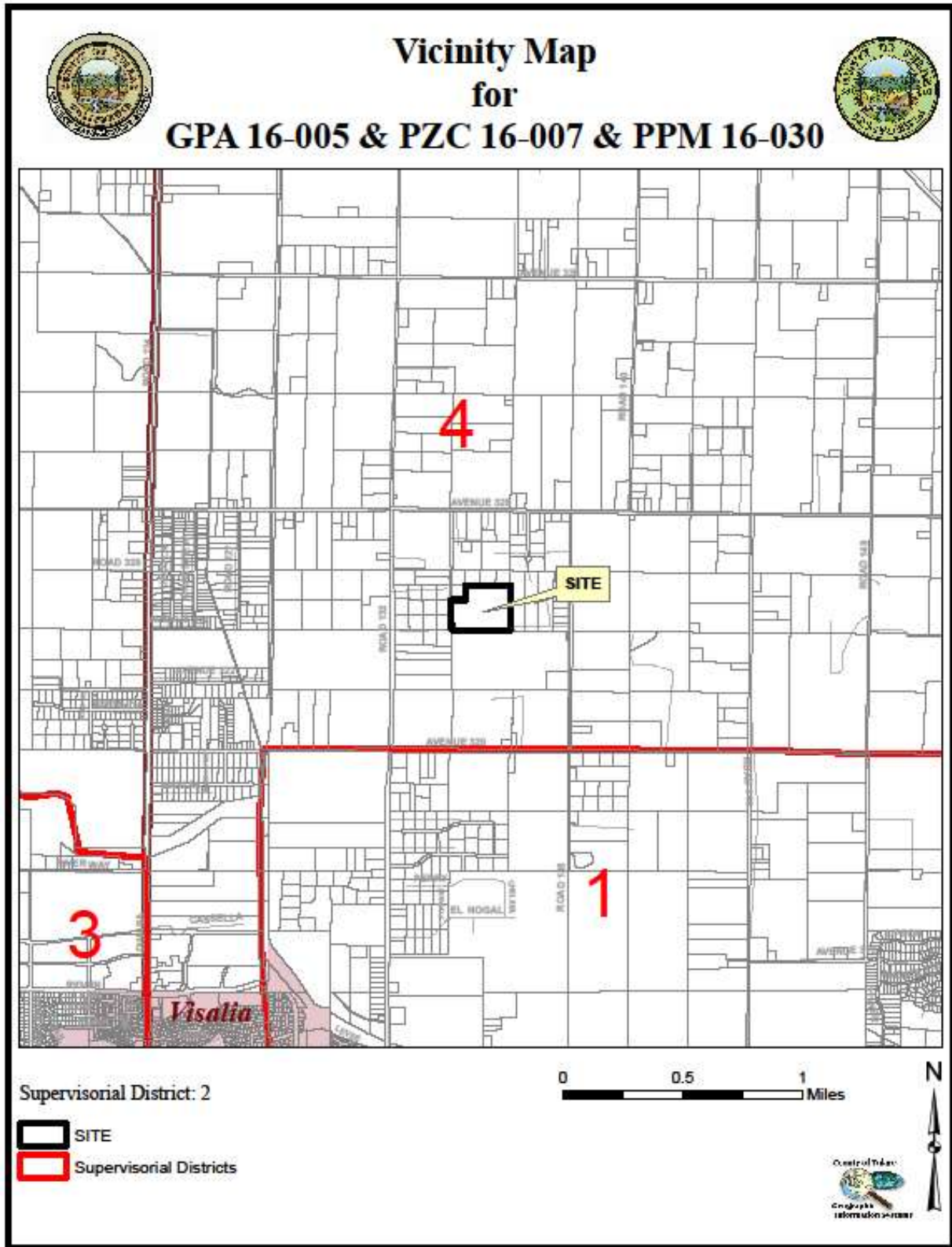
Prepared by
County of Tulare Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division

INITIAL STUDY CHECKLIST

1. **Project Title:** GPA 16-005, PZC 16-007, and PPM 16-030 Simon/Dutton/Qualls
2. **Lead Agency:** County of Tulare
Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277
3. **Contact Persons:** Dana Mettlen, Planner III (Project Planner) – 559-624-7106
Hector Guerra, Chief, Environmental Planning Division – 559-624-7121
4. **Project Location:** South of Avenue 328 and west of Road 132, northeast of the City of Visalia in Tulare County, California. (APN 079-190-017) in Section 9, Township 18S, Range 25E, MDB&M.
5. **Applicant:** Paula Simon, Sonjia Dutton, & Berwyn Qualls
844 N. High Road
Palm Springs, CA 92262
6. **Latitude, Longitude:** 36° 22' 50.18" N / 119 ° 16' 15.69" W
7. **General Plan Designation:** Rural Valley Lands Plan Checklist to Control Development in a County Approved City Urban Area Boundary (CACUAB)
8. **Zoning:** AE-40 (Exclusive Agriculture – 40 acre minimum)
9. **Description of Project (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)** The project is General Plan Amendment No. GPA 16-005 to change the land use designation from Agriculture to Rural Residential on a 7.29-acre portion of a 27.83 acre parcel; Zone Change No. PZC 16-007 on a 7.29-acre portion of a 27.83 acre parcel from the AE-40 (Exclusive Agriculture – 40 acre minimum) to R-A-87 (Rural Residential – 87,000 sq. ft. minimum); and Tentative Parcel Map No. PPM 16-030 to divide a 27.83-acre parcel into three parcels and a remainder: Parcel 1 = 2.23 acres, Parcel 2 = 2.23 acres, Parcel 3 = 2.23 acres and Remainder Parcel = 20.97 acres, contingent upon the Board of Supervisors' approval of GPA 16-005 & PZC 16-007, with the requirement to file a final map.
10. **Surrounding land uses and setting (Brief description):** The surrounding properties to the north, west and east are developed with rural residential housing. This area has been substantially developed with rural residential development. The properties to the northwest and south are in agricultural production.
11. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):** San Joaquin Valley Unified Air Pollution Control District.
12. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?** A Sacred Lands File (SLF) search by the Native American Heritage Commission (NAHC) was requested on May 11, 2017. The NAHC responded on May 17, 2017, indicating that the SLF returned with negative results. Pursuant to SB 18 and AB 52, Tulare County Resource Management Agency (RMA) staff contacted eleven (11) Native American tribal contacts, representing five (5) tribes, by letter regarding the proposed Project, to provide an opportunity for consultation. None of the tribes responded requesting

consultation within the mandatory response time-frames. Conditions of Approval been incorporated into the project to reduce potential impacts in the event of accidental discovery of Native American tribal cultural resources during construction-related activities.

Figure 1



C:\Users\JWang1\Desktop\Planner Maps\Data Mettlen\GPA 16-005 and PZC 16-007 and PPM 16-030\GPA 16-005 & PZC 16-007 and PPM 16-030 Vicinity Map.mxd

Figure 2

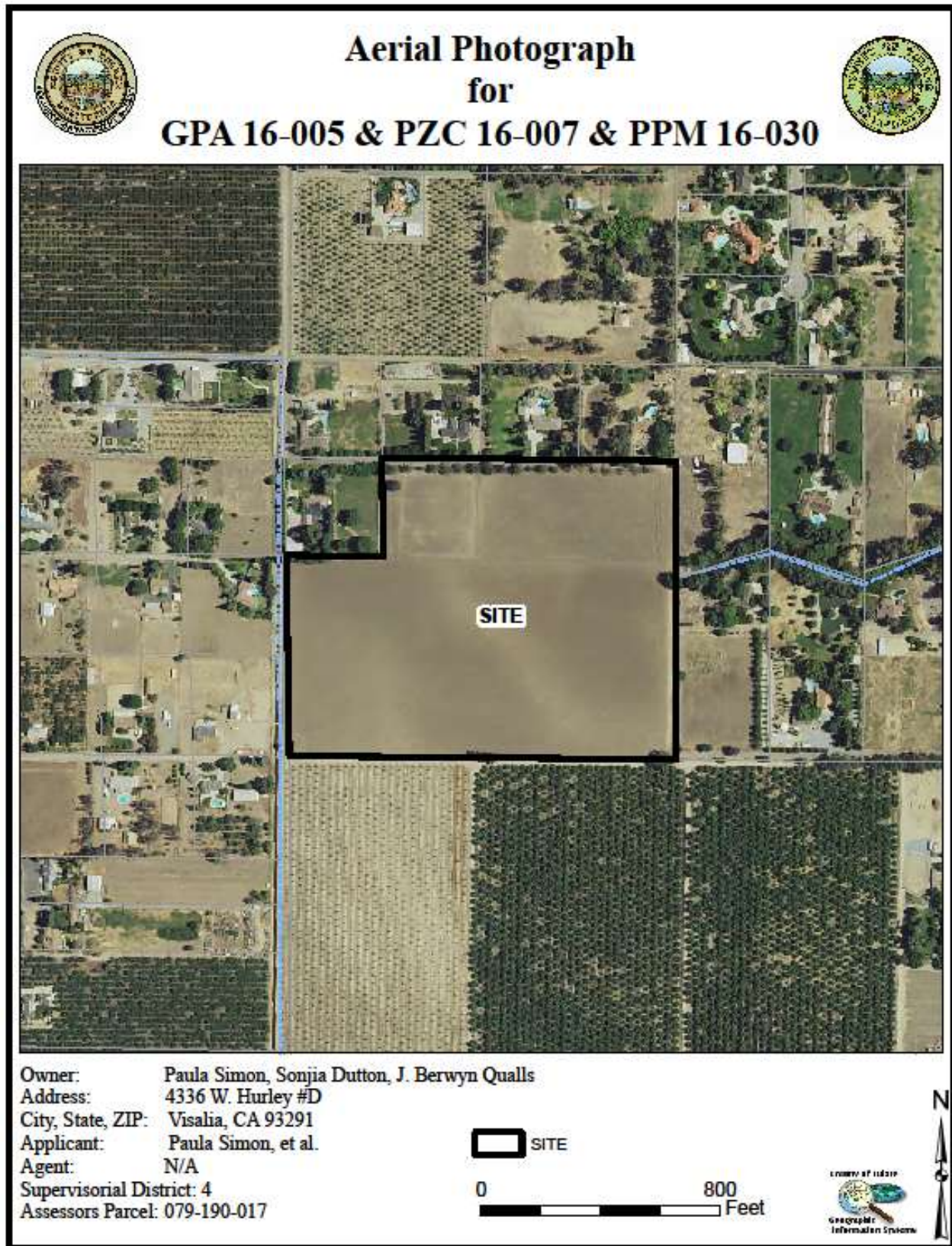
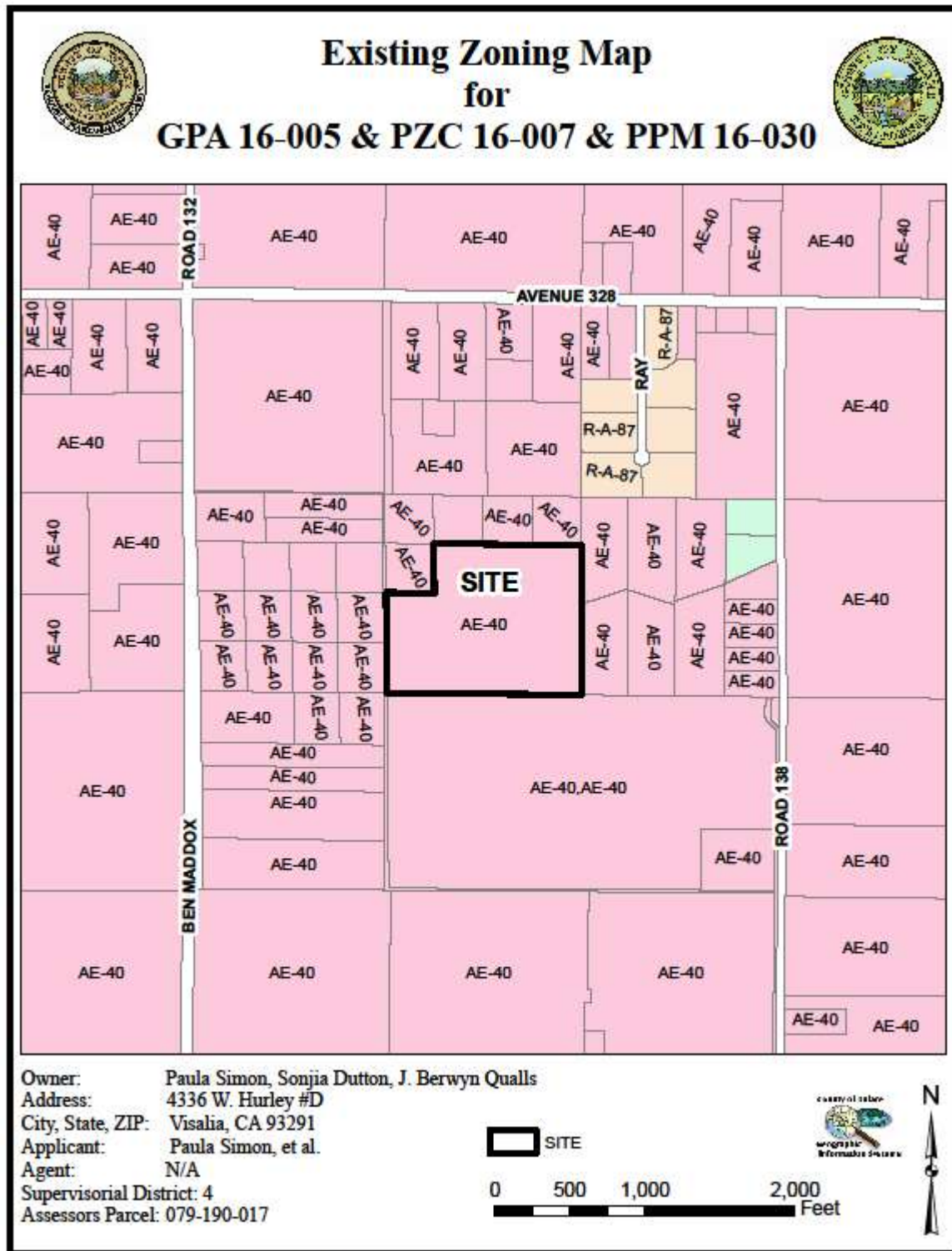
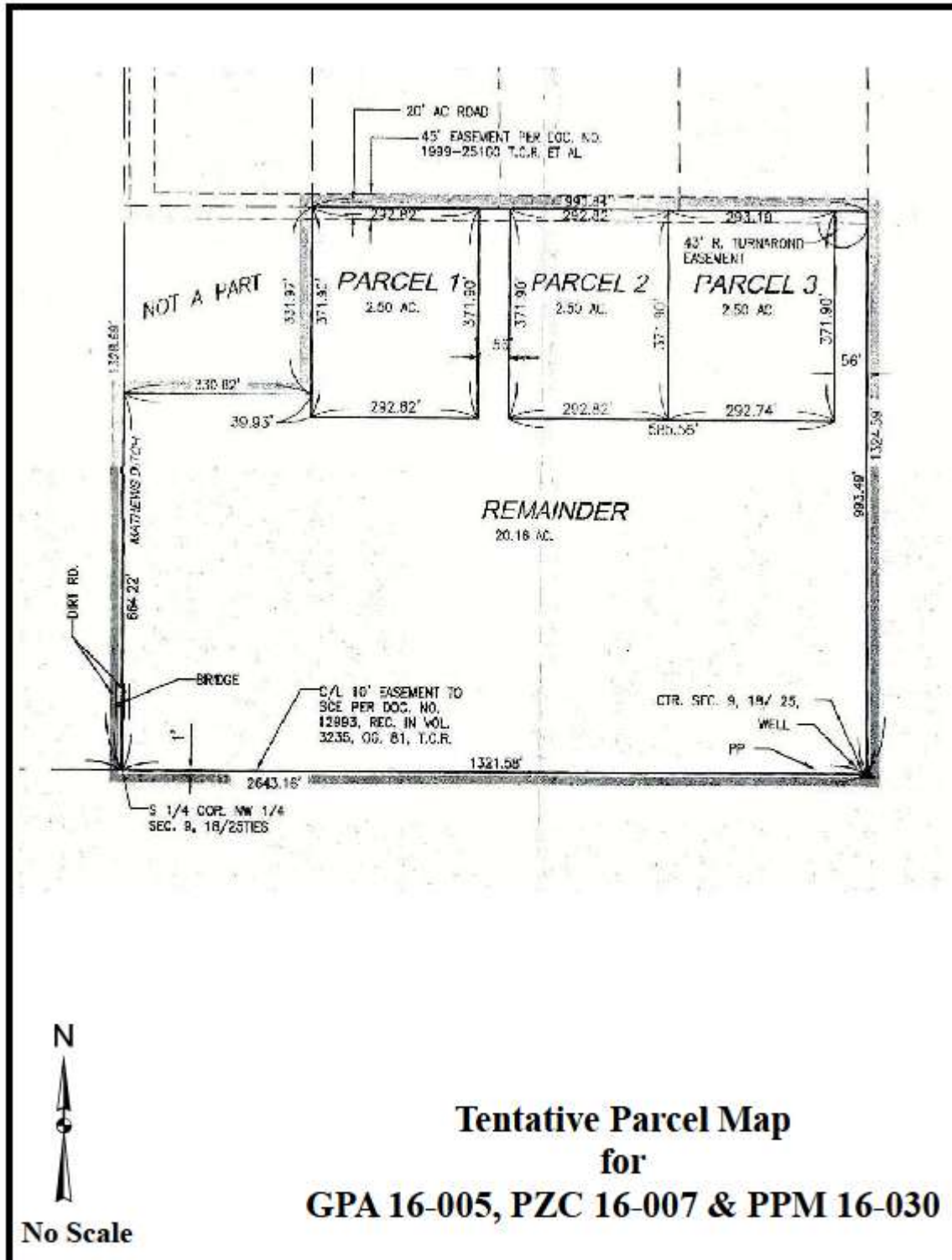


Figure 3



C:\Users\JYang1\Desktop\Planner Maps\Dana Mettlen\GPA 16-005 and PZC 16-007 and PPM 16-030\GPA 16-005 & PZC 16-007 and PPM 16-030 Existing Zoning Map.mxd

Figure 4



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

- A. The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" "unless mitigated" as indicated by the checklist on the following pages.

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

B. DETERMINATION:

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 or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- ☐ I find 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: _____



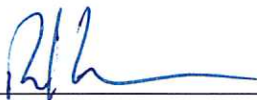
Hector Guerra
Printed Name

Date: _____



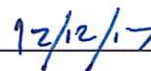
Chief Environmental Planner
Title

Signature: _____



Reed Schenke P.E.
Printed Name

Date: _____



Director/Environmental Assessment Officer
Title

EVALUATION OF ENVIRONMENTAL IMPACTS:

The following checklist contains an extensive listing of the kind of environmental effects which result from development projects. Evaluation of the effects must take into account the whole action involved, including off-site as well as on site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts, in addition to reasonably foreseeable phases or corollary actions. The system used to rate the magnitude of potential effects is described as follows:

A "**Potentially Significant Impact**" is appropriate if an effect is significant or potentially significant, or if the lead agency lacks information to make a finding of insignificance. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

A "**Less Than Significant With Mitigation Incorporated**" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."

A "**Less Than Significant Impact**" means that the environmental effect is present, but is minor in nature and/or not adverse, or is reduced to a level less than significant due to the application and enforcement of mandatory locally adopted standards.

"**No Impact**" indicates that the effect does not apply to the proposed project.

Using this rating system, evaluate the likelihood that the proposed project will have an effect in each of the environmental areas of concern listed below. At the end of each category, discuss the project-specific factors, locally adopted standards, and/or general plan elements that support your evaluation. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one proposed (e.g., Zone C of the FEMA maps). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants based on a project specific screening analysis). The explanation of each issue should identify:

- a) the significance criteria or threshold, if any, used to evaluate each question; and
- b) the mitigation measure identified, if any, to reduce the impact to less than significance

Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

"Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The mitigation measures must be described along with a brief explanation on how they reduce the effect to a less than significant level (mitigation measures from Section E., "Earlier Analyses," may be cross-referenced).

Earlier analyses may be used where, pursuant to the tiering program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration Section 15063(c)(3)(D). In this case, a brief discussion should identify the following.

- a) Earlier Analysis Used. Identify and state where they are available for review.
- b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
- c) Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated”, describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site- specific conditions for the project.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
1.	AESTHETICS					
	Would the project:					
	a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
	b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
	c)	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?	☐	☐	☒	☐
	Analysis: The following Tulare County General Plan 2030 Update policy for this resource applies to this Project: SL-3.2 Urban Expansion–Edges - The County shall design and plan the edges and interface of communities with working and natural landscapes to protect their scenic qualities by: 1. Maintaining urban separators between cities and communities, 2. Encouraging cities to master plan mixed-density neighborhoods at their edges, locating compatible lower density uses adjacent to working and natural landscapes, and 3. Protecting important natural, cultural, and scenic resources located within areas that may be urbanized in the future. a) Less Than Significant Impact – The proposed Project will not adversely affect any scenic vista. Other than the future residential structures typical of rural residential development, the Project will not include any other structures which may substantially impact a scenic vista. Zoning height limitations would restrict structures (e.g., residences) to no greater than a two-story equivalent (2-1/2 story and not to exceed 35 feet maximum). No parts of the Project would obstruct local scenic views, be visually intrusive or incompatible with the surrounding area, or be visible to large numbers of sensitive receptors. The Project site is relatively level, is currently vacant and was last farmed in 2011. As noted earlier, the surrounding properties to the north, west and east are developed with rural residences. This area has been substantially developed with rural residential development beginning in 1972. The properties to the northwest and south are in agricultural production. As shown in Figure 2 Aerial Photograph, all of the adjacent sites are heavily screened with vegetation (i.e., decorative trees), which screens views into and outside of the adjacent properties. As such, the Project would not have a less than substantial impact on a scenic vista resulting in a Less Than Significant Impact to this resource. b) No Impact – The Project is not located adjacent to any designated Candidate State Scenic Highway (see Tulare County General Plan 2030 Update, Part I – Goals and Policies Report, Chapter 7 – Scenic Landscapes, Figure 7-1) or any County-designated Scenic Corridor (see Tulare County General Plan 2030 Update, Part II – Area Plan Policies, Chapter 2– Corridors Framework Plan, Figure 2-1). As the proposed project will result in three rural residential lots (and a remainder lots), it will not substantially damage scenic resources scenic resources, including, but not limited to, trees, rock outcroppings, and historic					

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	buildings within a state or county designated scenic highway or county designated scenic road. Therefore, the Project would result in No Impact to this resource. c) Less Than Significant Impact – As previously noted, the Project will not adversely affect any scenic vista. Other than the future residential structures typical of rural residential development, the Project will not include any other structures which may substantially impact a scenic vista. Zoning height limitations would restrict structures (e.g., residences) to no greater than a two-story equivalent (2-1/2 story and not to exceed 35 feet maximum). No part of the Project would obstruct local scenic views, be visually intrusive or incompatible with the surrounding area, or be visible to large numbers of sensitive receptors. The Project site is relatively level, is currently vacant and was last farmed in 2011. As noted earlier, the surrounding properties to the north, west and east are developed with rural residences. This area has been substantially developed with rural residential development beginning in 1972. The properties to the northwest and south are in agricultural production. As shown in Figure 2 Aerial Photograph, all of the adjacent sites are heavily screened with vegetation (i.e., decorative trees) which screens views into and outside of the adjacent properties. As such, the Project would not have a less than substantial impact on a scenic vista. As such, the Project will not substantially degrade the existing visual character or quality of the site and its surroundings which are open to public view. Therefore, the Project would result in a Less Than Significant Impact to this resource. d) Less Than Significant Impact – Viewers traveling north on Road 136 will likely have the most direct view (from the southeast to northwest) As noted earlier, the surrounding properties to the north, west and east are developed with rural residences. This area has been substantially developed with rural residential development beginning in 1972. The properties to the northwest and south are in agricultural production. As shown in Figure 2 Aerial Photograph, all the adjacent sites are heavily screened with vegetation (i.e., decorative trees), which screens views into and outside of the adjacent properties. The Project has the potential to result in the creation of a new source of light; however, the Project will comply with the applicable General Plan policies adopted to minimize lighting impacts. Standard conditions of approval require outdoor lighting to be directed away from public roads and adjacent properties and to be dark-sky compliant. Therefore, the Project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Therefore, the Project would result in a Less Than Significant Impact to this resource.				
2.	AGRICULTURAL AND FOREST RESOURCES				
	In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the Rural Valley Lands Plan point evaluation system prepared by the County of Tulare 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 Range Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols Adopted by the Air Resources Board. Would the project:				
	a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐

			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	b)	Conflict with existing zoning for agriculture use, or a Williamson Act contract?	☐	☐	☐	☒
	c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code 12220(g), timberland (as defined in Public Resource 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?	☐	☐	☐	☒
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: AG-1.14 <i>Right to Farm Noticing</i>. a) Less Than Significant Impact – The Project would result in the conversion of approximately 7.3 acres of prime agricultural land to non-agricultural use. The Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) (see http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx) identifies on-site soil as Grangeville sandy Loam, 0-2% slopes, which is considered by the Farmland Mapping and Monitoring Program (FMMP) to be Prime Farmland for Tulare County if irrigated and either protected from flooding or not frequently flooded during the growing season (see Prime and Statewide Soils Spreadsheet, http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/prime_soils.aspx, and Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Tulare County, http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/soils/Tulare_ssurgo.pdf). The <i>Tulare County Important Farmland 2014</i> (Rural Land Mapping Edition, Sheet 1) map also identifies the Project site as Prime Farmland (see ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/tul14_no.pdf). However, as the Project site is not currently active, it is not irrigated; as such, the site is not capable of growing common cultivated crops and pasture plants over a long period without deterioration. Furthermore, the Project is subject to the Tulare County Agricultural Conservation Easement Program (ACEP). As such, a Condition of Approval requiring the applicant to submit an application for an Agricultural Conservation Easement, with associated fees, to the Tulare County Resource Management Agency (RMA) for no less than 7.3 acres of on-site Prime farmland prior to the issuance of building permits. According to the FMMP, as of 2014 there were 366,414 acres of Prime Farmland (see Table A-44 Tulare County 2012-2014 Land Use Conversion, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx); as such, this Project represents 0.002% of the County’s Prime Farmland. Therefore, the Project would not result in a significant conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural						

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	use. Therefore, the Project would result in Less Than Significant Impacts to this resource. b) No Impact - The subject site is zoned AE-40 (Exclusive Agricultural – 40 acre minimum), which allows agriculture and most ag-related uses. The applicant is requesting a General Plan Amendment (No. GPA 16-005) to change the land use designation from Agriculture to Rural Residential on a 7.29-acre portion of a 27.83 acre parcel; Zone Change (No. PZC 16-007) on a 7.29-acre portion of a 27.83 acre parcel from the AE-40 (Exclusive Agricultural – 40 acre minimum) to R-A-87 (Rural Residential – 87,000 sq. ft. minimum); and Tentative Parcel Map (No. PPM 16-030) to divide a 27.83-acre parcel into three parcels and a remainder: Parcel 1 = 2.23 acres, Parcel 2 = 2.23 acres, Parcel 3 = 2.23 acres and Remainder Parcel = 20.97 acres. The site is not within an agricultural preserve and is not under a Williamson Act Contract. The Project is consistent with land uses and zoning within a County Approved City Urban Area Boundary (CACUAB). Therefore, the Project will not conflict with existing zoning for agriculture use or a Williamson Act contract. Therefore, there will be No Impact to this resource. c) No Impact – There are no forestlands on the Project site or in the vicinity. The Project site is not zoned for forestland, timberland, or timberland zoned Timberland Production. Therefore, the Project would not conflict with existing zoning for, or cause rezoning of, forestland, timberland, or timberland zoned Timberland Production. Therefore, there will be No Impact to this resource. d) No Impact – The Project will not be located on forest land. As such, the Project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, there will be No Impact to this resource. e) No Impact – The Project would not involve other changes in the existing environment which, due to its location or nature, could result in conversion of farmland to non-agricultural use. An important goal of the Tulare County General Plan 2030 Update is to preserve the County’s agricultural roots and economy. The General Plan 2030 Update includes the following policy, which applies to this Project, to protect agricultural resources: AG-1.14 Right-to-Farm Noticing. Because of active agricultural uses (grazing) adjacent to the site, as a Condition of Approval, the applicant will be required to sign a “Right to Farm” notice. Because of the nature of the Project (a General Plan amendment, rezone, and tentative parcel map for three (3) potential residential lots and an out-lot), it can be reasonably concluded that the Project will not affect any farmland beyond its own boundaries. Therefore, there will be No Impact to this resource.				
3.	AIR QUALITY				
	Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
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	☐	☐	☒	☐

			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
		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?	☐	☐	☒	☐
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: AQ-2.2 <i>Indirect Source Review</i>; AQ-3.4 <i>Landscape</i>; AQ-4.2 <i>Dust Suppression Measures</i>. The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB), a continuous inter-mountain air basin. The Sierra Nevada Range forms the eastern boundary; the Coast Range forms the western boundary; and the Tehachapi Mountains form the southern boundary. These topographic features restrict air movement through and beyond the SJVAB. The SJVAB is comprised of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties and the valley portion of Kern County; it is approximately 25,000 square miles in area. Tulare County lies within the southern portion of the SJVAB. Air resources in the SJVAB is managed by the San Joaquin Valley Air Pollution Control District (Air District). Both the federal government (through the United State Environmental Protection Agency (EPA)) and the State of California (through the California Air Resources Board (ARB)) have established health-based ambient air quality standards (AAQS) for six air pollutants, commonly referred to as “criteria pollutants.” The six criteria pollutants are: carbon monoxide (CO), ozone (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for each criteria pollutant to protect the public health and welfare. The federal and state standards were developed independently with differing purposes and methods, although both processes are intended to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. The Federal Clean Air Act requires EPA to set NAAQS for the six criteria pollutants, noted above, that occur throughout the United States. Of the six pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA regulates the criteria pollutants by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards. EPA is required to designate areas as meeting (attainment) or not meeting (nonattainment) the air pollutant standards. The Federal Clean Air Act (CAA) further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. The Federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states will use to attain the						

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	NAAQS. The Federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the Federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and impose additional control measures. The SJVAB is considered to be in attainment for federal and state air quality standards for carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂); attainment for federal and non-attainment for state air quality standards for respirable particulate matter (PM₁₀); and non-attainment of state and federal air quality standards for ozone (O₃) and fine particulate matter (PM_{2.5}). To meet federal Clean Air Act requirements, the Air District has adopted the following attainment plans: the 2004 Extreme Ozone Attainment Demonstration Plan (for the 1-hour standard); the 2007 Ozone Plan (for the 1997 8-hour standard); the 2009 RACT SIP; the 2013 Plan for the Revoked 1-Hour Ozone Standard; the 2014 RACT SIP; the 2016 Plan for the 2008 8-Hour Ozone Standard; the 2007 PM₁₀ Maintenance Plan; the 2008 PM_{2.5} Plan (for the 1997 annual standard); the 2012 PM_{2.5} Plan (for the 2006 24-hour standard); the 2015 Plan for the 1997 PM_{2.5} Standard (for annual and 24-hour standards); and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide. The State does not have an attainment deadline for the ozone standards; however, it does require implementation of all feasible measures to achieve attainment at the earliest date possible. State PM₁₀ and PM_{2.5} standards have no attainment planning requirements, but must demonstrate that all measures feasible for the area have been adopted. It is reiterated that the Project does not contain a development proposal; rather, the Project is a tentative parcel map. Until such time a development proposal is submitted for processing with the County of Tulare, the Project will not result in a physical change in the environment. In the event development proposals were to occur, the proposals could be subject to various San Joaquin Valley Air Pollution Control District (Air District) rules/regulations, thresholds, and/or permitting requirements, as applicable. As indicated below, the mere size of the project (i.e., three potential rural residential sites) would not result in the exceedance of any Air District thresholds and, depending upon a final determination by the Air District, does not appear to meet rule applicability requirements. a) Less Than Significant Impact – Air quality plans (also known as attainment plans) and subsequent rules are used to bring the applicable air basin into attainment with federal ambient air quality standards designed to protect the health and safety of residents within that air basin. In the event development proposals were to occur following approval of the proposed Project, such developments will be required to comply with all applicable Air District rules and regulations including, but not limited to, Regulation VIII (Fugitive PM₁₀ Prohibitions) requirements and District Rule 9510 (Indirect Source Review). The Air District’s <i>Guidance for Assessing and Mitigating Air Quality Impacts</i> (GAMAQI) states, “...the District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District’s air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to “Not conflict or obstruct implementation of the District’s air quality plan.” (GAMAQI, page 65, available online at www.valleyair.org/transportation/GAMAQI_3-19-15.pdf) “Determination of whether a project would exceed the applicable thresholds of significance for criteria pollutants requires quantification of project specific emissions. To streamline the process of assessing				

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	significance of criteria pollutant emissions from commonly encountered projects, the District has developed the screening tool, Small Project Analysis Level (SPAL). Using project type and size, the District has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants.” (GAMAQI, page 85) The Air District has identified SPAL limits based on vehicle trips and by project type (SPAL, Table 5.2 and Table 5-3 (a), see: http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF). The SPAL limits identified for residential land uses are 1,453 average daily trips (ADT) per day or 390 units. As the Project includes a potential for three (3) single-family residences (units), the Project is below the applicable SPAL established by the Air District. The traffic generation analysis (TGA) prepared for the Project (see Attachment “D”) states that the Project will result in 29 ADT, which is below the 1,453 ADT SPAL limits established by the Air District. As the Project falls below the Air District’s SPAL levels for both ADT and units, it can be reasonably concluded that the Project will not exceed the Air District’s thresholds of significance and, therefore, will not conflict with or obstruct implementation of the applicable air quality plan. As such the Project will have a Less Than Significant Impact on the environment. b) Less Than Significant Impact - Nearly all development projects have the potential to generate pollutants that will worsen air quality, so it is necessary to evaluate air quality impacts to comply with California Environmental Quality Act. The Air District’s GAMAQI states, “Determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project’s property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The need to perform an air quality dispersion modeling analysis for any project (urban development, commercial, or industrial projects) is determined on a case-by-case basis depending on the level of emissions associated with the proposed project.” (GAMAQI, page 65) The Air District’s guidance document, <i>Ambient Air Quality Analysis Project Daily Emissions Assessment</i> (see http://www.valleyair.org/transportation/CEQA%20Rules/Ambient-Air-Quality-Analysis-Project-Daily-Emissions-Assessment.pdf), states, “State and Federal ambient air quality standards have been established to protect public health and welfare from the adverse impacts of air pollution. A project would be considered to have a significant impact if its emissions are predicted to cause or contribute to a violation of any California Ambient Air Quality Standard (CAAQS)/National Ambient Air Quality Standard (NAAQS). The District applies a threshold of 100 pounds per day of any criteria pollutant to determine significance impact. ...Development projects below ISR applicability thresholds are therefore, not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Thus, for development projects (including transportation and transit projects) below District Rule 9510 (Indirect Source Review) Applicability Thresholds, no emission calculation is required for ambient air quality analysis purposes, and an ambient air quality analysis is not required.” The applicability threshold for residential development is 50 dwelling units. As such, the proposed Project’s three residences are significantly below the Air District’s threshold. Therefore, the Project will not violate any air quality standards or contribute substantially to an existing or projected air quality violation and will have a Less Than Significant Impact on air quality. Furthermore, the SJVAPCD requires concerted efforts to reduce project-related emissions, including compliance with the following rules and regulations: Regulation VIII (Fugitive PM10 Prohibitions), Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 4102 (Nuisance), Rule 4641 (Cutback, Slow Cure and Emulsified Asphalt, Paving and Maintenance Operations), and Rule				

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	9510 (Indirect Source Review). As such, the Project will not violate any air quality standards or contribute substantially to an existing or projected air quality violation and will have a Less Than Significant Impact on air quality. c) Less Than Significant Impact - The Project would be considered to have a significant cumulative impact on air quality if project-specific impacts are determined to be significant. As previously noted, the emissions analysis confirms that the Project falls under the SPAL limits, that Project-specific emissions are below the Air District's thresholds of significance at a project-specific level, and that the Project will not cause or contribute to an existing air quality violation. Therefore, because the Project would have Less Than Significant Project-specific Impacts, the Project will have a Less Than Significant Cumulative Impact on air quality. d) Less Than Significant Impact – The Air District suggests that projects classified as meeting SPAL examine areas surrounding the project site for sources of toxic air contaminants, hazardous materials, and odors and to verify the project itself is not a source of toxic air contaminants or other hazardous air pollutants. County staff evaluated all sources of emissions to determine whether an HRA should be conducted. The Project site is located in a rural area with scattered rural residences. The nearest residences are located approximately 110 feet north of the Project's northern property line; the nearest residence to the west is approximately 175 feet west; the nearest residence to the northeast is approximately 325 feet northeast; the nearest residence to the southeast is approximately 250 feet southeast; the nearest southerly residence (southeast) is approximately 440 feet southeast. Approximately 60 residences are within 1 mile of the existing parcel boundary, with the majority of these residences (approximately 30) located northwest (upwind) of the Project site. Elbow Creek Elementary is located within ¼ mile (slightly northeast) of the Project site. The proposed Project, if eventually developed to residential uses, would not handle hazardous materials with the exception of the sale of pre-packaged, common cleaning supplies (such as bleach, ammonia, etc.) in daily operations. Construction-related activities may require the use of Medium- and Heavy-duty diesel equipment/trucks would be a source of diesel particulate matter which is considered to be a toxic air contaminant. However, as this Project does not include a specific development proposal, it would be speculative to estimate potential toxic air contaminant emissions. Also, any emissions would be temporary, short-term, intermittent, and dependent upon the number and timing of parcels at the time of development. The proposed Project has the potential to temporarily expose the residents of nearby single-family residences to the northwest, west, northeast, and southeast of the Project site to increased criteria pollutant emission concentrations from diesel powered construction equipment during the short-term construction phase. As this Project does not include a specific development proposal, it would be speculative to estimate potential criteria pollutant emissions. Particulate emissions from diesel powered construction equipment are considered a toxic air contaminant by the California Air Resources Board. However, any construction-related emissions would be temporary, short-term, intermittent, and dependent upon the number and timing of parcels at the time of development; and due to the limited number of potential parcels which could be developed (three), emissions would not exceed the Air District's health risk thresholds of 20 in one million. Tulare County RMA staff has prepared screening analyses for heavy-duty truck-related health risk impacts for other projects that include a higher volume of daily/weekly heavy-duty vehicles. Air pollutants are linear by nature. By analogy, one such screening analysis indicated that a project with 2,600 heavy-duty trucks per year would have an estimated health risk of 4.98 in one million for a work site receptor located				

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	approximately 25 feet north of the project boundary and a risk of 0.94 in one million for a residential receptor approximately 638 feet southwest of the project boundary (Diesel Truck Health Risk Screening memo, PSP 14-052). Another screening analysis indicated that a project with 3,432 heavy-duty trucks per year would have an estimated health risk of 0.59 in one million (approximately 2 in one million using current methodologies) for a school site receptor located approximately 50 feet north of the project boundary and a risk of 1.78 in one million (approximately 5.5 in one million using current methodologies) for a work site receptor approximately 50 feet south of the project boundary (Diesel Truck Health Risk Screening memo, PRC 15-024). Both of these screening analyses conclude that the projects would not exceed the Air District's health risk thresholds of 20 in one million. As the proposed Project does not include any development proposal of any land use type, it could not possibly approach the number of heavy-duty trucks in the example projects provided above; therefore, it is anticipated that Project-related health risks would not exceed the Air District's health risk thresholds. As such, based on the information presented before the County, the County has concluded that an HRA will not be required for determining risks associated with on-site heavy-duty vehicles. Furthermore, the Applicant will be required to comply with all local, state, and federal policies related to emission of toxic air pollutants in the unlikely event such pollutants are emitted and would require control efforts to minimize their impacts. Tulare County Environmental Health Services Division will require a Hazardous Waste Business Plan if materials exceed their thresholds. As such, the Project will not expose sensitive receptors to substantial pollutant concentrations resulting in impacts that are Less Than Significant. e) Less Than Significant Impact - As noted earlier, approximately 60 sensitive receptors (residences) are within 1 mile of the proposed Project, with the majority of these residences (approximately 30) located northeast (upwind) of the Project site. Potential odor sources associated with the Project could originate from diesel exhaust from construction equipment and fumes from architectural coatings and paving operations during the construction phase; and from diesel exhaust from delivery vehicles (e.g., heavy-duty trucks) if future development were to occur on the Project site. However, these odors, if perceptible, would dissipate rapidly as they mix with the surrounding air and would be of very limited duration. As such, Project-related objectionable odors would not affect a substantial number of people in the area; therefore, the Project would result in Less Than Significant Impact as due to odors.				
4.	BIOLOGICAL RESOURCES				
	Would the project:				
	a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and 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,	☐	☒	☐

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		policies, and 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?	☐	☐	☐	☒
	Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: ERM-1.1 <i>Protection of Rare and Endangered Species</i>; ERM-1.2 <i>Development in Environmentally Sensitive Areas (limits development in sensitive areas)</i>; ERM-1.3 <i>Encourage Cluster Development</i>; ERM-1.7 <i>Planting of Native Vegetation (including native trees, shrubs, and grassland preserve)</i>; ERM-1.8 <i>Open Space Buffers (buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities)</i>; ERM-1.9 <i>Coordination of Management on Adjacent Lands (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)</i>; ERM-1.10 <i>Appropriate Access for Recreation</i>; ERM-1.11 <i>Hunting and Fishing (provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code)</i>; ERM-1.13 <i>Pesticides (implementing pesticide controls to limit effects on natural resources)</i>; and ERM-1.14 <i>Mitigation and Conservation Banking Program (support the establishment and administration of a mitigation banking program for protection and recovery of threatened and endangered species impacted during the land development process)</i>. As indicated in the Executive Summary of the Biological Evaluation (BE) prepared by consultant Live Oak Associates, Inc. (LOA, April 2017); "Live Oak Associates, Inc. (LOA) conducted an investigation of the					

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	biological resources of an approximate 27-acre agricultural site proposed for residential subdivision (hereafter referred to as the project site). The project site is located south of Avenue 328, west of Road 138, east of Road 132, and north of Avenue 320, approximately 2 miles northeast of Visalia, in an unincorporated part of Tulare County, California. The proposed project consists of subdivision into four parcels, to eventually be converted to residential development. In March of 2017, LOA surveyed the project 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. Land use identified within the project site is limited to fallow field. A mosaic of agricultural, and residential land uses surrounds the project site, within a region dominated by similar land uses. As defined by the California Environmental Quality Act (CEQA), impacts associated with residential development would be less than significant for special status plant species, most special status animals occurring regionally, wildlife movement corridors, downstream water quality, sensitive habitats, and Waters of the U.S. Potentially significant impacts associated with eventual residential development include project related mortality of the San Joaquin kit fox, roosting bats, and nesting raptors and migratory birds protected under the federal Migratory Bird Treaty Act and related state laws. Project avoidance of active dens, roosts, and nests identified during preconstruction surveys conducted prior to periods of mass grading on individual lots, and implementation of minimization measures consistent with the USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance will ensure that impacts to all special status animal species are reduced to a less than significant level.”¹ <u>Biological Evaluation Study Methodology</u> “A field survey of the project site was conducted on March 20, 2017 by LOA ecologist Wendy Fisher. The survey consisted of driving the perimeter road of the project site, conducting a meandering walk periodically, and using binoculars to scan the site and adjacent lands. During the survey, the principal land uses of the project site were identified and the constituent plants and animals of each land use were noted. LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the project site. Sources of information used in the preparation of this analysis included: (1) the <i>California Natural Diversity Data Base</i> (CDFW 2017a), (2) the <i>Online Inventory of Rare and Endangered Vascular Plants of California</i> (CNPS 2017), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region. Detailed surveys for sensitive biological resources were not conducted for this study. Field surveys conducted for this study were sufficient to assess the significance of possible biological impacts associated with full development of the project site and to assess the need for more detailed studies that could be warranted if sensitive biotic resources were identified in this initial survey.”² a) Would the Project 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?				

¹ “Biological Evaluation 27-Acre Subdivision APN 079-190-017 Tulare County, California.” Page 1. Prepared by Live Oak Associates, Inc., April 2017 (see Attachment “B” of this document).

² Ibid. Page 4.

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	AND b) <i>Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service</i> Potentially Significant Project Impacts/Mitigation As indicated in the BE, “The 27-acre project site is proposed for subdivision into four separate parcels, all of which are expected to be used for residential development. The following subsections assume that all areas of the project site will be impacted by future development. It is assumed that removal of the few valley oaks on the project boundaries would occur as a result of residential development on individual lots. Potentially significant project impacts to biological resources and mitigations are discussed below.”³ [as follows]. <u>Project-Related Mortality of San Joaquin Kit Fox</u> “Potential Impacts. As discussed in Section 2.5.2 [of the BE], the San Joaquin kit fox is unlikely to occur within the project site. However, based on past occurrences of kit fox in the 10-mile vicinity of the project site, it is remotely possible that individual foxes may pass through and possibly forage on the site from time to time during dispersal movements. If a kit fox were present at the time of future construction activities in the project site, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the project site would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA. Mitigation. Prior to project construction, the following measures adapted from the U.S. Fish and Wildlife Service 2011 <i>Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance</i> (Appendix E [of the BE]) will be implemented. <i>Mitigation Measure 3.3.1a [BIO-1 of this IS/MND] (Pre-construction Surveys).</i> Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance on each of the four separate parcels. These surveys will be conducted in accordance with the USFWS <i>Standardized Recommendations</i>. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action. <i>Mitigation Measure 3.3.1b [BIO-2 of this IS/MND] (Avoidance).</i> Should a kit fox be found using the site during preconstruction surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified. <i>Mitigation Measure 3.3.1c [BIO-3 of this IS/MND] (Minimization).</i> Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of				

³ Op. Cit. 27.

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	escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash. Mitigation Measure 3.3.1d [BIO-4 of this IS/MND] (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information. Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level and ensure that future development activities within the project site remain in compliance with state and federal laws protecting this species.”⁴ <u>Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds</u> “Potential Impacts. The project site contains habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Four special-status birds (Swainson’s hawk, white-tailed kite (<i>Elanus leucurus</i>), northern harrier, and loggerhead shrike (<i>Lanius ludovicianus</i>)) also have the potential to nest within or adjacent to the project site. On-site valley oak trees, as well as mature trees bordering the site, could be used for nesting by the western kingbird, Bullock’s orioles (<i>Icterus bullockii</i>), and various raptors. Ground-nesting species such as the western meadowlark (<i>Sturnella neglecta</i>), mourning dove, and northern harrier could potentially nest in the dense vegetation of the fallow field. Raptors and migratory birds nesting within the project site at the time of construction have the potential to be injured or killed by project activities. In addition to direct “take” of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA. Mitigation. The following measures will be implemented prior to the start of ground disturbance on each of the four parcels of the project site. Mitigation Measure 3.3.2a (Avoidance). In order to avoid impacts to nesting raptors and migratory birds, ground disturbance on individual lots of the project will occur, where possible, outside the nesting season, or between September 1st and January 31st. Mitigation Measure 3.3.2b [BIO-5 of this IS/MND] (Preconstruction Surveys). If ground disturbance must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. Should a 30-day window of no activity occur on any given parcel (within the breeding season), the surveys should be redone. The surveys will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save the Swainson’s hawk; the Swainson’s hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required. Mitigation Measure 3.3.2c [BIO-6 of this IS/MND] (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species.				

⁴ Op. Cit. 28-29.

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	Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged. Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds to a less than significant level, and will ensure that the project remains in compliance with state and federal laws protecting these species.”⁵ <u>Project Impacts to Roosting Bats</u> “Potential Impact. Valley oak trees within the study area provide potential roosting habitat for several species of bat. Development of the parcels on the project site could result in removal of mature valley oaks potentially serving as roosting habitat for both pallid bat (<i>Antrozous pallidus</i>) and western mastiff bat (<i>Eumops perotis</i> ssp. <i>californicus</i>). Impacts to mature valley oak trees with maternal roosts have the potential to result in the mortality of many juvenile bats and would be considered a significant impact of the project as defined by CEQA. Mitigation. In order to minimize construction disturbance to maternal roosting bats in onsite trees, prior to the beginning of ground disturbance on each of the four separate parcels, the following measures will be implemented, as applicable: <i>Mitigation Measure 3.3.3a [BIO-7 of this IS/MND] (Temporal Avoidance).</i> Tree removal (if necessary) should occur after September 30, and before April 1, outside the maternal roosting season. <i>Mitigation Measure 3.3.3b [BIO-8 of this IS/MND] (Preconstruction Surveys).</i> If removal of trees must occur between April 1 and September 30 (general maternity bat roost season), a qualified biologist will survey affected trees for the presence of bats within 30 days prior to these activities. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed. <i>Mitigation Measure 3.3.3c [BIO-9 of this IS/MND] (Minimization).</i> If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees prior to full removal under the direction of a qualified biologist to ensure that no adverse impact to any bats occurs as a result of construction activities. <i>Mitigation Measure 3.3.3d [BIO-10 of this IS/MND] (Avoidance of Maternity Roosts).</i> If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist determines that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist. <i>Mitigation Measure 3.3.3e [BIO-11 of this IS/MND] (Consultation if Maternity Roosts Cannot be Avoided).</i> If maternal roosts are determined to be present and must be removed, the bats will be excluded from the roosting site before the roost is removed. An exclusion plan, addressing exclusion methods, and roost removal procedures will be developed by a qualified biologist before implementation. Exclusion methods may include use of one-way doors at roost entrances or sealing				

⁵ Op. Cit. 29-30.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	roost entrances when a site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g. during hibernation or while females in maternity colonies are nursing young). Implementation of these measures will reduce potentially significant project impacts to roosting bats to a “less than significant” level under CEQA.”⁶ Less Than Significant Project Impacts <u>Loss of Habitat for Special Status Plants</u> As indicated in the BE, “Fourteen special status vascular plant species are known to occur in the vicinity of the project site: Hoover’s spurge (<i>Euphorbia hooveri</i>), San Joaquin Valley orcutt grass (<i>Orcuttia inaequalis</i>), San Joaquin adobe sunburst (<i>Pseudobahia peirsonii</i>), heartscale (<i>Atriplex cordulata</i> var. <i>cordulata</i>), Earlimart orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>), brittlescale (<i>Atriplex depressa</i>), lesser saltscale (<i>Atriplex minuscula</i>), vernal pool smallscale (<i>Atriplex persistens</i>), subtle orache (<i>Atriplex subtilis</i>), recurved larkspur (<i>Delphinium recurvatum</i>), spiny-sepaled button-celery (<i>Eryngium spinosepalum</i>), Winter’s sunflower (<i>Helianthus winteri</i>), California satintail (<i>Imerata brevifolia</i>), and California alkali grass (<i>Puccinellia simplex</i>) (see Table 1 [in the BE]). Past and ongoing disturbance of the project site and surrounding lands has eliminated habitat for these 14 plant species. Therefore, the proposed project would not affect regional populations of these species and impacts would be less than significant.”⁷ As such, no mitigation measures are warranted. <u>Loss of Habitat for Special Status Animals Absent or Unlikely to Occur in the Project Site</u> As indicated in the BE, “Of the 18 special status animal species potentially occurring in the region, twelve (12) species would be absent or unlikely to occur on the project site (see Table 1 [in the BE]). These include the vernal pool fairy shrimp (<i>Branchinecta lynchi</i>), vernal pool tadpole shrimp (<i>Lepidurus packardii</i>), Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>), California tiger salamander (<i>Ambystoma californiense</i>), Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>), willow flycatcher (<i>Empidonax traillii</i>), San Joaquin kit fox, western spadefoot (<i>Spea hammondi</i>), western pond turtle (<i>Emys marmorata</i>), foothill yellow-legged frog (<i>Rana boylei</i>), burrowing owl, and American badger (<i>Taxidea taxus</i>). Loss of habitat as a result of future residential development of the project site would have no effect on these species because there is little or no likelihood that they are present.”⁸ As such, no mitigation measures are warranted. <u>Loss of Habitat for Special Status Animals that Could Breed and/or Forage in the Project Site</u> The BE provides the following analysis regarding loss of habitat for special status animals that could breed and/or forage in the Project site; “Of the 18 special status animal species potentially occurring in the region, six species have the potential to occur within the project site in association with breeding, foraging, or both. These species comprise the Swainson’s hawk, northern harrier, white-tailed kite, loggerhead shrike, pallid bat, and western mastiff bat. The Swainson’s hawk, white-tailed kite, and loggerhead shrike could theoretically nest in the on-site valley oaks, while the northern harrier could nest in the dense vegetation of the site’s fallow field. All four birds could forage in the fallow field. However, the project site is situated				

⁶ Op. Cit. 31-32.

⁷ Op. Cit. 32.

⁸ Op. Cit. 33.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	within a matrix of residential development and orchard lands incompatible with the life history of these four avian species, all of which are associated with open country. Although the site may be used for nesting and foraging by these birds on occasion, it is unlikely to represent regionally important habitat for any of these species. The pallid bat and western mastiff bat have the potential to roost in the on-site valley oaks, and to forage in or over the fallow field. Functionally similar roosting habitat is plentiful on surrounding lands, and the loss of the oaks is not expected to adversely affect individuals or populations of these species. Similarly, considerable agricultural habitat suitable for foraging by these species will continue to be available on surrounding lands following development of the project site. For the reasons given, loss of breeding and foraging habitat for the four avian species and two bat species considered in this section is not considered a significant impact of the project under CEQA.”⁹ As such, mitigation measures are not warranted. c) <i>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?</i> There are no “waters” of the United States within the Project area. As indicated in the BE, “As discussed in Section 2.6, no potential waters of the U.S. have been identified on the project site. Therefore, impacts from project implementation will have no measurable effect on the value or function of waters of the U.S. and are not considered significant under CEQA.”¹⁰ Therefore, no mitigation measures are required or necessary. d) <i>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?</i> The Project would not interfere with wildlife movement corridors. As indicated in the BE, “The project site consists of and is surrounded by developed and/or highly disturbed lands that do not contain important movement corridors for native wildlife. Birds using the Pacific flyway will continue to do so following project development. Future development of the project site will result in a less than significant effect on regional wildlife movements.”¹¹ Therefore, no mitigation measures are required or necessary. e) <i>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</i> The project would not disturb riparian habitat or other sensitive habitats. This conclusion is based on the information contained in the BE, to wit; “Riparian habitat is absent from the project site. The fallow field of the project site is not considered a sensitive habitat, and is not of significant importance to regional wildlife populations. Because riparian and other sensitive habitats are absent, future development of the project site will have no impact on these habitats.”¹² Further, the BE provided the following determination regarding project impacts to designate critical habitat; “As discussed, designated critical habitat is absent from the project site. Although critical habitat for vernal pool fairy shrimp, vernal pool fairy shrimp, Hoovers’s				

⁹ Op. Cit. 33-34.

¹⁰ Op. Cit. 34.

¹¹ Op. Cit.

¹² Op. Cit. 34-35.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
	spurge and San Joaquin Valley orcutt grass occurs approximately 4.5 miles north of the site, suitable habitat for these vernal pool species is absent from the project site. Future development of the project site does not have the potential to impact designated critical habitat.”¹³ In addition to the discussion at Item c), the Project would not result in degradation of water quality in seasonal drainages, stock ponds, and downstream waters. The BE includes the following analysis; “Extensive grading often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. However, agricultural and industrial/residential lands in and around the project site are nearly level and are subjected to regular soil disturbance that exposes barren soils. The only hydrologic feature found in the immediate vicinity of the project site where grading could occur (residential pond) is highly maintained and isolated from all other hydrologic features. Therefore, impacts to water quality from project construction are considered less than significant. It should be noted that projects involving the grading of more than one acre of land must be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the RWQCB.”¹⁴ Therefore, no mitigation measures are required or necessary for the above noted resource impacts. f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? “The project will be implemented in accordance with the goals and policies of the Tulare County General Plan. No known HCPs or NCCPs are in effect for the area. Therefore, the project is not expected to conflict with local policies or habitat conservation plans.”¹⁵ As such, no mitigation measures are required or necessary.					
5.	CULTURAL RESOURCES					
	a)	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
	b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
	c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature of paleontological or cultural value?	☐	☐	☒	☐
	d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

¹³ Op. Cit. 35.

¹⁴ Op. Cit.

¹⁵ Op. Cit. 36.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	Analysis: The following Tulare County General Plan 2030 Update policy for this resource applies to this Project: ERM-6.1 <i>Evaluation of Cultural and Archaeological Resources</i>. A Cultural Resources Assessment (CRA) was prepared by consultant Sierra Valley Cultural Planning and is included in the Initial Study as Attachment “B”. “On 23 March 2017, a cultural resources survey was performed of approximately 27 acres (11 hectares) of land located south of Avenue 328 and west of Road 132, northeast of the City of Visalia in Tulare County, California. The study area is located in Township 18S, Range 25E, Section 9, MDB&M; see Maps 1 and 2. The cultural resources survey was performed at the request of Mr. Fred Weber on behalf of the property owners. The results of this study will supplement environmental studies performed in support of a tentative parcel map which will divide the 27 acres into three equal parcels of 2.515 acres with a remainder of 20.12 acres. Provisions and implementing guidelines of the California Environmental Quality Act (CEQA), as amended March 18, 2010, state that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which include archaeological resources. No archaeological or other cultural resources were identified as a result of this study. Therefore, it is unlikely that the proposed action will have an effect on important archaeological, historical, or other cultural resources. No further cultural resources investigation is therefore recommended.”¹⁶ “Prior to field inspection, a records search was completed by the Southern San Joaquin Valley Information Center (SSJV) of the California Historical Resources Information System staff to identify areas previously investigated and to identify known cultural resources present within or in close proximity to the Project APE. According to the Information Center records, there are no prehistoric or historic-period sites or structures identified within the project APE, and no prehistoric or historic-period sites or structures are identified within a ¼-mile radius of the study area. There have been no previous investigations within the APE or within ¼-mile radius. No cultural resource sites listed on the National Register of Historic Places, the California Register of Historic Resources California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources have been documented within ¼-mile radius of the project APE.”¹⁷ A Sacred Lands File (SLF) search was conducted on May 17, 2017, by the Native American Heritage Commission (NAHC) which then provided a response indicating “negative results” meaning that no sacred lands are located within or near the USGS Quadrangle where the Project is located. As discussed in further detail below, the CRA finds that no archaeological or cultural resources were identified within the Project Area of Potential Impact (APE). a) No Impact - There are no known historical resources located on the Project site. “Two items were documented as a result of this survey. Along the western edge of the parcel is a north- to south-trending irrigation ditch. This unlined ditch measures approximately ten feet wide by four feet deep. The banks of the ditch area are level and free of any vegetation. No associated ditch gates or concrete features were observed along the inspected portion of the ditch. At the southeast corner of the study area is a Fairbanks-Morse Pomona turbine pump (Figures 6-7 [in the				

¹⁶ “Cultural Resources Assessment, 27-Acre Parcel (APN 079-190-017, 13401 Avenue 328 At Ben Maddox Way, Tulare County, California”. March 2017 Page. 3. Prepared by Sierra Valley Cultural Planning.

¹⁷ Ibid. Page 4

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	CRA and shown below]). The above ground portion of the pump motor is four feet tall. The electrical source for the pump is a nearby wooden utility pole. On September 02, 1944, the Fairbanks-Morse and Company purchased the Pomona Pump Company. After the acquisition, Pomona pumps were labeled “Fairbanks-Morse Pomona” (The Log of West Coast Maritime Industries, July 1944, Volume 39, No.7, page 126. Source accessed via Google Books March 24, 2017).   No archaeological or other cultural resources were identified as a result of this study. Therefore, it is unlikely that the proposed action will have an effect on important archaeological, historical, or other cultural resources. No further cultural resources investigation is therefore recommended. In the unlikely event that buried archaeological deposits are encountered within the project area, the finds must be evaluated by a qualified archaeologist.”¹⁸ No buildings or historic structures, monuments, or markers will be removed as part of the Project. Therefore, the Project will not result in any substantial adverse change in the significance of an historical resource as defined in Section 15064.5. Therefore, there will be No Impact to this resource. b) Less Than Significant Impact – “Survey methods involved walking the perimeters of the parcel and attempting to walk several east to west transects within the 27-acre parcel. A Panasonic DMC-TS20 digital camera was used to photo document the project setting and any items of note within the study area. All photo information was recorded in the field on a photo-log.”¹⁹ “Soils across the parcel are a fine grain silty sandy loam with clay. Inspected soils have a general Munsell color value of 10yr 3/2, dark grayish brown (wet).”²⁰ As indicated in the CRA, “No archaeological or other cultural resources were identified as a result of this study. Therefore, it is unlikely that the proposed action will have an effect on important archaeological, historical, or other cultural resources. No further cultural resources investigation is therefore recommended. In the unlikely event that buried archaeological deposits are encountered within the project area, the finds must be evaluated by a qualified archaeologist. Should human remains be encountered, the County Coroner must be contacted immediately; if the remains are determined to be Native American, then the Native American Heritage Commission must be contacted as well.”²¹ A standard Condition of Approval will be imposed that requires cessation of grading or construction if any paleontological, archaeological or historical resources are discovered during surface or subsurface grading or construction activities on the site. Therefore, the Project will result in a Less Than Significant Impact.				

¹⁸ Op. Cit. 13-14.

¹⁹ Op. Cit. 13

²⁰ Op. Cit.

²¹ Op. Cit. 13-14.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	c) Less Than Significant Impact – No paleontological resources or unique geologic feature of paleontological or cultural value have been identified at the proposed Project site. However, a standard Condition of Approval will be imposed that requires cessation of grading or construction if any paleontological, archaeological or historical resources are discovered during surface or subsurface grading or construction activities on the site. Therefore, the Project will result in a Less Than Significant Impact. d) Less Than Significant Impact – A Standard Condition of Approval will be imposed that requires immediate cessation of grading or construction, and other requirements specified by State law, in the unlikely event of discovering human remains during activities on the Project site. Therefore, the Project will result in a Less Than Significant Impact on this resource.				
6.	GEOLOGY/SOILS				
	Would the project:				
	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 No. 42.	☐	☐	☒
	ii)	Strong seismic ground shaking?	☐	☐	☒
	iii)	Seismic-related ground failure, including liquefaction?	☐	☐	☒
	iv)	Landslides?	☐	☐	☒
	b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒
	c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒
	d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒
	e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal	☐	☐	☒

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	systems where sewers are not available for the disposal of waste water?				
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: HS-1.2 <i>Development Constraints</i>; HS-1.4 <i>Building and Codes</i>; HS-1.11 <i>Site Investigations</i>; HS-2.8 <i>Alquist-Priolo Act Compliance</i>. The United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) identified the soil on the Project site as Grangeville sandy loam, 0-2% slopes, with a capability class of 1 irrigated and 4c non-irrigated. According to the NRCS, the Grangeville series consists of very deep, somewhat poorly drained soils, and moderately rapid permeability. (see https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) According to California Geological Survey – Alquist-Priolo Earthquake Fault Zones as of January 2010, Table 4, neither Tulare County, nor any city within Tulare County, are located within earthquake fault zones. “There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below: ▪ San Andreas Fault. The San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the county. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west to Tulare County lies the “Central California Active Area,” where many earthquakes have originated. ▪ Owens Valley Fault Group. The Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County. ▪ Clovis Fault. The Clovis Fault is considered to be active within the Quaternary Period (within the past two million years), although there is no historic evidence of its activity, and is therefore classified as “potentially active.” This fault lies approximately six miles south of the Madera County boundary in Fresno County. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts.”²² “Older buildings constructed before current building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in the current building codes, are most likely to suffer damage in an earthquake. Most of Tulare County’s buildings are no more than one or two stories in height and are of wood frame construction, which is considered the most structurally resistant to earthquake damage. Older masonry buildings (without earthquake-resistance reinforcement) are the most susceptible to structural failure, which causes the greatest loss of life. The State of California has identified unreinforced masonry buildings as a safety issue during earthquakes. In high risk areas (Bay					

²² Tulare County General Plan 2030 Update, *Background Report*, Pages 8-6 to 8-7.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	Area) inventories and programs to mitigate this issue are required. Because Tulare County is not a high-risk area, state law only recommends that programs to retrofit URM's are adopted by jurisdictions."²³ a) Less Than Significant Impact - No substantial faults are known to traverse Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation. The nearest major fault line, which lies outside of Tulare County, is the San Andreas fault zones; well over 50 miles southwest of the proposed Project site. According to the Health and Safety Element (Chapter 10) of the Tulare County General Plan 2030 Update, Tulare County is located in the V-1 zone. This zone includes most of the eastern San Joaquin Valley, and is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance of the faults that are expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities.²⁴ Therefore, any impacts resulting from the rupture of a known earthquake fault would be Less Than Significant. i) Fault Rupture: "The Great Valley in general, has historically been a province of relatively low seismic activity. There are no known active fault traces in the project vicinity. The project area is not within an Alquist-Priolo Earthquake Fault (Special Studies) Zone and will not require a special site investigation by an Engineering Geologist. The site is not within a currently established California Earthquake Fault Zone for surface fault rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. As such, the impact from this resource item would be Less Than Significant. ii) Strong seismic ground shaking: Tulare County is characterized as Severity Zone "Nil" and "Low" for ground-shaking events. De-aggregation of the hazard was performed by using the USGS Interactive De-aggregation website and it was found that all faults within a 20-mile radius are quaternary faults between the ages of 750,000 and 1.6 million years old. Quaternary faults are defined as those faults that have been recognized at the surface and which have evidence of movement in the past 1.6 million years, which is the duration of the Quaternary Period. Due to the distance and types of faults in the proposed Project vicinity, strong ground shaking is unlikely. Therefore, the impact from this resource item would be Less Than Significant. iii) Ground Failure-Liquefaction: The proposed Project area is not located within an area mapped to have a potential for soil liquefaction. Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content. The Grangeville soil of the Project site is a sandy loam, 0-2% slopes, alluvium derived from granitic rock sources, somewhat poorly drained, rarely floods, never ponds, with moderate ability to store water (NRCS). As such, the impact from this resource item would be Less Than Significant.				

²³ Ibid. 8-8.

²⁴ Five County Seismic Safety Element, Summary of Seismic Hazards & Safety Recommendations, page 15

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	iv) Landslides: The Project is located on a relatively flat parcel of land. As such, landslides are not a significant threat as the topography in the proposed Project area is relatively flat. No geologic landforms exist on or near the site that would result in a landslide event. Therefore, No Impact from this resource item would occur. Therefore, the Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving earthquakes, strong seismic ground shaking, liquefaction, or landslides. b) Less Than Significant Impact – The proposed Project area is primarily flat and as such, soil erosion is not anticipated. If required by the Clean Water Act (CWA) and the Central Valley Regional Water Quality Control Board (CVRWQCB), a Stormwater Pollution Prevention Plan (SWPPP) could be developed by a qualified engineer or erosion control specialist and implemented before construction begins. If prepared, the SWPPP will be kept on site during construction-related activities and will be made available upon request to representatives of the CVRWQCB. The objectives of the SWPPP will be to identify pollutant sources that may affect the quality of stormwater associated with construction activity and to identify, construct, and implement stormwater pollution prevention measures to reduce pollutants in stormwater discharges during and after construction. To meet these objectives, the SWPPP will include a description of potential pollutants, a description of methods of management for dredged sediments, and hazardous materials present on site during construction (including vehicle and equipment fuels). The SWPPP will also include details for best management practices (BMPs) for the implementation of sediment and erosion control practices. Implementation of the SWPPP will comply with state and federal water quality regulations and will reduce this impact to a less than significant level. Compliance with local grading and erosion control ordinances will also help minimize adverse effects associated with erosion and sedimentation. Any stockpiled soils will be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction and reclamation. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction and reclamation periods are not anticipated. The impact will be Less Than Significant. c) No Impact – On-site soil type (Grangeville sandy loam) is not prone to landslide, spreading, subsidence, liquefaction or collapse. Therefore, No Impact to or from this resource would occur. d) Less Than Significant Impact – The on-site soil does is not an expansive soil. As with any construction project within Tulare County, the Building Division may require a soils report prior to issuance of applicable building permits and appropriate construction techniques to ensure any on-site structures (e.g., residences) are developed to standards which would prevent structural failure. Therefore, a Less Than Significant Impact to or from this resource would occur. e) Less Than Significant Impact – Existing, surrounding residential land uses use septic systems for wastewater disposal. The Project, if eventually developed to rural residences, would be required to adhere to conditions of approval as recommended by the Tulare County Environmental Health Services Division (EHSD) to avoid potential impacts from on-site septic systems. Among the conditions typically imposed by EHSD for septic systems are: the disposal system shall be designed by a licensed professional knowledgeable and experienced in the field of sewage disposal system and design (a registered civil engineer, registered environmental health specialist, or registered engineering geologist); the specifications and engineering data for the system shall be reviewed and approved by the EHSD prior to the release of building permits; and seepage pits are not allowed. The Project engineering and design features would be required to be compliant with California Building Code and Waste Discharge Requirements to ensure proper preventative measures are implemented to prevent adverse impacts from the use of the on-site septic system. Therefore, a Less Than Significant Impact to or from				

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	this resource will occur.				
7.	GREENHOUSE GAS EMISSIONS				
	Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: AQ-3.4 <i>Landscape</i>; ERM-4.2 <i>Streetscape and Parking Improvements for Energy Conservation</i>. a) and b) Less Than Significant Impact: This Initial Study is relying on the guidance and expertise of the San Joaquin Valley Unified Air Pollution Control District (Air District) in addressing greenhouse gas (GHG) emissions. The Air District is a public health agency with jurisdiction over air quality and resources in the San Joaquin Valley Air Basin. The following assessment follows the Air District's recommendation for evaluation of potential impacts on GHG emissions as provided in the <i>Guidance for Assessing and Mitigating Air Quality Impacts</i> (GAMAQI) adopted by the Air District Governing Board on March 19, 2015. The Air District has determined that projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emissions (GAMAQI, page 112). The <i>Tulare County Climate Action Plan</i> (CAP) serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the Tulare County General Plan 2030 Update which provides the supporting framework for development in the County. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets required by State of California legislation. The Tulare County General Plan 2030 Update fulfills many sustainability and GHG reduction objectives at the program level. Individual projects that will implement the General Plan will comply with these policies resulting in long-term benefits to GHG reductions that will help the County achieve the CAP reduction targets. The CAP identifies the policies from the various General Plan elements that promote more efficient development, and reduce travel and energy consumption. The Project provides an opportunity for up to three single-family if ultimately developed. The Project will result in direct GHG emissions from the general building operations (heating and cooling, cleaning supplies, etc.) as well as from on-road vehicles miles travelled by residents to and from the site. The Project is consistent with the Tulare County General Plan and CAP. Because of the small number of residences (three), Project-related GHG emissions will not have a significant impact on the environment, nor will the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, the Project will have a Less Than Significant Impact on these resources.					

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
8. HAZARDS AND HAZARDOUS MATERIALS:					
Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and 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 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	☐	☐	☐	☒

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	where residences are intermixed with wildlands?				
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: HS-4.1 <i>Hazardous Materials</i>; HS-4-3 <i>Incompatible Land Uses</i>; and HS-4-4 <i>Contamination Prevention</i>. a) Less Than Significant Impact – Construction-related activities associated with construction of the residential development would require the limited use and transport of hazardous materials, including fuels, oils, and other chemicals (e.g., paints, adhesives, etc.) typically used during construction. It is likely that these hazardous materials and transport vehicles would be stored by the contractor(s) on-site during construction-related activities. Improper use and transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. However, a Storm Water Pollution Prevention Plan (SWPPP) may be required for the proposed Project and would include emergency procedures for incidental hazardous materials releases. If required, a SWPPP typically includes Best Management Practices which includes requirements for hazardous materials storage. In addition, all use, storage, transport and disposal of hazardous materials during construction shall be performed in accordance with existing local, state and federal hazardous materials regulations. The operational phase of the proposed Project would occur after construction is completed and residents move in to occupy the structures on a day-to-day basis. The proposed Project includes land uses that are considered compatible with the surrounding uses, that is, large lot single-family rural residential uses. This land use does not routinely (i.e., as a commercial practice would) transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential grade hazardous materials such as cleaners, paint, etc. The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely release of hazardous materials into the environment occur. All businesses transporting, storing, using or disposing of hazardous materials (including wastes) must comply with applicable local, state and federal regulations for hazardous materials management. These include regulations and programs administered by the Tulare County Health & Human Services Agency, Environmental Health Services Division as well as other requirements of state and federal laws and regulations, including compliance with the Uniform Fire Code for hazardous material storage. This impact to or from this resource will be Less Than Significant. b) Less Than Significant Impact – The Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment or risk explosion. As noted above, the Tulare County Environmental Health Services Division (TCEHSD) requires a Hazardous Materials Business Plan if the Applicant will handle or store quantities of hazardous materials in excess of 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas, or any amount of a hazardous waste. While the facility operates in compliance with local, state and federal regulations, there is no significant hazard to the public or the environment. Also, see response a), above. As such, the Project would result in a Less Than Significant Impact to or from this resource. c) No Impact – The nature of the Project will not result in emitting of hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or					

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	proposed school. The facility is approximately 0.25 miles from the northeastern most portion of the property to the nearest school structure. (Elbow Creek Elementary to the northeast). Therefore, the Project would result in No Impact to or from this resource. d) No Impact - According to the State of California Department of Toxic Substances Control <i>EnviroStor</i> database map (http://www.envirostor.dtsc.ca.gov/public/) and <i>Hazardous Waste and Substance Sites List</i> (http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm), the Project site does not contain and is not proximate (within one mile) to a listed hazardous site, pursuant to Government Code Section 65962.5. Therefore, the Project would result in No Impact to or from this resource. e) No Impact – According to the <i>Tulare County Comprehensive Airport Land Use Plan</i> (CALUP), the Project site is not located within an airport land use plan or two miles of a public-use airport. The nearest public-use airports with an airport land use plan is Sequoia Field (approximately 5 miles northwest of the Project site). Therefore, the Project would result in No Impact to or from a public-use airport. f) No Impact –The Project site is not in the vicinity of any private airstrip. As noted earlier, the nearest airport is Sequoia Field is located approximately four miles northeast of the Project site. The three parcels could accommodate up to three single-family residences that would not exceed 35 feet in height to be consistent with Tulare County building codes and will be not result in a safety hazard for people residing or working in the project area. Therefore, the Project would result in Less Than Significant Impacts to this resource. g) No Impact – “Tulare County has in place an emergency plan to cope with natural disasters that are statewide or happen locally. The County Fire Department and local stationed California Department of Forestry (CDF) are well prepared to fight fires locally as well as statewide. The United States Forest Service (USFS) is in charge of fires that happen in the national parks and Tulare County assists with the fire management process as needed.”²⁵ “In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities. This plan also addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain.”²⁶ As such, the Project will not impair implementation of, or interfere with, County-adopted emergency response plans. Therefore, the Project would result in No Impact to this resource. h) No Impact – The Project is located in the Unincorporated Local Responsibility Area (see http://frap.fire.ca.gov/webdata/maps/tulare/fhszs_map.54.pdf). The Project site is surrounded to the north, west and east with rural residential housing. The properties to the northwest and south are in agricultural production. With this environmental context, the proposed Project site is not located within a wildlands area. Therefore, the proposed Project will not expose people or structure to wildland fires. No Project-specific impacts related to this Checklist Item will occur. Therefore, the Project would result in No Impact to this resource.				

²⁵ Tulare County Association of Governments Regional Transportation Plan, Page 1-11.

²⁶ Tulare County General Plan 2030 Update Background Report, pages 8-35 to 8-36.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
9.	HYDROLOGY AND WATER QUALITY					
	Would the project:					
	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 or 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 surface or groundwater 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 IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
		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?	☐	☐	☐	☒
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: WR-2.1 <i>Protect Water Quality</i>; WR-2.2 <i>National Pollutant Discharge Elimination System (NPDES) Enforcement</i>; WR-2.3 <i>Best Management Practices (BMPs)</i>; WR-2.4 <i>Construction Site Sediment Control</i>; WR-3.3 <i>Adequate Water Availability</i>. a) Less Than Significant Impact – The Project will not result in a violation of any water quality standards or waste discharge requirements. Treatment of wastewater on the Project site will be achieved via engineered septic disposal systems. The disposal system shall be designed by a licensed professional knowledgeable and experienced in the field of sewage disposal system and design (a registered civil engineer, registered environmental health specialist, or registered engineering geologist). As discussed in Item 6 e), the Project, if eventually developed to rural residences, would be required to adhere to conditions of approval as recommended by the Tulare County Environmental Health Services Division (EHSD) to avoid potential impacts from on-site septic systems. Among the conditions typically imposed by EHSD for septic systems are: the disposal system shall be designed by a licensed professional knowledgeable and experienced in the field of sewage disposal system and design (a registered civil engineer, registered environmental health specialist, or registered engineering geologist); the specifications and engineering data for the system shall be reviewed and approved by the EHSD prior to the release of building permits; and seepage pits are not allowed. The Project engineering and design features would be required to be compliant with California Building Code and Waste Discharge Requirements to ensure proper preventative measures are implemented to prevent adverse impacts from the use of the on-site septic system. The County Environmental Health Services Division requires that septic tanks and leach fields are located outside of areas subject to vehicular traffic and are not paved over. Therefore, the Project would result in a Less Than Significant Impact to this resource. b) Less Than Significant Impact – The Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. A technical memorandum was prepared by Kenneth D. Schmidt and Associates Groundwater Quality Consultants which concludes that sufficient groundwater exists via well extraction to provide sufficient groundwater for 40 years for the three proposed residences (see Attachment “C” of this document). As noted above, the area contains adequate water supply the proposed Project; as such, the Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, the Project would result in a Less Than Significant Impact to this resource. c) Less Than Significant Impact – The Project will not substantially alter the existing drainage pattern of the Project site or the surrounding area; as such, it would not result in substantial erosion or siltation. The Project will retain all stormwater on-site through the utilization of on-site grading. As such, the following conditions of approval, as recommended by the Tulare County Public works will be implemented to reduce any potential impacts from soil erosion: a grading and drainage plan shall be prepared by a licensed civil engineer and shall be submitted to and approved by the Tulare County Resource Management Agency – Engineering Branch prior to the issuance of the special use permit and any building permits; the grading and						

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	drainage plan shall include existing and proposed contours and detail the means of disposal of storm water runoff from the site in such a manner that all such runoff shall be collected and disposed of on-site; and grading and drainage plan shall specify a means of disposal such that runoff is not diverted to adjacent property or road frontage. A Condition of Approval requiring all on-site parking areas and driveways to be surfaces for all-weather conditions and continually maintained will further reduce soil erosion. Therefore, the Project would result in a Less Than Significant Impact to this resource. d) Less Than Significant Impact – The Project will not substantially alter the existing drainage pattern of the site or area in a way that would increase surface runoff. As noted above, a grading and drainage plan is required as a Condition of Approval by County Engineering. Therefore, the Project would result in a Less Than Significant Impact to this resource. e) No Impact – The Project will not result in runoff water that would exceed capacity of existing or planned stormwater drainage systems, nor would the Project provide substantial additional sources of polluted runoff. The Project is not served by a community storm water drainage system; all stormwater will be retained onsite. As previously noted, a grading and drainage plan is required by County Engineering. Therefore, the Project would result No Impact to this resource. f) No Impact – The Project consists of a subdivision of a parcel to four parcels to accommodate up to three potential home sites. The Project will not utilize hazardous materials with the exception of typical household cleaning supplies. The Tulare County Environmental Health Services Division (TCEHSD) requires submittal of a Hazardous Materials Business Plan, if any parcel or site ever handles or stores quantities of hazardous materials in excess of 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas or any amount of a hazardous waste. There is a low risk of hazardous materials being released to the environment during construction-related activities (e.g., diesel fuel) on the Project site. As such, the Project will not otherwise substantially degrade groundwater quality. Therefore, the Project would result in No Impact to this resource. g) Less Than Significant Impact – The Project consists of a subdivision of a parcel into four parcels to accommodate up to three potential home sites. The Project site is located within a Flood Zone X, per Federal Emergency Management Agency (FEMA) National Flood Insurance Program Flood Insurance Rate Map (FIRM) for Community Number 065066, dated June 16, 2009, Panel No. 645, Map # 06107C0645E (see http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cbe088e7c8704464aa0fc34eb99e7f30). Construction of buildings within a Flood Zone X requires no specific flood mitigation measures; however, FEMA recommends that all finished floor levels be elevated one (1) foot above adjacent natural ground. Therefore, the Project would result in a Less Than Significant Impact to this resource. h) Less Than Significant – As noted item g), construction of buildings within a Flood Zone X requires no specific flood mitigation measures; however, FEMA recommends that all finished floor levels be elevated one (1) foot above adjacent natural ground. As such, the Project would result in a Less Than Significant Impact to this resource. i) No Impact – The Project would not 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. Therefore, the Project would result in No Impact to this resource. j) No Impact – As the Project is not located in or near a lake or enclosed body of water, near a seashore, or located in lands conducive to mud slides/flows, the Project would not be subject to inundation by seiche,				

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
	tsunami or mudflow. Therefore, the Project would result in No Impact to this resource.					
10.	LAND USE AND PLANNING					
	Would the project:					
	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?	☐	☐	☐	☒
	Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: PF-4.1 CACUABs <i>for Cities</i> , and LU-1.10 <i>Roadway Access</i> . a) No Impact - The Project site is located northeast of the City of Visalia in a rural area with scattered rural residences. There are several existing rural residences adjacent to the Project site. As such, the Project will not divide an established community. Therefore, the Project would result in No Impact to this resource. b) No Impact –The Project site is within an area subject to Rural Valley Lands Plan Checklist to Control Development in a County Approved City Urban Area Boundary (CACUAB). As noted earlier, the Project is General Plan Amendment No. GPA 16-005 to change the land use designation from Agriculture to Rural Residential on a 7.29-acre portion of a 27.83 acre parcel; Zone Change No. PZC 16-007 on a 7.29-acre portion of a 27.83 acre parcel from the AE-40 (Exclusive Agriculture – 40 acre minimum) to R-A-87 (Rural Residential – 87,000 sq. ft. minimum); and Tentative Parcel Map No. PPM 16-030 to divide a 27.83-acre parcel into three parcels and a remainder: Parcel 1 = 2.23 acres, Parcel 2 = 2.23 acres, Parcel 3 = 2.23 acres and Remainder Parcel = 20.97 acres, contingent upon the Board of Supervisors’ approval of GPA 16-005 & PZC 16-007, with the requirement to file a final map. It is not intended, nor will it 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. As such, the Project would result in No Impact to this resource. c) No Impact – As noted in the discussion for Biological Resources Checklist Item f), the Project site is not located in an area covered by an adopted habitat conservation plan; natural community conservation plan; or other approved local, regional, or state habitat conservation plans. Therefore, the Project would result in No Impact to this resource.					

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
11.	MINERAL RESOURCES					
	Would the project:					
	a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
	b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
	Analysis: As discussed below, the Project is not near any known mineral resources. a) No Impact – No oil or gas wells are located within or near the proposed Project site. According to the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), there are only three areas within Tulare County that produce (or have produced) gas and oil: the Trico gas field, the Deer Creek (including Deer Creek North), and Terra Bella oil fields (see http://www.conservation.ca.gov/dog/maps/Pages/d4_index_map1.aspx). The nearest of these fields (Deer Creek) is located approximately 30 miles southeast of the Project site (see Tulare County General Plan 2030 Update Background Report, Figure 10-3). No other valuable mineral resources are known to exist on or near the Project site. Therefore, the Project would result in No Impact to this resource. b) No Impact - According to the Environmental Resources Management Element of the Tulare County General Plan 2030 Update (Part I – Goals and Policies Report, Chapter 8), the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. The Project site does not contain any of the minerals or natural resources of local or state significance known to exist in the County. According to the Environmental Resources Management Element, the Project site is not in a Mineral Resource Zone and none are in the immediate Project vicinity; the nearest mineral resource zone is located approximately 6.5 miles east of the Project site (Section 8.9 – Mineral Resources, Figure 8-1). Therefore, the Project would result in No Impact to this resource.					
12.	NOISE					
	Would the project result in:					
	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	☐	☐	☒	☐

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	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?	☐	☐	☐	☒
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: HS-8.11 <i>Peak Noise Generators</i>; HS-8.18 <i>Construction Noise</i>; HS-8.19 <i>Construction Noise Control</i> The Health and Safety Element of the Tulare County General Plan 2030 Update (Part I – Goals and Policies Report, Chapter 10) identifies noise producers in the County including highways and roads, railroads, manufacturing plants, airports, and agricultural operations. Table 10.1 of the Health and Safety Element (Section 10.8 – Noise, page 10-25) establishes noise level criteria for typical land uses throughout Tulare County. Exterior noise levels in the range of 60 dB Ldn or Community Noise Equivalent Level (CNEL), or below, are generally considered acceptable for residential land uses, 70 dB Ldn (or CNEL) or below are considered acceptable for golf courses, and 75 dB Ldn (or CNEL) or below are considered acceptable for industrial and agricultural uses. The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in CEQA documents and local noise ordinances, which generally acknowledge that short-term noise from construction-related activities is inevitable and cannot be mitigated beyond a certain level. The Health and Safety Element (Section 10.8 Noise) does not identify short-term, construction-noise-level thresholds. It does, however, limit noise generating activities such as construction to hours of normal business operation unless specific County approval is given. Thus, the County consents to short-term noise at levels that it would not accept from permanent noise sources. a) Less Than Significant Impact – Proposed Project construction-related activity would involve short-term, temporary noise sources from earthmoving equipment operations. Typical construction equipment would include a grader, trencher, and other miscellaneous equipment. During the construction phase, noise from construction activities would contribute to the noise environment in the immediate proposed Project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 1 below, ranging from 79 to 91 dBA at a distance of 50 feet, without feasible noise control (e.g., mufflers, well maintained equipment, shielding noisier equipment parts, and/or time and activity constraints) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise control.					

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT																																			
	<table><tr><th colspan="3">Table 1. Typical Construction Noise Levels</th></tr><tr><th rowspan="2">Type of Equipment</th><th colspan="2">dBA at 50 ft</th></tr><tr><th>Without Feasible Noise Control</th><th>With Feasible Noise Control¹</th></tr><tr><td>Dozer or Tractor</td><td>80</td><td>75</td></tr><tr><td>Excavator</td><td>88</td><td>80</td></tr><tr><td>Scraper</td><td>88</td><td>80</td></tr><tr><td>Front End Loader</td><td>79</td><td>75</td></tr><tr><td>Backhoe</td><td>85</td><td>75</td></tr><tr><td>Grader</td><td>85</td><td>75</td></tr><tr><td>Truck</td><td>91</td><td>75</td></tr><tr><td colspan="3">Source: U.S. Department of Transportation, Federal Transit Administration. 2006.</td></tr><tr><td colspan="3">¹ Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds operating in accordance with manufacturers specifications.</td></tr></table> During the site preparation phase of the three potential residences noted in the Project description, earthmoving equipment will circulate throughout the site thus dispersing both volume and frequency of noise exposure at variable distances resulting in dissipated dBA. Earthmoving operations will occur beyond 50 feet in distance to the nearest residences. Although the noise generated from earthmoving equipment may exceed the acceptable 60 dB Ldn for residential uses during earthmoving operations, the impact is short-term, temporary, and will only occur during normal business hours, typically from 8:00 a.m.-5:00 p.m. Therefore, the Project will not expose persons to excessive noise levels during construction-related activities. Project operations will not expose persons to noise levels in excess of standards established in the County’s Health and Safety Element (Section 10.8 Noise). Noise sensitive uses such as residential development, churches, schools and hospitals are considered during development of local industrial facilities, highways, major local streets, and other stationery sources. The Project site is located in an inhabited area with mixed agricultural and scattered, large lot, rural residences and is predominantly surrounded by agricultural uses (e.g., orchards). The nearest residences are located approximately 110 feet north of the Project’s northern property line; the nearest residence to the west is approximately 175 feet west; the nearest residence to the northeast is approximately 325 feet northeast; the nearest residence to the southeast is approximately 250 feet southeast; the nearest southerly residence (southeast) is approximately 440 feet southeast. Approximately 60 residences are within one mile of the existing parcel boundary, with the majority of these residences (approximately 30) located northwest of the Project site. Elbow Creek Elementary is located within ¼ mile (slightly northeast) of the Project site. If the residences are ultimately developed, the Project could generate intermittent construction activities-related noise during normal business (i.e., 8 A.M.-5 P.M.) attributable to workers and equipment (such as trenchers, backhoes, cement trucks, pneumatic nail guns, etc.). Other than typical residential uses noise (e.g., vehicles departing/arriving, outdoor related activities, yardwork equipment, etc.), the noise generated by the future residential uses would be similar to adjacent residences, agricultural-related activities, vehicle traffic, etc. As such, the proposed Project will not result in permanent noise, ground-borne noise, or vibrations; although construction-related equipment may generate low frequency sound vibrations. Therefore, the Project would result in a Less Than Significant Impact to this resource. b) No Impact – As previously noted, the Project does not include any operations that would result in excessive ground-borne vibrations or other noise levels. Therefore, the Project would result in No Impact to this					Table 1. Typical Construction Noise Levels			Type of Equipment	dBA at 50 ft		Without Feasible Noise Control	With Feasible Noise Control ¹	Dozer or Tractor	80	75	Excavator	88	80	Scraper	88	80	Front End Loader	79	75	Backhoe	85	75	Grader	85	75	Truck	91	75	Source: U.S. Department of Transportation, Federal Transit Administration. 2006.			¹ Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds operating in accordance with manufacturers specifications.		
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		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
	resource. c) Less Than Significant Impact – The Project is not anticipated to result in a substantial permanent increase in ambient noise levels, although intermittent increases in noise may occur from departing and arriving vehicles and from other equipment (such as outdoor related activities, yardwork equipment, etc.) used on the site. Therefore, the Project would result in a Less Than Significant Impact to this resource. d) Less Than Significant Impact – The Project is not anticipated to result in substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. The Project site is not within a noise-impacted corridor, but rather it is situated within an agricultural area where equipment is typically operated during daylight hours. As such, the Project would result in a Less Than Significant Impact to this resource. Also see discussions at Items 12 a) thru c). e) No Impact - According to the Tulare County Comprehensive Airport Land Use Plan (CALUP), the Project site is not located within an airport land use plan or within two miles of a public-use airport. The nearest public-use airports with airport land use plans are Woodlake Airport (approximately eight miles east of the Project site in Woodlake, CA) (CALUP, Figure 1-1). Therefore, the Project would result in No Impact to this resource. f) No Impact - The Project site is not within the vicinity of any known private airstrips. Therefore, the Project would result in No Impacts to this resource.					
13.	POPULATION AND HOUSING					
	Would the project:					
	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?	☐	☐	☐	☒
	Analysis: a) - c) No Impact - The Project consists of a subdivision of a parcel to four parcels to accommodate up to three potential home sites. The Project will not be growth inducing, rather, it is considered growth accommodating. As with any residential project, the future residential units (if developed) will be required to comply with applicable standards, guidelines, requirements, etc. Based on Tulare County’s average household size, the three residences would result in approximately 10 persons (based on the County’s average household size of 3.24 person per owner-occupied units (see California Department of Finance, 2011-2015 American Community Survey 5–year Estimates: Tenure)). As such, the proposed Project will					

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	not result in demographic or population changes, induce population growth, alter the location, distribution, or density of the area's population, or displace any housing or people; and the Project does not conflict with the County's adopted housing element. Therefore, the Project would result in No Impact to these resources.				
14.	PUBLIC SERVICES				
	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:				
	a) Fire protection?	☐	☐	☒	☐
	b) Police protection?	☐	☐	☒	☐
	c) Schools?	☐	☐	☒	☐
	d) Parks?	☐	☐	☐	☒
	e) Other public facilities?	☐	☐	☐	☒
	Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: WR-3.3 <i>Adequate Water Availability</i>; PFS-7.2 <i>Fire Protection Standards</i>; PFS-7.8 <i>Law Enforcement Staffing Ratios</i>. a) Less Than Significant Impact – The Project consists of a subdivision of a parcel to four parcels to accommodate up to three potential home sites. As such, the Project will not result in the need for additional fire protection facilities. County fire protection services will likely be provided by the nearest fire station, Station No. 8, located in Ivanhoe (approximately four miles east of the Project site). City of Visalia Fire Station No. 54 is located approximately four miles south of the Project site and could provide assistance as requested by Tulare County Fire Department via a mutual aid agreement. Therefore, the Project will have a Less Than Significant Impact to this resource. b) Less Than Significant Impact – As noted earlier, the proposed Project will result in minimal population growth and will, therefore, not significantly impact the need for additional police facilities. Police protection will be provided by the Tulare County Sheriff's Department (Sheriff's Cutler-Orosi Substation, located in Cutler, is approximately 11 miles north/northwest of the Project site). City of Visalia Police Substation NW Third Street is located approximately four miles north of the Project site and could provide assistance as requested by Tulare County Sheriff's Office via a mutual aid agreement. Therefore, the Project will have a Less Than Significant Impact to this resource. c) Less Than Significant Impact - The proposed Project is estimated to result in approximately 10 persons. As such, very minimal population growth and subsequent school-aged student growth would occur. The Project is within the Visalia Unified School District (VUSD); therefore, VUSD has the authority to levy school fees as development occurs to use as determined by VUSD; including the addition of new or expansion of existing education facilities. Therefore, it is not anticipated that the Project would result in the need for additional school facilities. As such, the Project would result in a Less Than Significant Impact to this resource. d) No Impact - Community parks are not located within or in the vicinity of the proposed Project. Therefore, the Project would result in No Impact to this resource.				

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	e) No Impact – Electricity to the Project site will be provided by Southern California Edison. Existing communication facilities are adequate for the Project. The proposed Project will not impact the need for any other public or utility services. Therefore, the Project would result in No Impact to this resource.				
15.	RECREATION				
	a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
	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?	☐	☐	☐	☒
	Analysis: a) No Impact - The proposed Project will not increase the use of any public park facilities and will result in no environmental impacts on existing neighborhood, regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, the Project would result in No Impact to this resource. b) No Impact - The Project does not include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Therefore, the Project would result in No Impact to this resource.				
16.	TRANSPORTATION/TRAFFIC				
	Would the project:				
	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	☐	☐	☒	☐

			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
		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 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 supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: LU-1.10 <i>Roadway Access</i>. A Trip Generation Analysis (TGA) was prepared by Omi-Means Engineering Solutions in March 2017, to evaluate anticipated Project-related traffic and to identify potential traffic-related impacts. The TGA is included in this Initial Study as Attachment “D”. As noted in the TGA, “The purpose of this Memorandum is to identify any potential traffic impacts that may occur as a result of splitting a parcel to add additional single-family dwelling units (SFDU). The proposed project is generally located on the southeast corner of Avenue 328/Road 132 in Tulare County, just north of the city limits of Visalia.”²⁷ “Avenue 328 and Road 132 are both County owned and maintained roads. They are two-lane undivided roadways with narrow shoulders and are in good condition, based upon visual review of the exterior pavement. An all-way stop-controlled intersection is the traffic control that is currently in operation. All of the approaches on Avenue 328 and Road 132 operate with shared movements, i.e., a single lane with shared left, through and right movements.”²⁸ “Existing Traffic Volumes Based upon Omni-Means’ understanding of the project, the following existing intersection was identified as important intersection for this study: Avenue 328/Road 132. At the study intersection, existing weekday AM and						

²⁷ Trip Generation Analysis (TGA) was prepared by Omi-Means Engineering Solution in March 2017. Page 1. (See Attachment “E” of this document)

²⁸ Ibid.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT																																				
PM peak-hour traffic volume counts were conducted by Metro Traffic Count Data, Inc., on Thursday, March 9, 2017, while local schools were in session and the weather was clear (reference Appendix [of the TGA] for turning movement report). The traditional AM peak period is defined as one-hour of peak traffic flow counted between 7:00 AM and 9:00 AM and the traditional PM peak period is defined as one-hour of peak traffic flow counted between 4:00 PM and 6:00 PM. Actual peak hour factors and heavy-duty truck percentages were applied to the existing conditions evaluation.”²⁹ “Existing Traffic Operations Traffic operations have been quantified through the determination of “Level of Service” (LOS). LOS is a qualitative measure of traffic operating conditions, whereby a letter grade “A” through “F” is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. LOS was calculated for intersection control types using the methods documented in the Highway Capacity Manual 2010 (HCM 2010). LOS definitions for different types of intersection controls are outlined in the Appendix [of the TGA]. According to the Tulare County General Plan Circulation Element, LOS “D” is the standard used for all county streets and roads. For purposes of this report, LOS “D” is taken as the CEQA significance threshold for minimum acceptable traffic operations on non-state highway facilities. Intersection turning movement volumes and LOS worksheets are contained in the Appendix [of the TGA]. “Existing” peak-hour intersection traffic operations were quantified applying existing traffic volumes and existing intersection lane geometrics and control (shown on Figure 1 [of the TGA]). Table 1 presents the “Existing” peak hour intersection delay and LOS. <table><tr><th colspan="9">Table 1 Existing Conditions Intersection Level-Of-Service</th></tr><tr><th colspan="3"></th><th colspan="3">AM Peak Hour</th><th colspan="3">PM Peak Hour</th></tr><tr><th>No.</th><th>Intersection</th><th>Control Type</th><th>Delay (sec/veh)</th><th>LOS</th><th>Warrant Met?</th><th>Delay (sec/veh)</th><th>LOS</th><th>Warrant Met?</th></tr><tr><td>1</td><td>Avenue 328/Road 132</td><td>AWSC</td><td>19.1</td><td>C</td><td>No</td><td>12.9</td><td>B</td><td>No</td></tr></table> Legend: AWSC: All-Way Stop-Control; Warrant: CA MUTCD Peak-Hour Warrant-3. As shown in Table 1, the intersection at Avenue 328/Road 132 currently operates at acceptable LOS “C” conditions during the AM peak hour period and LOS “B” conditions during the PM peak hour period.”³⁰ “Project Trip Generation Table 2 identifies the estimated trip generation of the project’s land-use based upon data presented in ITE Trip Generation (9th Edition). As shown in Table 2, the project is estimated to generate 29 daily trips, including 2 AM peak hour trips (1 in and 2 out) and 3 PM peak hour trips (2 in and 1 out).”³¹						Table 1 Existing Conditions Intersection Level-Of-Service												AM Peak Hour			PM Peak Hour			No.	Intersection	Control Type	Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?	1	Avenue 328/Road 132	AWSC	19.1	C	No	12.9	B	No
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²⁹ Op. Cit. 2

³⁰ Op. Cit.

³¹ Op. Cit. 2-3.

			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT																																																																											
<table><tr><th colspan="9">Table 2 Project Trip Generation</th></tr><tr><th rowspan="2">Land Use Category (ITE Code)</th><th rowspan="2">Unit¹</th><th rowspan="2">Daily Trip Rate/Unit²</th><th colspan="3">AM Peak Hour Trip Rate/Unit</th><th colspan="3">PM Peak Hour Trip Rate/Unit</th></tr><tr><th>Total</th><th>In %</th><th>Out %</th><th>Total</th><th>In %</th><th>Out %</th></tr><tr><td>Single Family Detached Housing (210)</td><td>DU</td><td>9.57</td><td>0.75</td><td>25%</td><td>75%</td><td>1.01</td><td>63%</td><td>37%</td></tr><tr><th rowspan="2">Project Name</th><th rowspan="2">Quantity (Units)</th><th rowspan="2">Daily Trips</th><th colspan="3">AM Peak Hour Trips</th><th colspan="3">PM Peak Hour Trips</th></tr><tr><th>Total</th><th>In %</th><th>Out %</th><th>Total</th><th>In %</th><th>Out %</th></tr><tr><td></td><td>3</td><td>29</td><td>2</td><td>1</td><td>2</td><td>3</td><td>2</td><td>1</td></tr><tr><td colspan="2">Net New Project Trips³</td><td>29</td><td>2</td><td>1</td><td>2</td><td>3</td><td>2</td><td>1</td></tr><tr><td colspan="9">Notes: 1. DU = dwelling unit 2. Trip rates based on ITE Trip Generation Manual 9th 3. Rounding errors may occur</td></tr></table>							Table 2 Project Trip Generation									Land Use Category (ITE Code)	Unit ¹	Daily Trip Rate/Unit ²	AM Peak Hour Trip Rate/Unit			PM Peak Hour Trip Rate/Unit			Total	In %	Out %	Total	In %	Out %	Single Family Detached Housing (210)	DU	9.57	0.75	25%	75%	1.01	63%	37%	Project Name	Quantity (Units)	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips			Total	In %	Out %	Total	In %	Out %		3	29	2	1	2	3	2	1	Net New Project Trips ³		29	2	1	2	3	2	1	Notes: 1. DU = dwelling unit 2. Trip rates based on ITE Trip Generation Manual 9 th 3. Rounding errors may occur								
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Project Trip Nature, Distribution and Assignment The project is expected to “generate” and “attract” a small amount of trips throughout the area. Directional trip distribution for project generated trips was estimated based upon existing traffic flow patterns, geographic location of the project sites and location of other similar destinations. These considerations resulted in a distribution project trips throughout the study area and is summarized below: • 65% to/from Avenue 328 west of project driveway via Road 132 • 35% to/from Avenue 328 east of project driveway”³² “Existing plus Project Operations Adding the project trips (as shown in Table 2) to Existing traffic conditions, Table 3 identifies Existing plus Project traffic operations at the study intersection. <table><tr><th colspan="9">Table 3 Existing Plus Project Conditions Intersection Level-Of-Service</th></tr><tr><th colspan="3"></th><th colspan="3">AM Peak Hour</th><th colspan="3">PM Peak Hour</th></tr><tr><th>No.</th><th>Intersection</th><th>Control Type</th><th>Delay (sec/veh)</th><th>LOS</th><th>Warrant Met?</th><th>Delay (sec/veh)</th><th>LOS</th><th>Warrant Met?</th></tr><tr><td>1</td><td>Avenue 328/Road 132</td><td>AWSC</td><td>19.3</td><td>C</td><td>No</td><td>13</td><td>B</td><td>No</td></tr></table> Legend: AWSC: All-Way Stop-Control; Warrant: CA MUTCD Peak-Hour Warrant-3. As shown in Table 3, the study intersection is projected to continue operate at acceptable LOS “C” and “B” conditions, respectively, during the AM and PM peak hour periods under the Existing plus Project scenario.”³³ a) Less Than Significant Impact – The Project will not result in a substantial increase in roadway vehicle volume or vehicle miles traveled. As indicated in the Traffic Generation Assessment (TGA, page 1), per the							Table 3 Existing Plus Project Conditions Intersection Level-Of-Service												AM Peak Hour			PM Peak Hour			No.	Intersection	Control Type	Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?	1	Avenue 328/Road 132	AWSC	19.3	C	No	13	B	No																																							
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³² Op. Cit. 3.

³³ Op. Cit.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	Institute of Transportation Engineers (ITE, 9th Edition), the Project will result in an estimated 29 ADT; with peak hour estimates in the morning at 2 trips and peak hour estimates in the evening at 3 trips. A traffic impact study is not required as contained in guidelines in the Transportation and Circulation Element of the Tulare County General Plan 2030 Update (Part I – Goals and Policies Report, Chapter 13), which require a traffic study when peak hour trips exceed 100 (see Policy TC-1.15, page 13-4). Pursuant to the California Department of Transportation (Caltrans) <i>Guide for the Preparation of Traffic Impact Studies</i> (http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf), a traffic impact study should be prepared if a project generates over 100 peak hour trips assigned to a state highway facility, where the facility is experiencing noticeable delays; approaching unstable traffic flow conditions (LOS "C" or "D"). Therefore, the Project will not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, and impacts are Less Than Significant. b) Less Than Significant Impact – The minimum requirements for Level of Service (LOS) standards in Tulare County are set forth by Tulare County Association of Governments (TCAG). LOS standards shall be no worse than “D” in rural areas (TCAG, <i>2014-2040 Regional Transportation Plan & Sustainable Communities Strategy</i>, System Performance Policy No. 2, page 2-4). As indicated in the TGA, the intersection at Avenue 328 and Road 132 currently operates at acceptable LOS “C” conditions during the A.M. peak hour period and LOS “B” conditions during the PM peak hour period. Therefore, the evaluation of traffic generated by the project indicates that there will not be any significant impact to the nearby roadway facilities, and no further traffic study is warranted.” (see TGA, page 2) As Project-related traffic will not cause the adjacent roadways to operate at an unacceptable LOS, and a TIS is not warranted, the Project will not conflict with the applicable congestion management program; impacts are Less Than Significant. c) No Impact – No air traffic exists in the Project area. The proposed Project is intended to accommodate the ultimate construction of three single-family rural residences. As the nearest operational airport is approximately eight miles east, it is not possible that the proposed Project would interfere with air traffic or result in the need to increase or change current air traffic operations. Therefore, there would be No Impacts to air traffic patterns. d) Less Than Significant Impact – The project will not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, hazards or barriers for vehicles, pedestrians, or bicyclists. The Project site is near SR 63 (approximately one miles east) but does not have has direct access to the State Route; as such, the Project will not increase hazards due to a design feature. Therefore, a Less Than Significant Impact would occur as a result of the Project. e) Less Than Significant Impact – The Project will not result in inadequate emergency access. Conditions of approval have been included that requires the applicants to provide surfaced, year-round access for emergency fire department response and submittal of all site plans to the County Fire Chief for approval to assure fire protection measures and standards are met. Therefore, the Project will not result in inadequate emergency access and would result in a Less Than Significant Impact. f) No Impact – TCAG’s <i>2014-2040 Regional Transportation Plan & Sustainable Communities Strategy</i>				

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
	contains policies regarding public transit, bicycle, and pedestrian facilities within Tulare County. This Plan includes a proposed Class II Bike Project along SR 63; however, as the Project is approximately one-mile distance from SR 65, it will result No Impact to bicycle or pedestrian facilities.					
17.	TRIBAL CULTURAL RESOURCES					
	Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
	a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☐	☒
	b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☒	☐
	Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: ERM-6.1 <i>Evaluation of Cultural and Archaeological Resources</i>; ERM-6.3: <i>Alteration of Sites with Identified Cultural Resources</i>; ERM-6.4: <i>Mitigation</i>; ERM-6.7 <i>Cooperation of Property Owners</i>; ERM-6.8 <i>Solicit Input from Local Native Americans</i>; ERM-6.9: <i>Confidentiality of Archaeological Sites</i>; ERM-6.10: <i>Grading Cultural Resources Sites</i>. A Cultural Resources Assessment (CRA) was prepared by consultant Sierra Valley Cultural Planning in May 2017, and is included in the Initial Study as Attachment “B”. The CRA finds, “No archaeological or other cultural resources were identified as a result of this study. Therefore, it is unlikely that the proposed action will have an effect on important archaeological, historical, or other cultural resources. No further cultural resources investigation is therefore recommended.”³⁴ However, in the event of accidental discovery of Tribal Cultural Resources during Project construction-related activities, Mitigation Measures will be implemented to reduce any potential impacts to less than significant. “Prior to field inspection, a records search was completed by the Southern San Joaquin Valley Information Center (SSJV) of the California Historical Resources Information System staff to identify areas previously investigated and to identify known cultural resources present within or in close proximity to the Project APE. According to the Information Center records, there are no prehistoric or historic-period sites or structures identified within the project APE, and no prehistoric or historic-period sites or structures are identified within a					

³⁴ “Cultural Resources Assessment, 27-Acre Parcel (APN 079-190-017, 13401 Avenue 328 At Ben Maddox Way, Tulare County, California”. March 2017 Page. 3. Prepared by Sierra Valley Cultural Planning.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	¼-mile radius of the study area. There have been have been no previous investigations within the APE or within ¼-mile radius. No cultural resource sites listed on the National Register of Historic Places, the California Register of Historic Resources California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources have been documented within ¼-mile radius of the project APE.”³⁵ “Survey methods involved walking the perimeters of the parcel and attempting to walk several east to west transects within the 27-acre parcel. A Panasonic DMC-TS20 digital camera was used to photo document the project setting and any items of note within the study area. All photo information was recorded in the field on a photo-log. Ground visibility across the entire project area was extremely poor (0 to 2 percent). Dense non-native grasses two to four feet tall completely obscured all of the ground surfaces. Along the edges of the parcel vegetation had been mowed in the recent past. In these areas grasses were ten to twelve inches tall. Soils across the parcel are a fine grain silty sandy loam with clay. Inspected soils have a general Munsell color value of 10yr 3/2, dark grayish brown (wet).”³⁶ “Two items were documented as a result of this survey. Along the western edge of the parcel is a north- to south-trending irrigation ditch. This unlined ditch measures approximately ten feet wide by four feet deep. The banks of the ditch area are level and free of any vegetation. No associated ditch gates or concrete features were observed along the inspected portion of the ditch. At the southeast corner of the study area is a Fairbanks-Morse Pomona turbine pump (Figures 6-7 [in the CRA]). The above ground portion of the pump motor is four feet tall. The electrical source for the pump is a nearby wooden utility pole. On September 02, 1944, the Fairbanks-Morse and Company purchased the Pomona Pump Company. After the acquisition, Pomona pumps were labeled “Fairbanks-Morse Pomona” (The Log of West Coast Maritime Industries, July 1944, Volume 39, No.7, page 126. Source accessed via Google Books March 24, 2017). No archaeological or other cultural resources were identified as a result of this study. Therefore, it is unlikely that the proposed action will have an effect on important archaeological, historical, or other cultural resources. No further cultural resources investigation is therefore recommended. In the unlikely event that buried archaeological deposits are encountered within the project area, the finds must be evaluated by a qualified archaeologist. Should human remains be encountered, the County Coroner must be contacted immediately; if the remains are determined to be Native American, then the Native American Heritage Commission must be contacted as well.”³⁷ a) No Impact – As noted above, there are no resources within or in the immediate vicinity of the study area that are listed on the National Register of Historic Places, the California Register of Historic Resources, California Points of Historical Interest, or the California State Historic Resources Inventory. There were two items (a ditch and a turbine pump) observed; however, these items are not listed in any historical records. No buildings or historic structures, monuments, or markers will be removed as part of the Project. Therefore, the Project will not result in any substantial adverse change in the significance of an historical resource as defined in Public Resources Code Section 5020.1(k). Therefore, the Project would result in No Impact to this resource. b) Less Than Significant Impact – A Sacred Lands File (SLF) search was conducted on May 17, 2017, by the Native American Heritage Commission (NAHC) which then provided a response indicating “negative				

³⁵ Ibid. Page 4

³⁶ Op. Cit. 13

³⁷ Op. Cit. 13-14.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	results” meaning that no sacred lands are located within or near the USGS Quadrangle where the Project is located. After receiving the NAHC’s list of applicable tribes for consultation pursuant to SB 18 and AB 52, Tulare County RMA staff contacted eleven (11) Native American tribal contacts, representing five (5) tribes, by letter (see Attachment “E”) regarding the proposed Project, to provide an opportunity for consultation. None of the tribes responded requesting consultation within the mandatory response time-frames. Standard and generally-accepted procedure for reviewing land use projects for potential archaeological/cultural resources is to determine whether the subject site is on any features which would have attracted prehistoric peoples. As noted above, the on-site pedestrian survey observed that vegetation had been mowed in the recent past along the edges of the Project site, the non-native grasses were ten to twelve inches tall, and the soils across the parcel are a fine grain silty sandy loam with clay, and inspected soils have a general Munsell color value of 10yr 3/2, dark grayish brown (wet). The CRA found that no archaeological or other cultural resources were identified within the project APE as a result of the survey, it is unlikely that the proposed action will have an effect on important archaeological, historical, or other cultural resources, and that no further cultural resources investigation is therefore recommended. The following standard Conditions of Approval, consistent with existing State regulation, have been included in the Project and will be implemented in the unlikely event that tribal cultural resources are uncovered during Project construction. • In the event that historical, archaeological, paleontological, or tribal cultural resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recovery, excavation analysis, and curation of archaeological, paleontological, or tribal cultural materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County. • The property owner shall avoid and minimize impacts to paleontological and tribal cultural resources. If a potentially significant paleontological or tribal cultural resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the Tribe and paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project. • Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public				

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT	
	Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: - There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: - The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and - If the coroner determines the remains to be Native American: - The coroner shall contact the Native American Heritage Commission within 24 hours. - The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. - The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or - Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. - The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. - The descendant fails to make a recommendation; or - The landowner or his authorized representative rejects the recommendation of the descendent. Implementation of these standard conditions will reduce potential impacts to tribal cultural resources resulting from construction-related activities. Therefore, the Project would result in a Less Than Significant Impact to Tribal Cultural Resources.					
18.	UTILITIES AND SERVICE SYSTEMS					
	Would the project:					
	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	☐	☐	☐	☒

			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
		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?	☐	☐	☐	☒
	Analysis: The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: PFS-2.1 <i>Water Supply</i>; PFS-2.2 <i>Adequate Systems</i>; PFS-2.4 <i>Water Connections</i>; PFS-3.1 <i>Private Sewage Disposal Standards</i>; PFS-4.2 <i>Site Improvements</i>; PFS-4.4 <i>Stormwater Retention Facilities</i>; PFS-5.7 <i>Provisions for Solid Waste Storage, Handling, and Collection</i>; PFS-7.2 <i>Fire Protection Standards</i>. As noted earlier in Item 9 b), the Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. A technical memorandum was prepared by Kenneth D. Schmidt and Associates Groundwater Quality Consultants which concludes that sufficient groundwater exists via well extraction to provide sufficient groundwater for 40 years for the three proposed residences (see Attachment "C" of this document). a) No Impact –Wastewater treatment has the potential to violate water quality standards or waste discharge requirements. Treatment of wastewater from the potential three residences will be achieved via individual engineered septic disposal systems. The disposal systems shall be designed by a licensed professional knowledgeable and experienced in the field of sewage disposal system and design (a registered civil engineer, registered environmental health specialist, or registered engineering geologist). The Project engineering and design features in compliance with California Building Code and Waste Discharge Requirements will ensure the proper preventative measures will be taken to eliminate any adverse impacts from the use of individual septic systems. Furthermore, the following conditions of approval, as recommended by the Tulare County Environmental Health Services Division (EHSD) will be implemented to reduce potential impacts from wastewater treatment: the specifications and engineering data for the system shall be reviewed and approved by the EHSD prior to the release of building permits. Therefore, the Project will not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board and would result in No Impact to this resource.					

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	b) No Impact – The Project will not require or result in the construction of new water or wastewater treatment or expansion of existing facilities, the construction of which could cause significant environmental effects. As previously noted, treatment of wastewater will be achieved via an engineered on-site septic system. As such, the Project does not require the expansion of existing or the construction of new off-site wastewater facilities and would result in No Impact to this resource. c) No Impact – The Project will not substantially alter the existing drainage pattern of the Project site or the surrounding area; as such, it would not result in substantial erosion or siltation. The Project will retain all stormwater on-site through the utilization of on-site grading. As such, the Project does not require or result in the construction of new or expansion of existing off-site storm water drainage facilities, which could cause significant environmental effects. Therefore, the Project will result in No Impact to this resource. d) Less Than Significant Impact – The Project will have sufficient water supplies (including fire flow) available to serve the Project. See also discussion earlier at Item 9 b). Therefore, the Project will have sufficient water supplies and will result in a Less Than Significant Impact to this resource. e) No Impact – The Project is not served by a wastewater treatment facility. As previously noted, the Project will be served by an on-site engineered septic system. See discussions at items 17 a) and b). As such, the Project will result in No Impact to this resource. f) Less Than Significant Impact – Solid waste disposal services for the Project will be provided by the solid waste disposal company servicing the area. Tulare County Solid Waste Department operates three landfills with sufficient capacity to accommodate the proposed Project. The proposed Project will not generate solid waste in quantities that will potentially impact a landfill in an adverse manner; as such, the Project will be served by a landfill with sufficient permitted capacity to accommodate the Project’s solid waste disposal needs. Therefore, the Project will result in a Less Than Significant Impact to this resource. g) No Impact – As previously noted, waste disposal services will be provided by the solid waste disposal company servicing the area. As such, the Applicant must comply with federal, state, and local statutes and regulations related to solid waste. Therefore, there are No Impacts to this resource.				
19.	MANDATORY FINDINGS OF SIGNIFICANCE				
	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 species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

			SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
	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?	☐	☐	☒	☐

Analysis:

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: AG-1.14 *Right to Farm Noticing*; AQ-2.2 *Indirect Source Review*; AQ-3.4 *Landscape*; AQ-4.2 *Dust Suppression Measures*; ERM-1.1 *Protection of Rare and Endangered Species*; ERM-1.2 *Development in Environmentally Sensitive Areas (limits development in sensitive areas)*; ERM-1.3 *Encourage Cluster Development*; ERM-1.7 *Planting of Native Vegetation*; ERM-1.8 *Open Space Buffers (buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities)*; ERM-1.9 *Coordination of Management on Adjacent Lands (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-1.10 *Appropriate Access for Recreation*; ERM-1.11 *Hunting and Fishing (provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code)*; ERM-1.13 *Pesticides (implementing pesticide controls to limit effects on natural resources)*; ERM-1.14 *Mitigation and Conservation Banking Program (support the establishment and administration of a mitigation banking program for protection and recovery of threatened and endangered species impacted during the land development process)*; ERM-4.2 *Streetscape and Parking Improvements for Energy Conservation*; ERM-6.1 *Evaluation of Cultural and Archaeological Resources*; HS-1.2 *Development Constraints*; HS-1.4 *Building and Codes*; HS-1.11 *Site Investigations*; HS-2.8 *Alquist-Priolo Act Compliance*; HS-4.1 *Hazardous Materials*; HS-4.3 *Incompatible Land Uses*; and HS-4.4 *Contamination Prevention*; HS-8.11 *Peak Noise Generators*; HS-8.18 *Construction Noise*; HS-8.19 *Construction Noise Control*; LU-1.10 *Roadway Access*; PFS-2.1 *Water Supply*; PFS-2.1.1 *Adequate Systems*; PFS-2.4 *Water Connections*; PFS-3.1 *Private Sewage Disposal Standards*; PFS-4.2 *Site Improvements*; PFS-4.4 *Stormwater Retention Facilities*; PFS-5.7 *Provisions for Solid Waste Storage, Handling, and Collection*; PFS-7.2 *Fire Protection Standards*; PFS-7.8 *Law Enforcement Staffing Ratios*; SL-3.2 *Urban Expansion – Edges*; WR-2.1 *Protect Water Quality*; WR-2.2 *National Pollutant Discharge Elimination System (NPDES) Enforcement*; WR-2.3 *Best Management Practices (BMPs)*; WR-2.4 *Construction Site Sediment Control*; WR-3.3 *Adequate Water Availability*; and PFS-7.8 *Law Enforcement Staffing Ratios*.

- a) Based on the analyses above, no “Significant Impacts” were identified, and findings of “Less Than Significant Impact” or “No Impact” are appropriate for the Project for all resources with the exception of Biological Resources, which is found to be “Less Than Significant With Mitigation.” For resources in which “Less Than Significant Impacts” were identified, potential impacts will be reduced to a less than significant level by application and enforcement of State and other local standards, rules, regulations, orders, etc., or through County ordinances and/or conditions made a part of the project approval.

		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
As discussed in Checklist Item 4. Biological Resources, the pre-field survey reports found that there were 14 special status plant species and 18 special status wildlife species previously recorded within the Project study area, that is, on or within five miles of the Project site. The Biological Evaluation (BE) indicates that of the 14 special status plant species identified in the pre-field survey, all 14 species were presumed absent from the Project site; there was an absence of habitat for three species while the habitat has been rendered unsuitable by human disturbance for the remaining 11 species (see BE, Table 1, pages 11-12). Therefore, impacts to special status plant species would be Less Than Significant. The BE indicates that no special status wildlife species, or their sign (scat, burrows, etc.) were observed on the Project site during field surveys. Of the 18 special status wildlife species identified in the pre-field survey, the field surveys indicated that eight species are presumed absent from the Project site, four species are unlikely to occur on the Project site, and six have been determined to have the possibility of occurrence on the Project site (see BE, Table 1, page 12-15). The six wildlife species with possibility of occurrence are: Swainson's hawk (<i>Buteo swainsoni</i>); northern harrier (<i>Circus cyaneus</i>); white-tailed Kite (<i>Elanus leucurus</i>); loggerhead shrike (<i>Lanius ludovicianus</i>); pallid bat (<i>Antrozous pallidus</i>); and western mastiff bat (<i>Eumops perotis</i>). The BE indicates the Project site does not provide nesting/roosting opportunities for the loggerhead shrike, northern harrier, tri-colored blackbird, pallid bat, and western mastiff bat; nor will the development of the Project have a significant impact on the foraging area of these species; therefore, impacts on special status bird and bat species is Less Than Significant. Mitigation measures have been included in the Mitigation Monitoring and Reporting Program (included in this Initial Study as Attachment "F") for the San Joaquin kit fox, nesting raptors and non-specific migratory birds, and roosting bats. These mitigation measures include avoidance, compensation, and additional focused field surveys, and would reduce potential impacts to special status wildlife species to Less Than Significant With Mitigation. The BE also indicates that no potential jurisdictional waters are located on the Project site and there is no evidence of hydric soils, wetland hydrology, or hydrophytic vegetation. As such, mitigation measures are not required to reduce potential impacts to sensitive natural communities to Less Than Significant. b), c) Based on the analyses above, no "Significant Impacts" were identified, and findings of "Less Than Significant Impact" or "No Impact" are appropriate for the Project for all resources with the exception of Biological Resources, which was found to be "Less Than Significant With Mitigation". As such, a finding of "Less Than Significant Impact" is appropriate for the Mandatory Findings of Significance.					

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ATTACHMENT “A”

Biological Evaluation



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

**BIOLOGICAL EVALUATION
27-ACRE SUBDIVISION
APN 079-190-017
TULARE COUNTY, CALIFORNIA**

Prepared by:

LIVE OAK ASSOCIATES, INC.

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April 6, 2017

PN 2133-01

EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of an approximate 27-acre agricultural site proposed for residential subdivision (hereafter referred to as the project site). The project site is located south of Avenue 328, west of Road 138, east of Road 132, and north of Avenue 320, approximately 2 miles northeast of Visalia, in an unincorporated part of Tulare County, California. The proposed project consists of subdivision into four parcels, to eventually be converted to residential development. In March of 2017, LOA surveyed the project 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.

Land use identified within the project site is limited to fallow field. A mosaic of agricultural, and residential land uses surround the project site, within a region dominated by similar land uses.

As defined by the California Environmental Quality Act (CEQA), impacts associated with residential development would be less than significant for special status plant species, most special status animals occurring regionally, wildlife movement corridors, downstream water quality, sensitive habitats, and Waters of the U.S.

Potentially significant impacts associated with eventual residential development include project-related mortality of the San Joaquin kit fox, roosting bats, and nesting raptors and migratory birds protected under the federal Migratory Bird Treaty Act and related state laws. Project avoidance of active dens, roosts, and nests identified during preconstruction surveys conducted prior to periods of mass grading on individual lots, and implementation of minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* will ensure that impacts to all special status animal species are reduced to a less than significant level.

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1.0 INTRODUCTION

The technical report that follows describes the biotic resources of approximately 27 acres of agricultural land (hereafter referred to as the project site) proposed for subdivision into four parcels. The project site is located south of Avenue 328, west of Road 138, east of Road 132, and north of Avenue 320, approximately 2 miles north of Visalia in an unincorporated area of Tulare County, California (Figure 1). The site may be found on the *Monson* U.S. Geological Survey (USGS) 7.5-minute quadrangle in Section 9 of Township 18 South, Range 25 East, Mt. Diablo Base and Meridian (Figure 2).

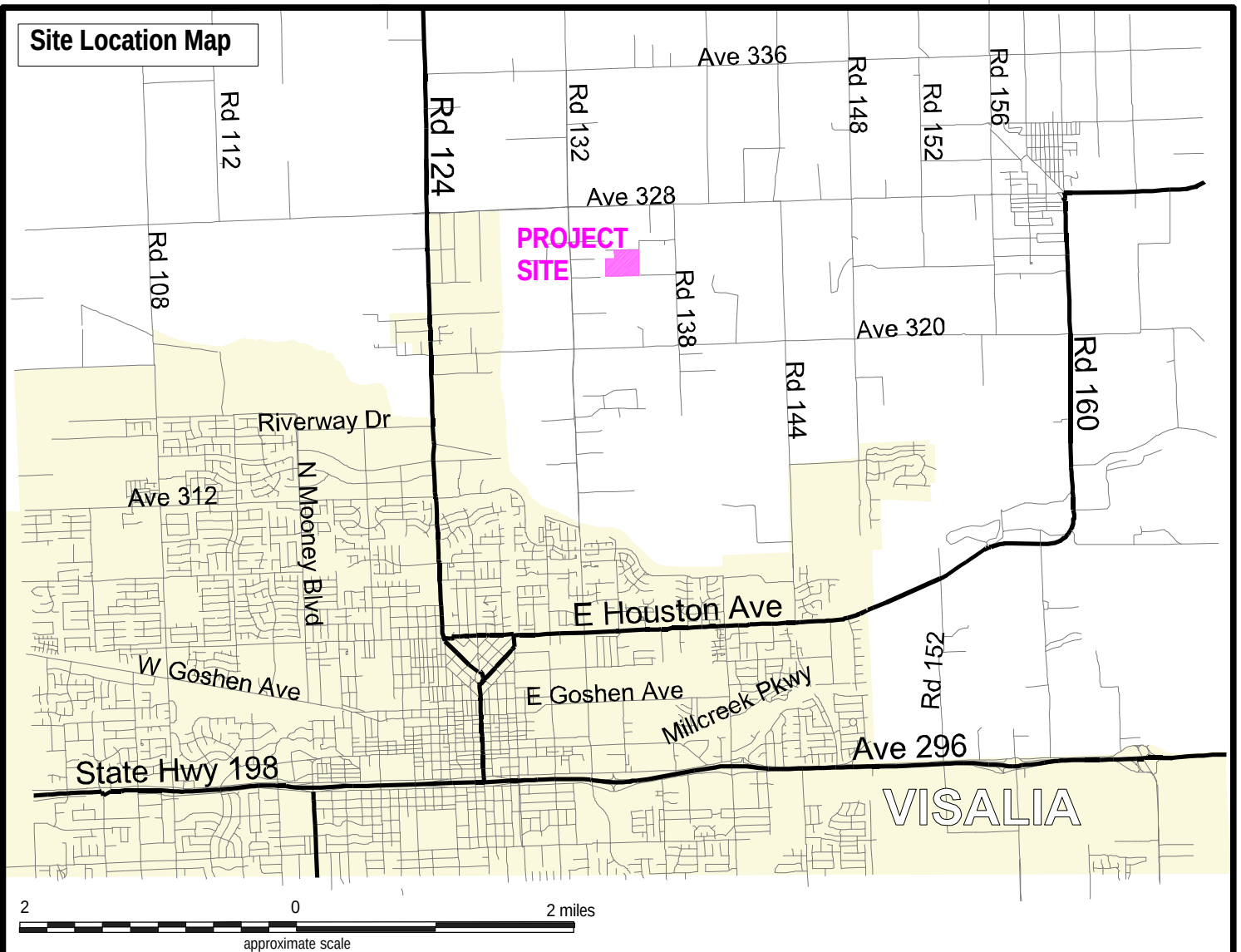
1.1 PROJECT DESCRIPTION

The proposed project (APN 079-190-017) is the subdivision of the 27-acre parcel into four parcels planned for residential use. Three of the parcels will be 2.5 acres in size, and the remaining parcel 20 acres. It is anticipated that each of the three smaller parcels will eventually be used for the development of one single-family home and associated outbuildings, landscaping, and infrastructure, and that the parcels will not be further subdivided. The 20-acre parcel may include construction of multiple structures suitable for a single family compound. For the purposes of this analysis, it is anticipated that eventually all 27 acres will be impacted by project implementation. The land use of the project site will change from agriculture to residential.

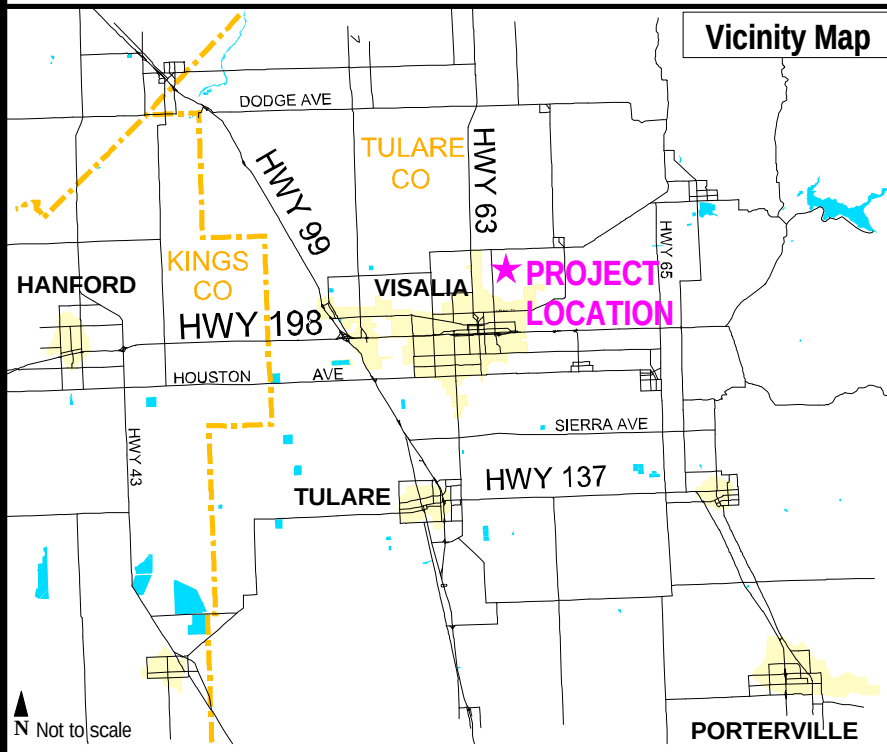
1.2 REPORT OBJECTIVES

The development of agricultural lands and other open space parcels may damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by policies and ordinances of Tulare County. This report addresses issues related to: 1) sensitive biotic resources occurring within the project site; 2) the federal, state, and local laws regulating such resources, and 3) mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:

Site Location Map



Vicinity Map



Regional Map



Live Oak Associates, Inc.

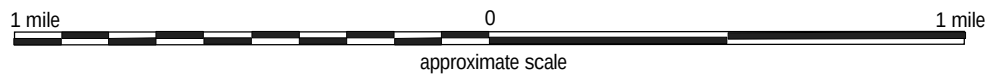
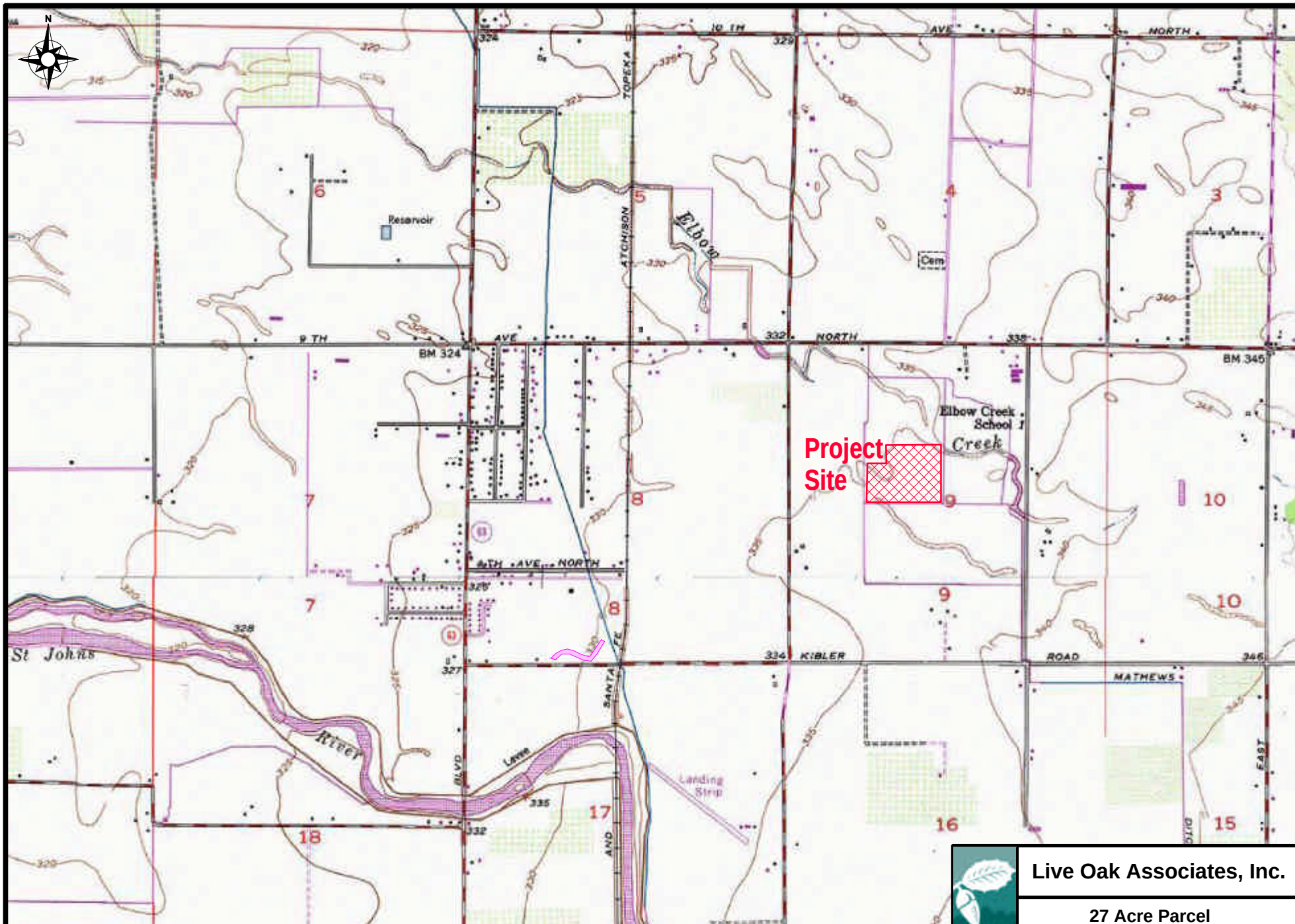
27 Acre Parcel
Site / Vicinity Map

Date
3/28/2017

Project #
2133-01

Figure #

1



From USGS
Monson 7.5' Quadrangle 1969



Live Oak Associates, Inc.

27 Acre Parcel
U.S.G.S. Quadrangle

Date	Project #	Figure #
3/28/2017	2133-01	2

- Make reasonable inferences about the biological resources that could occur within the project site based on habitat suitability and the proximity of the project site to a species' known range;
- Summarize all site-specific information related to existing biological resources;
- Identify and discuss project impacts to biological resources likely to occur within the project site within the context of CEQA or any state or federal laws;
- Summarize all state and federal natural resource protection laws that may be relevant to future development of the project site; and
- Identify avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

1.3 STUDY METHODOLOGY

A field survey of the project site was conducted on March 20, 2017 by LOA ecologist Wendy Fisher. The survey consisted of driving the perimeter road of the project site, conducting a meandering walk periodically, and using binoculars to scan the site and adjacent lands. During the survey, the principal land uses of the project site were identified and the constituent plants and animals of each land use were noted.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the project site. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2017a), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2017), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

Detailed surveys for sensitive biological resources were not conducted for this study. Field surveys conducted for this study were sufficient to assess the significance of possible biological impacts associated with full development of the project site and to assess the need for more detailed studies that could be warranted if sensitive biotic resources were identified in this initial survey.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The project site is located in the central San Joaquin Valley. The valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the central San Joaquin Valley (and the project site) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the project site is about 8 inches, almost 85% of which falls between the months of October and March (Western Regional Climate Center 2009). Nearly all precipitation falls in the form of rain.

The principal drainage of the area and the project vicinity is the St. Johns River, which flows southeast to northwest approximately one mile southwest of the site. The St. Johns River is a tributary of the Kaweah River and historically terminated in Tulare Lake. It formerly contained large areas of riparian, wetland, and aquatic ecosystems that supported large populations of diverse native plants and animals. Presently, the St. Johns River supports only a fraction of the riparian habitat it once supported and the aquatic habitat has been greatly degraded from agricultural runoff and irregular flows. In essence the river has been reduced to a series of distributary channels supplying water to farmland in the region.

The project site is situated within a matrix of agricultural lands and residential development associated with the nearby communities. The project site is bordered by residential land to the west, north, and east, and orchard to the south. Sheep pasture and a seasonal pond were part of residential areas within 100 feet east of the site. The seasonal pond has been in place since prior to 1994, as seen by Google Earth historic images. Mathews Ditch, an earthen ditch, borders the site immediately on the west. Historically, a fragment of Elbow Creek, a distributary of the St. John's River, flowed from southeast to northwest adjacent to the site's northeastern corner.

However, no evidence of this stream was seen on the ground or from review of current aerial photographs.

2.2 PROJECT SITE

The project site consists of a fallow field. The topography of the site is relatively level, with an average elevation of 335 feet National Geodetic Vertical Datum (NGVD).

One soil mapping unit was identified within the project site, Grangeville sandy loam, 0-2% slopes (NRCS 2017). Grangeville soils occur on alluvial fans and floodplains, and are very deep, somewhat poorly drained soils formed in moderate coarse textured alluvium dominantly from granitic rocks.

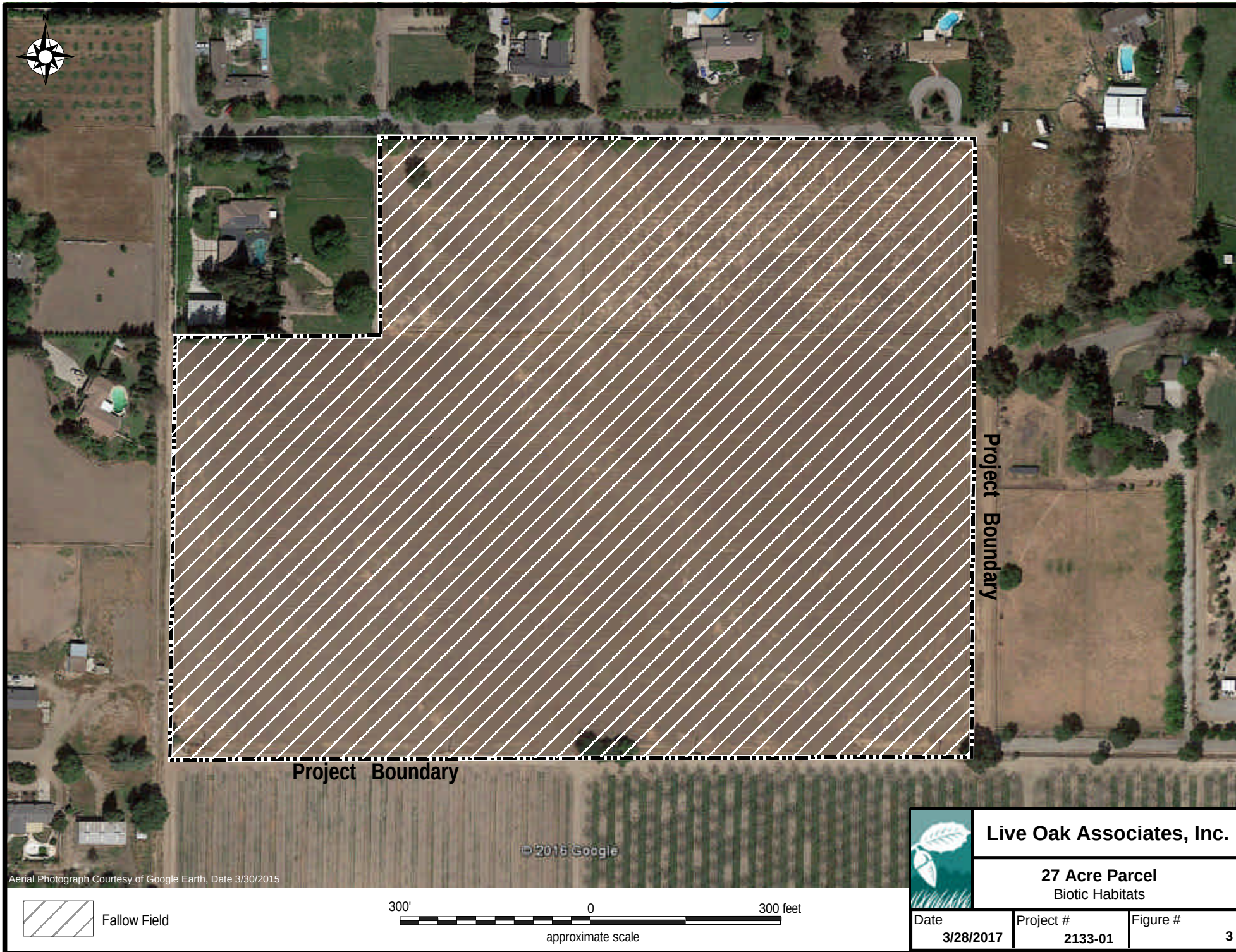
2.3 LAND USES

A single land use type was observed on the project site during the March 2017 field survey: fallow field (Figure 3). A list of the vascular plant species observed within the project site and the terrestrial vertebrates using, or potentially using, the site are provided in Appendices A and B, respectively. Photos of the project site are presented in Appendix C.

2.3.1 Fallow Field

The project site consisted entirely of a fallow agricultural field. Prior to 2011, the fallow field was in cultivation of a variety of agricultural crops. It has been left fallow for the last 6 years, allowing non-native weedy annuals to encroach upon the formerly highly managed field. The fallow field supported dense weedy annual plant species dominated by tall hedge mustard (*Sisymbrium altissimum*), barnyard barley (*Hordeum murinum* spp. *leporinum*), whitestem filaree (*Erodium moschatum*), and Menzies fiddleneck (*Amsinckia menziesii*). A few large valley oaks (*Quercus lobata*) lined the fallow field along its northern and southern boundaries, within the project area. The boundaries of the fallow field had recently been disced.

Historic agricultural practices within the fallow field limits its value to wildlife; however, some wildlife species would occur in these areas in limited numbers. Amphibians with the potential to



use the fallow field include Pacific chorus frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*). Reptiles that could occur in the field include the side-blotched lizard (*Uta stansburiana*), Pacific gopher snake (*Pituophis catenifer catenifer*), and common kingsnake (*Lampropeltis getulus*).

The fallow field also provides foraging habitat for a number of avian species. Common resident species likely to forage in the field include mourning doves (*Zenaida macroura*) and mixed flocks of Brewer's blackbirds (*Euphagus cyanocephalus*), brown-headed cowbirds (*Molothrus ater*), and European starlings (*Sturnus vulgaris*). Northern mockingbirds (*Mimus polyglottos*) and American crows (*Corvus brachyrhynchos*) were seen during the March 2017 survey, and are common visitors of agricultural sites. Summer migrants that would be common in the fallow field include the western kingbird (*Tyrannus verticalis*) while common winter migrants include the savannah sparrow (*Passerella sandwichensis*) and American pipit (*Anthus rubescens*).

Several mammal species would be expected to occur within the fallow field. Small mammals such as deer mice (*Peromyscus maniculatus*) and California voles (*Microtus californicus*) would occur in fluctuating numbers depending on the season and maintenance practices in the field. Botta's pocket gophers (*Thomomys bottae*) and California ground squirrels (*Otospermophilus beecheyi*) may also occur in the field. At the time of the field survey, the only small mammal burrows observed in the field were associated with the Botta's pocket gopher, and were located along the eastern boundary of the field. No ground squirrel burrows were observed within or on the boundaries of the fallow field. Various species of bat may also occasionally forage over the fallow field for flying insects. A domestic dog (*Canis familiaris*) was observed wandering through the field during the March field survey.

The presence of amphibians, reptiles, birds and small mammals is likely to attract foraging raptors and mammalian predators. Raptors such as the red-tailed hawk (*Buteo jamaicensis*) and northern harrier (*Circus cyaneus*) would likely forage over the fallow field from time to time. A red-shouldered hawk (*Buteo lineatis*) was observed flying overhead during the March 2017 field survey. Mammalian predators occurring in the fallow field would most likely be limited to the raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*) and red fox (*Vulpes vulpes*), as these species are relatively tolerant of human disturbance.

2.4 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as “threatened” or “endangered” under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as “species of special concern” by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as “special status species.”

A number of special status plants and animals occur in the vicinity of the project site (Figure 4). These species, and their potential to occur within the project site, are listed in Table 1 in the following pages. Sources of information for this table included *California’s Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFW 2017a), *Special Animals* (CDFW 2017b), *Endangered and Threatened Wildlife and Plants* (USFWS 2017), and *The California Native Plant Society’s Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2017). It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records.

A search of published accounts for all of the relevant special status plant and animal species was conducted for the *Monson* USGS 7.5-minute quadrangle in which the project site occurs, and for the eight surrounding quadrangles (*Orange Cove South, Stokes Mountain, Ivanhoe, Exeter, Visalia, Reedley, Goshen* and *Traver*) using the CNDDB Rarefind 5 (2017) program.

LEGEND

Special-status Plants

- ✱ California alkali grass
- California satintail
- Hoover's spurge
- ✱ San Joaquin Valley Orcutt grass
- ✱ Brittscale
- ☆ Recurved larkspur
- ◆ Spiny-sepaed button-celery

Special-status Animals

- California tiger salamander
- Burrowing owl
- ✱ Pallid bat
- ✱ Vernal pool fairy shrimp
- ☆ Vernal pool tadpole shrimp
- ◆ Western pond turtle
- ◆ Western spadefoot
- ✱ Western yellow-billed cuckoo

U.S. FWS Critical Habitats

- Hoover's Spurge
- San Joaquin Orcutt Grass
- Vernal Pool Tadpole Shrimp
- Vernal Pool Fairy Shrimp

Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service

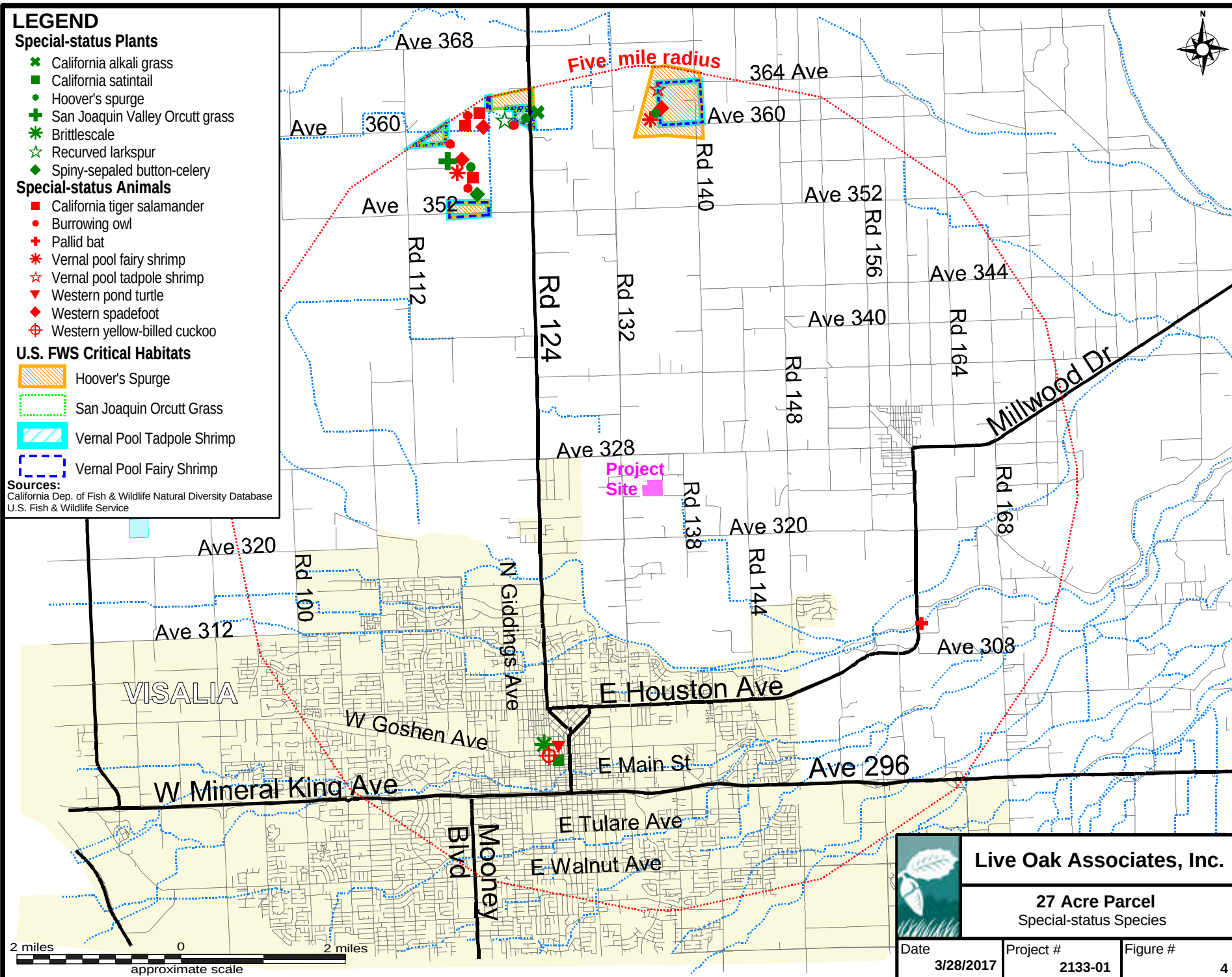


TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PROJECT SITE

PLANTS (adapted from CDFW 2017a and CNPS 2017)

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

Species	Status	Habitat	Occurrence within the Project Site
Hoover's Spurge (<i>Euphorbia hooveri</i>)	FT, CNPS 1B	This annual 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.
San Joaquin Valley Orcutt Grass (<i>Orcuttia inaequalis</i>)	FE, CE CNPS 1B	This annual occurs in vernal pools of the Central Valley; requires deep pools with prolonged periods of inundation; blooms April-September; elevation 100-2,480 ft.	Absent. Vernal pools are absent from the project site.
San Joaquin Adobe Sunburst (<i>Pseudobahia peirsonii</i>)	FT, CE CNPS 1B	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	Absent. Suitable heavy clay soils of the Porterville and Centerville series are absent from the project site.

CNPS-Listed Plants

Heartscale (<i>Atriplex cordulata</i> var. <i>cordulata</i>)	CNPS 1B	Occurs on saline or alkaline soils in chenopod scrub, meadows, seeps, and grasslands; blooms April-October; elevations below 1,230 ft.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
Earlimart Orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)	CNPS 1B	Occurs in valley and foothill grassland between 130 and 330 ft. in elevation; blooms August-September.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
Brittscale (<i>Atriplex depressa</i>)	CNPS 1B	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, grasslands, and vernal pools of the Central Valley; blooms April-October; elevations below 1,050 ft.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
Lesser saltscale (<i>Atriplex minuscula</i>)	CNPS 1B	Occurs widely scattered locations of California's Central Valley with sandy alkaline soils in chenopod scrub, valley grasslands, and vernal pools; blooms May-October; elevation 50-660 ft.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
Vernal Pool Smallscale (<i>Atriplex persistens</i>)	CNPS 1B	Occurs in alkaline vernal pools in Glenn, Madera, Merced, Solano, Stanislaus, and Tulare Counties; blooms June – September between 30-350 ft. in elevation.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
Subtle Orache (<i>Atriplex subtilis</i>)	CNPS 1B	Occurs in valley and foothill grassland; blooms August-October; elevation 130-330 ft.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
Recurved Larkspur (<i>Delphinium recurvatum</i>)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and grasslands; blooms March-June; elevations below 2,500 ft.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PROJECT SITE

PLANTS (adapted from CDFW 2017a and CNPS 2017)

CNPS-Listed Plants

Species	Status	Habitat	Occurrence within the Project Site
Spiny-Sepaled Button Celery (<i>Eryngium spinosepalum</i>)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
Winter's Sunflower (<i>Helianthus winteri</i>)	CNPS 1B	This perennial occurs in openings on relatively steep south-facing slopes, in granitic, often rocky soils of cismontane woodland and valley and foothill grassland; blooms January – December; elevation 400 to 1,500 ft.	Absent. The site is too low in elevation for this species. It is relatively flat topographically. Habitats are not suitable.
California Satintail (<i>Imperata brevifolia</i>)	CNPS 2B	This perennial grass occurs in chaparral, coastal sage scrub, creosote bush scrub and wetland/riparian habitat throughout much of southern California; blooms March – Sept.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.
California Alkali Grass (<i>Puccinellia simplex</i>)	CNPS 1B	This annual grass occurs in alkaline sinks, flats, lake margins, vernal pools, chenopod scrub, valley grassland and wetland-riparian habitats in much of Central California; blooms March – May; elevation 0-3,050 ft.	Absent. Historic and ongoing human disturbance of the project site has rendered habitats unsuitable for this species.

ANIMALS (adapted from CDFW 2017a and CDFW 2017b)

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

Species	Status	Habitat	Occurrence within the Project Site
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	Absent. Habitat suitable for this species is absent from the project site.
Vernal Pool Tadpole Shrimp (<i>Lepidurus packardii</i>)	FE	Primarily found in vernal pools, but may use other seasonal wetlands in mesic valley and foothill grasslands.	Absent. Habitat suitable for this species is absent from the project site.
Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>)	FT	Lives in mature elderberry shrubs of the Central Valley and Sierra foothills. Tulare County is one of the southern valley counties that is no longer considered to be within the range of this species.	Absent. The site is well south of this species range. Blue elderberry shrubs are absent from the site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PROJECT SITE

ANIMALS (adapted from CDFW 2017a and CDFW 2017b)

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

Species	Status	Habitat	Occurrence within the Project Site
California Tiger Salamander (<i>Ambystoma californiense</i>)	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most CTS aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	Absent. Habitat suitable for breeding is absent from the project site and surrounding lands. The residential pond immediately east of the site would not harbor breeding CTS, as it was constructed after the conversion of this area to residential and intensive agricultural uses, and appears to have an inundation regime not strictly tied to the rainy season. No rodent burrows providing suitable aestivation habitat were observed on the project site. The closest known occurrences of CTS are located in remnant grassland associated with the CDFW Stone Corral Ecological Reserve, 4 to 5 miles northwest of the project site.
Swainson's Hawk (<i>Buteo swainsoni</i>)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	Possible. Although relatively unlikely due to the project site being surrounded by residential development and orchards, both incompatible land uses for this species, Swainson's hawks could theoretically nest in the few valley oaks on the perimeter of the site, or in the eucalyptus trees immediately bordering the site to the north and east. The fallow field represents suitable foraging habitat for this species.
Western Yellow-billed Cuckoo (<i>Coccyzus americanus occidentalis</i>)	FT, CE	Utilizes densely wooded areas near waterways. Nests in riparian thickets of willow, and cottonwoods, with ample understory riparian vegetation.	Absent. Riparian habitat required by this species is absent from the site. The only documented occurrence of this species in the vicinity is from 1919.
Willow Flycatcher (<i>Empidonax traillii</i>)	CE	Utilizes densely wooded areas near waterways. Nests in riparian thickets of willow, and cottonwoods, with ample understory riparian vegetation.	Absent. Riparian habitat required by this species is absent from the site. The closest known occurrence of this species was recorded along Cottonwood Creek, approximately 13 miles northeast of the site, in 1988.
San Joaquin Kit Fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (6 to 10 inches in diameter) ground squirrel burrows as denning habitat.	Unlikely. The project site is situated within a matrix of intensive land uses making kit fox occurrence in the vicinity unlikely. No suitable burrows for kit fox denning were found on the site. At most, an occasional kit fox may pass through or forage on the site. There have been 11 documented SJKF occurrences within 10 miles of the project site, seven of which date back to the 1970's.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PROJECT SITE

ANIMALS (adapted from CDFW 2017a and CDFW 2017b)

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the Project Site
Western Spadefoot (<i>Spea hammondi</i>)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	Unlikely. Habitat suitable for breeding is absent from the project site and surrounding lands. The residential pond immediately east of the site is unlikely to harbor breeding spadefoot toads, as it was constructed after the conversion of this area to residential and intensive agricultural uses. No rodent burrows providing suitable aestivation habitat were observed on the project site.
Western Pond Turtle (<i>Emys marmorata</i>)	CSC	Occurs in open slow-moving water or ponds with rocks and logs for basking. Nesting occurs in open areas, on a variety of soil types, and up to ¼ mile away from water. This species is almost extinct in the southern San Joaquin Valley.	Absent. Suitable habitat is absent from the project site. The seasonal pond bordering the site to the east would not serve as suitable breeding habitat since it is not inundated year-round.
Foothill Yellow-legged Frog (<i>Rana boylei</i>)	CSC	Occurs in rocky streams and rivers with rocky substrate and open sunny banks in forests, chaparral, and woodland below 6,000 ft. in elevation.	Absent. Suitable habitat is absent from the project site and lands immediately adjacent to the project site.
Northern Harrier (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in wet areas, although grassland, pasture, and cultivated fields may be used.	Possible. This species could forage or nest within the fallow field of the project site.
White-tailed Kite (<i>Elanus leucurus</i>)	CFP	Occurs in savannah, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging. Nests in trees.	Possible. This species may forage within the fallow field of the project site. Large valley oaks on the perimeter of the site and trees adjacent to the site could theoretically serve as breeding habitat; however, white-tailed kites do not typically nest in such close proximity to residential development.
Burrowing Owl (<i>Athene cunicularia</i>)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	Unlikely. The site is situated within a matrix of land uses that are generally incompatible for this species, making burrowing owl use of the site unlikely. Moreover, the site does not appear to contain suitably-sized burrows for this species. Two suitable burrows were observed along the banks of Mathews Ditch immediately west of the site.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Can often be found in cropland.	Possible. Shrikes could forage in the on-site fallow field. Suitable nesting habitat for shrikes is available in valley oaks on the perimeter of the site and within shrubs adjacent to the site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PROJECT SITE

ANIMALS (adapted from CDFW 2017a and CDFW 2017b)

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the Project Site
Pallid Bat (<i>Antrozous pallidus</i>)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	Possible. Individuals of this species could potentially forage in the fallow field. Roosting habitat is limited to the few valley oaks along the site's perimeter, or in trees or structures adjacent to the site.
Western Mastiff Bat (<i>Eumops perotis</i> ssp. <i>californicus</i>)	CSC	Found in open, arid to semi-arid habitats, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings, trees, and tunnels.	Possible. Individuals of this species could potentially forage in flight over the fallow field. Roosting habitat is limited to the few valley oaks along the site's perimeter, or in trees or structures adjacent to the site.
American Badger (<i>Taxidea taxus</i>)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	Unlikely. No burrows suitable for this species were found on the site. The site is surrounded by residences and other incompatible land uses making badger occurrence here unlikely.

Occurrence Terminology:

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

STATUS CODES

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

2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS PLANT AND ANIMAL SPECIES MERITING FURTHER DISCUSSION

2.5.1 Swainson's Hawk (*Buteo swainsoni*). Federal Listing Status: None; State Listing Status: Threatened

Ecology of the species. Swainson's hawks are large, long-winged, broad-tailed hawks with a high degree of mate and territorial fidelity. They are breeding season migrants to California, arriving at their nesting sites in March or April. The young hatch sometime between March and July and fledge 4 to 6 weeks later. By October, most birds have left for wintering grounds in South America. In the Central Valley, Swainson's hawks typically nest in large trees along riparian systems, but may also nest in oak groves, or lone, mature trees in agricultural fields or along roadsides. Nest sites are typically located adjacent to suitable foraging habitat. 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 designation as a California Threatened species is based on population decline due in part to loss of foraging habitat to urban development (CDFG 1994).

Potential to occur onsite. Swainson's hawks are relatively uncommon in the immediate project vicinity. The closest known breeding occurrence of this species is approximately 7 miles to the northwest, where a pair was observed in 2008. The project site is situated within a matrix of residential development and orchard lands, both incompatible land uses for this species. However, Swainson's hawks could theoretically nest in the valley oaks occurring on the perimeter of the site, or in other mature trees within 0.5 mile of the project site, and may occasionally forage in the fallow fields of the project site.

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

Ecology of the species. By the time the San Joaquin kit fox (SJKF) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to

southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the San Joaquin Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox are found in valley sink scrub, valley saltbrush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of their range, they usually occupy burrows excavated by small mammals such as California ground squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

Potential to occur onsite. The project site consists of a fallow field theoretically suitable for foraging by the kit fox, but marginal for denning due to high levels of surrounding human activity. Gopher burrows, much less suitably-sized burrows, were observed on or directly adjacent to the project site during the March 2017 field survey. No ground squirrel burrows were found. The presence of domestic dogs on and adjacent to the site would be expected to further discourage on-site denning by this species.

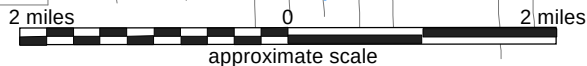
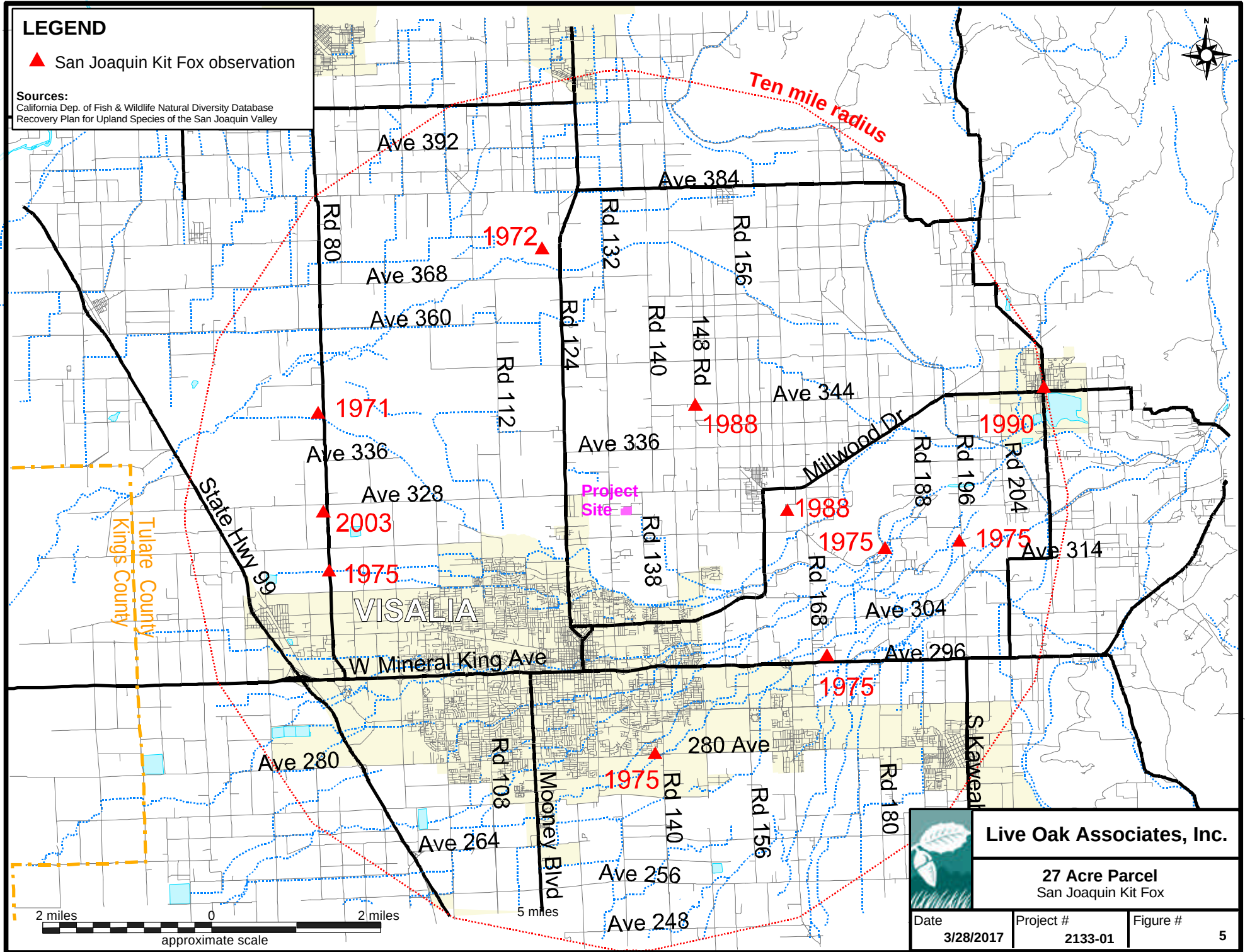
Moreover, in order to access habitats of the project site, kit fox must first occur in the project vicinity. This is unlikely for several reasons. First, ten out of the eleven documented occurrences of kit fox within ten miles of the project site are historical, from 30 years ago (or more). The nearest that kit fox have been documented is 3 miles northeast of the project site in 1988 (see Figure 5). The most recent sighting from 2003 is approximately 7 miles west of the site. Second, all kit fox observations within ten miles of the project site have been made in natural lands associated with waterways or in large expanses of agricultural fields; there is not a regional precedent for kit fox occurrence in small agricultural fields isolated from other potential

LEGEND

▲ San Joaquin Kit Fox observation

Sources:

California Dep. of Fish & Wildlife Natural Diversity Database
Recovery Plan for Upland Species of the San Joaquin Valley



Live Oak Associates, Inc.

27 Acre Parcel
San Joaquin Kit Fox

Date	Project #	Figure #
3/28/2017	2133-01	5

habitat by a matrix of orchards and residential uses. Finally, the project site is situated over 65 miles north of the nearest kit fox core population in Bakersfield.

In summary, the San Joaquin kit fox is not expected to occur within the project site because 1) their occurrence in both the immediate and larger vicinity of the project site is historical in nature, 2) what little habitat exists for the kit fox within the project site is surrounded by an intensively-managed landscape of limited suitability for this species, and 3) domestic dogs would be expected to deter kit fox from using the site.

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

Ecology of the species. The burrowing owl is primarily a grassland species, but may also occur in open shrub lands, grazed pastures, and occasionally agricultural lands. The primary indicators of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation, with only sparse areas of shrubs or taller vegetation. Burrowing owls roost and nest in the burrows of California ground squirrels, and occasionally also badger, coyote, or fox. The burrowing owl diet includes a broad array of arthropods, small rodents, birds, reptiles, and amphibians. In California, burrowing owl survival and reproductive success appears linked to rodent populations, particularly California vole (*Microtus californicus*) (Gervais et al. 2006). In agricultural areas of the San Joaquin Valley, burrowing owls primarily forage within 600 meters of their nest burrows (Gervais et al. 2003). The burrowing owl was designated a California Species of Special Concern in 1978 following long-term population decline, primarily due to loss of habitat to development and agricultural practices.

Potential to occur onsite. The project site's fallow field appears suitable for foraging by the burrowing owl. However, burrowing owls are unlikely to roost or nest on the project site given the site's location within a matrix of residential development and orchard lands, given the presence of tall dense vegetation, and given the apparent absence of suitable burrows. The only burrows of suitable size for burrowing owl identified during the survey were located along the banks of Mathews Ditch immediately to the west of the site. High levels of human disturbance would likely preclude burrowing owls from roosting or nesting in such areas.

Burrowing owls are known to occur in the larger project vicinity, but have not been documented on immediately surrounding lands. The CNDDDB lists four burrowing owl occurrences in grassland habitat associated with the CDFW Stone Corral Ecological Reserve, between 4 and 5 miles to the northwest of the project site. An additional six occurrences are documented in the CNDDDB, all greater than 6 miles from the site.

2.6 JURISDICTIONAL WATERS

As will be discussed in greater detail in Section 3.2.5, the U.S. Army Corps of Engineers (USACE) has regulatory authority over certain rivers, creeks, lakes, ponds, reservoirs, wetlands, and in some cases irrigation canals (“Waters of the U.S.” or “jurisdictional waters”). The extent of USACE jurisdiction is defined in the Code of Federal Regulations and has been further clarified in federal courts. Generally, Waters of the U.S. are navigable waters that cross state or national boundaries, are used in or somehow influence interstate or foreign commerce, or are impoundments or tributaries of such waters.

No potential jurisdictional waters were observed on the site. No evidence of hydric soils, wetland hydrology or hydrophytic vegetation were observed.

2.7 DESIGNATED CRITICAL HABITAT

As will be discussed further in Section 3.2.3, the USFWS often designates areas of “critical habitat” when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the project site. Critical habitat for vernal pool fairy shrimp, vernal pool tadpole shrimp, Hoover’s spurge and San Joaquin Valley orcutt grass is present within vernal pools approximately 4.5 miles north of the site. Habitat suitable for these species does not occur within the project site.

2.8 NATURAL COMMUNITIES OF SPECIAL CONCERN

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, home to special status species, etc. CDFW is responsible for the classification and mapping of all natural communities in California. Natural communities are assigned state and global ranks according to their degree of imperilment. Any natural community with a state rank of 3 or lower (on a 1-5 scale) is considered of special concern. Examples of natural communities of special concern in the vicinity of the project site include vernal pools and various types of riparian forest (Sawyer, Keeler-Wolf and Evens 2012).

The fallow field present on the project site is highly disturbed and dominated by non-native species, and therefore would not be considered a natural community of special concern.

2.9 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. No portion of the project site has the potential to function as a wildlife movement corridor. However, the Pacific flyway, one of four major bird migration routes in North America, passes over the project site and much of the rest of California.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA, and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either “significant” or “less than significant” under CEQA. According to *California Environmental Quality Act, Statute and Guidelines* (AEP 2012), “significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered “significant” if they would:

- 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 CDFW or USFWS;
- 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 CDFW or USFWS;
- 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;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a “mandatory finding of significance” if the project has the potential to:

“Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.”

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 General Plan Policies of County of Tulare

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the County of Tulare. The Tulare County General Plan released an update in 2003 that is valid through 2030. Implementation of goals in the Tulare County General Plan is accomplished via a set of policies specific to each goal. Please refer to Appendix F for the biological resources section of the plan.

Relevant biological resource goals of the Tulare County General Plan include:

- protecting rare and endangered species;
- limiting development in environmentally sensitive areas;
- encouraging cluster development in areas with moderate to high potential for sensitive habitat;
- encouraging the planting of native trees, shrubs, and grasslands preserve;
- requiring open space buffers between development projects and significant watercourse, riparian vegetation, wetlands, and other sensitive habitats and natural communities;

- coordinating with other government land management agencies to preserve and protect biological resources;
- encouraging appropriate access to resource-managed lands;
- providing opportunities for hunting and fishing activities;
- implementing pesticide controls to limit effects on natural resources; and
- supporting the establishment and administration of a mitigation banking program.

3.2.2 Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a proposed project have the potential to result in the “take” of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. “Take” is defined by the state of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). “Take” is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). The CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.3 Designated Critical Habitat

The USFWS often designates areas of “critical habitat” when it lists species as threatened or endangered. Critical habitat is defined by section 3(5)(A) of the federal Endangered Species Act as “(i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.” The Act goes on to define “conservation” as “the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary.”

The designation of a specific area as critical habitat does not directly affect its ownership. Federal actions that result in destruction or adverse modification of critical habitat are, however, prohibited in the absence of prior consultation with the USFWS according to provisions of the act. Furthermore, recent appellate court cases require that federal actions affecting critical habitat promote the recovery of the listed species protected by the critical habitat designation.

The USFWS designates critical habitat for a species by identifying general areas likely to contain the species' "primary constituent elements," or physical or biological features of the landscape that the species needs to survive and reproduce. Although a unit of critical habitat for a particular species may be quite large, only those lands within the unit that contain the species' primary constituent elements are actually considered critical habitat by the USFWS.

3.2.4 Migratory Birds

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800).

3.2.5 Birds of Prey

Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

3.2.6 Nesting Birds

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

3.2.7 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered “waters of the United States” or “jurisdictional waters” subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water.

The USACE regulates the filling or grading of jurisdictional waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards.

The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2003). Activities that would disturb these waters are regulated by the CDFW via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

The 27-acre project site is proposed for subdivision into four separate parcels, all of which are expected to be used for residential development. The following subsections assume that all areas of the project site will be impacted by future development. It is assumed that removal of the few valley oaks on the project boundaries would occur as a result of residential development on individual lots. Potentially significant project impacts to biological resources and mitigations are discussed below.

3.3.1 Project-Related Mortality of San Joaquin Kit Fox

Potential Impacts. As discussed in Section 2.5.2, the San Joaquin kit fox is unlikely to occur within the project site. However, based on past occurrences of kit fox in the 10-mile vicinity of the project site, it is remotely possible that individual foxes may pass through and possibly forage on the site from time to time during dispersal movements. If a kit fox were present at the time of future construction activities in the project site, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the project site would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.

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

Mitigation Measure 3.3.1a (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 on each of the four separate parcels. These surveys will be conducted in accordance with the USFWS *Standardized Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.

Mitigation Measure 3.3.1b (Avoidance). Should a kit fox be found using the site during preconstruction surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.

Mitigation Measure 3.3.1c (Minimization). Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads,

construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.

Mitigation Measure 3.3.1d (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level and ensure that future development activities within the project site remain in compliance with state and federal laws protecting this species.

3.3.2 Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds

Potential Impacts. The project site contains habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Four special-status birds (Swainson's hawk, white-tailed kite (*Elanus leucurus*), northern harrier, and loggerhead shrike (*Lanius ludovicianus*)) also have the potential to nest within or adjacent to the project site. On-site valley oak trees, as well as mature trees bordering the site, could be used for nesting by the western kingbird, Bullock's orioles (*Icterus bullockii*), and various raptors. Ground-nesting species such as the western meadowlark (*Sturnella neglecta*), mourning dove, and northern harrier could potentially nest in the dense vegetation of the fallow field. Raptors and migratory birds nesting within the project site at the time of construction have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.

Mitigation. The following measures will be implemented prior to the start of ground disturbance on each of the four parcels of the project site.

Mitigation Measure 3.3.2a (Avoidance). In order to avoid impacts to nesting raptors and migratory birds, ground disturbance on individual lots of the project will occur, where possible, outside the nesting season, or between September 1st and January 31st.

Mitigation Measure 3.3.2b (Preconstruction Surveys). If ground disturbance must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. Should a 30-day window of no activity occur on any given parcel (within the breeding season), the surveys should be redone. The surveys will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save the Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

Mitigation Measure 3.3.2c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds to a less than significant level, and will ensure that the project remains in compliance with state and federal laws protecting these species.

3.3.3 Project Impacts to Roosting Bats

Potential Impact. Valley oak trees within the study area provide potential roosting habitat for several species of bat. Development of the parcels on the project site could result in removal of mature valley oaks potentially serving as roosting habitat for both pallid bat (*Antrozous pallidus*) and western mastiff bat (*Eumops perotis* ssp. *californicus*). Impacts to mature valley oak trees with maternal roosts have the potential to result in the mortality of many juvenile bats and would be considered a significant impact of the project as defined by CEQA.

Mitigation. In order to minimize construction disturbance to maternal roosting bats in onsite trees, prior to the beginning of ground disturbance on each of the four separate parcels, the following measures will be implemented, as applicable:

Mitigation Measure 3.3.3a (Temporal Avoidance). Tree removal (if necessary) should occur after September 30, and before April 1, outside the maternal roosting season.

Mitigation Measure 3.3.3b (Preconstruction Surveys). If removal of trees must occur between April 1 and September 30 (general maternity bat roost season), a qualified biologist will survey affected trees for the presence of bats within 30 days prior to these activities. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

Mitigation Measure 3.3.3c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees prior to full removal under the direction of a qualified biologist to ensure that no adverse impact to any bats occurs as a result of construction activities.

Mitigation Measure 3.3.3d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist determines that the

nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.

Mitigation Measure 3.3.3e (Consultation if Maternity Roosts Cannot be Avoided). If maternal roosts are determined to be present and must be removed, the bats will be excluded from the roosting site before the roost is removed. An exclusion plan, addressing exclusion methods, and roost removal procedures will be developed by a qualified biologist before implementation. Exclusion methods may include use of one-way doors at roost entrances or sealing roost entrances when a site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g. during hibernation or while females in maternity colonies are nursing young).

Implementation of these measures will reduce potentially significant project impacts to roosting bats to a “less than significant” level under CEQA.

3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS

3.4.1 Loss of Habitat for Special Status Plants

Potential Impacts. Fourteen special status vascular plant species are known to occur in the vicinity of the project site: Hoover’s spurge (*Euphorbia hooveri*), San Joaquin Valley orcutt grass (*Orcuttia inaequalis*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), heartscale (*Atriplex cordulata* var. *cordulata*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), brittlescale (*Atriplex depressa*), lesser saltscale (*Atriplex minuscula*), vernal pool smallscale (*Atriplex persistens*), subtle orache (*Atriplex subtilis*), recurved larkspur (*Delphinium recurvatum*), spiny-sepaed button-celery (*Eryngium spinosepalum*), Winter’s sunflower (*Helianthus winteri*), California satintail (*Imerata brevifolia*), and California alkali grass (*Puccinellia simplex*) (see Table 1). Past and ongoing disturbance of the project site and surrounding lands has eliminated habitat for these 14 plant species. Therefore, the proposed project would not affect regional populations of these species and impacts would be less than significant.

Mitigation. Mitigation measures are not warranted.

3.4.2 Loss of Habitat for Special Status Animals Absent or Unlikely to Occur in the Project Site

Potential Impacts. Of the 18 special status animal species potentially occurring in the region, twelve (12) species would be absent or unlikely to occur on the project site (see Table 1). These include the vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), California tiger salamander (*Ambystoma californiense*), Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), willow flycatcher (*Empidonax traillii*), San Joaquin kit fox, western spadefoot (*Spea hammondi*), western pond turtle (*Emys marmorata*), foothill yellow-legged frog (*Rana boylei*), burrowing owl, and American badger (*Taxidea taxus*). Loss of habitat as a result of future residential development of the project site would have no effect on these species because there is little or no likelihood that they are present.

Mitigation. Mitigation measures are not warranted.

3.4.3 Loss of Habitat for Special Status Animals that Could Breed and/or Forage in the Project Site

Potential Impacts. Of the 18 special status animal species potentially occurring in the region, six species have the potential to occur within the project site in association with breeding, foraging, or both. These species comprise the Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, pallid bat, and western mastiff bat. The Swainson's hawk, white-tailed kite, and loggerhead shrike could theoretically nest in the on-site valley oaks, while the northern harrier could nest in the dense vegetation of the site's fallow field. All four birds could forage in the fallow field. However, the project site is situated within a matrix of residential development and orchard lands incompatible with the life history of these four avian species, all of which are associated with open country. Although the site may be used for nesting and foraging by these birds on occasion, it is unlikely to represent regionally important habitat for any of these species.

The pallid bat and western mastiff bat have the potential to roost in the on-site valley oaks, and to forage in or over the fallow field. Functionally similar roosting habitat is plentiful on

surrounding lands, and the loss of the oaks is not expected to adversely affect individuals or populations of these species. Similarly, considerable agricultural habitat suitable for foraging by these species will continue to be available on surrounding lands following development of the project site.

For the reasons given, loss of breeding and foraging habitat for the four avian species and two bat species considered in this section is not considered a significant impact of the project under CEQA.

Mitigation. Mitigation measures are not warranted.

3.4.4 Disturbance to Waters of the United States

Potential Impacts. As discussed in Section 2.6, no potential waters of the U.S. have been identified on the project site. Therefore, impacts from project implementation will have no measurable effect on the value or function of waters of the U.S. and are not considered significant under CEQA.

Mitigation. Mitigation measures are not warranted.

3.4.4 Project Impacts to Wildlife Movement Corridors

Potential Impacts. The project site consists of and is surrounded by developed and/or highly disturbed lands that do not contain important movement corridors for native wildlife. Birds using the Pacific flyway will continue to do so following project development. Future development of the project site will result in a less than significant effect on regional wildlife movements.

Mitigation. Mitigation measures are not warranted.

3.4.5 Disturbance to Riparian Habitat or other Sensitive Habitats

Potential Impacts. Riparian habitat is absent from the project site. The fallow field of the project site is not considered a sensitive habitat, and is not of significant importance to regional

wildlife populations. Because riparian and other sensitive habitats are absent, future development of the project site will have no impact on these habitats.

Mitigation. Mitigation measures are not warranted.

3.4.6 Project Impacts to Designated Critical Habitat

Potential Impacts. As discussed, designated critical habitat is absent from the project site. Although critical habitat for vernal pool fairy shrimp, vernal pool fairy shrimp, Hoovers's spurge and San Joaquin Valley orcutt grass occurs approximately 4.5 miles north of the site, suitable habitat for the these vernal pool species is absent from the project site. Future development of the project site does not have the potential to impact designated critical habitat.

Mitigation. Mitigation measures are not warranted.

3.4.7 Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters

Potential Impacts. Extensive grading often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. However, agricultural and industrial/residential lands in and around the project site are nearly level and are subjected to regular soil disturbance that exposes barren soils. The only hydrologic feature found in the immediate vicinity of the project site where grading could occur (residential pond) is highly maintained and isolated from all other hydrologic features. Therefore, impacts to water quality from project construction are considered less than significant.

It should be noted that projects involving the grading of more than one acre of land must be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the RWQCB.

Mitigation. No mitigation measures are warranted.

3.4.8 Local Policies or Habitat Conservation Plans

Potential Impacts. The project will be implemented in accordance with the goals and policies of the Tulare County General Plan. No known HCPs or NCCPs are in effect for the area. Therefore, the project is not expected to conflict with local policies or habitat conservation plans.

Mitigation. No mitigation is warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

The plant species listed below were observed on or adjacent to the project site by LOA during a field survey conducted on March 20, 2017. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
 FACW - Facultative Wetland
 FAC - Facultative
 FACU - Facultative Upland
 UPL - Upland

ASTERACEAE – Sunflower Family

<i>Erigeron bonariensis</i>	Asthmaweed	FACU
<i>Erigeron canadensis</i>	Canada Horseweed	FACU
<i>Lactuca serriola</i>	Prickly Lettuce	FACU
<i>Pseudognaphalium thermale</i>	Cudweed	UPL
<i>Senecio vulgaris</i>	Common Groundsel	FACU
<i>Sonchus oleraceus</i>	Common Sow Thistle	UPL
<i>Silybum marianum</i>	Milk Thistle	UPL
<i>Taraxacum californicum</i>	California Dandelion	FACW

BORAGINACEAE – Forget-Me-Not Family

<i>Amsinckia menziesii</i>	Small-flowered Fiddleneck	UPL
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BRASSICACEAE – Mustard Family

<i>Brassica nigra</i>	black mustard	UPL
<i>Capsella bursa-pastoris</i>	Shepherd's Purse	FACU
<i>Sisymbrium altissimum</i>	Tall Hedge Mustard	FACU

CARYOPHYLLACEAE – Carnation Family

<i>Stellaria media</i>	Chickweed	FACU
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CRASSULACEAE – Stonecrop Family

<i>Crassula tillaea</i>	Stonecrop	UPL
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EUPHORBIACEAE – Spurge Family

<i>Euphorbia peplus</i>	Spurge	UPL
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FABACEAE - Legume Family

<i>Trifolium</i> sp.	Clover	FAC
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FAGACEAE – Oak Family

<i>Quercus lobata</i>	Valley Oak	FACU
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GERANIACEAE - Geranium Family

<i>Erodium cicutarium</i>	Red-stem Filaree	UPL
<i>Erodium moschatum</i>	Whitestem Filaree	UPL

LAMIACEAE – Mint Family

<i>Lamium amplexicaule</i>	Henbit	UPL
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LYTHRACEAE – Loosestrife Family

<i>Lythrum hyssopifolium</i>	Hyssop Loosestrife	OBL
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MALVACEAE – Mallow Family

<i>Malva parviflora</i>	Buttonweed	UPL
MYRSINACEAE – Pimpernel Family		
<i>Lysimachia arvensis</i>	Scarlet Pimpernel	UPL
POACEAE – Grass Family		
<i>Avena fatua</i>	Wild Oats	UPL
<i>Bromus diandrus</i>	Ripgut	UPL
<i>Bromus hordeaceus</i>	Soft Chess	FACU
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Foxtail Barley	FACU
<i>Hordeum vulgare</i>	Cultivated Barley	UPL
<i>Leptochloa fusca</i> ssp. <i>univervia</i>	Bearded Sprangletop	FACW*
<i>Poa annua</i>	Annual Bluegrass	FAC
URTICACEAE – Nettle Family		
<i>Urtica dioica</i> ssp. <i>holisericea</i>	Hoary Nettle	FAC

**APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY
OCCUR ON THE PROJECT SITE**

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE

The species listed below are those that may reasonably be expected to use the habitats of the project site routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the project site on March 20, 2017 have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)

ORDER: SALIENTIA (Frogs and Toads)

FAMILY: BUFONIDAE (True Toads)

Western Toad (*Bufo boreas*)

FAMILY: HYLIDAE (Treefrogs and relatives)

Pacific Chorus Frog (*Pseudacris regilla*)

FAMILY: RANIDAE (True Frogs)

Bullfrog (*Lithobates catesbeiana*)

CLASS: REPTILIA (Reptiles)

ORDER: SQUAMATA (Lizards and Snakes)

SUBORDER: SAURIA (Lizards)

FAMILY: PHRYNOSOMATIDAE

Western Fence Lizard (*Sceloporus occidentalis*)

Side-blotched Lizard (*Uta stansburiana*)

FAMILY: TEIIDAE (Whiptails and relatives)

Western Whiptail (*Cnemidophorus tigris*)

SUBORDER: SERPENTES (Snakes)

FAMILY: COLUBRIDAE (Colubrids)

Glossy Snake (*Arizona elegans*)

Gopher Snake (*Pituophis melanoleucus*)

Common Kingsnake (*Lampropeltis getulus*)

Long-nosed Snake (*Rhinocheilus lecontei*)

Common Garter Snake (*Thamnophis sirtalis*)

FAMILY: VIPERIDAE (Vipers)

Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES (Birds)

ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)

FAMILY: ARDEIDAE (Herons and Bitterns)

Great Blue Heron (*Ardea herodias*)

Cattle Egret (*Bubulcus ibis*)

Great Egret (*Ardea alba*)

Snowy Egret (*Egretta thula*)

FAMILY: CATHARTIDAE (American Vultures)

Turkey Vulture (*Cathartes aura*)

ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)

FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)

White-tailed Kite (*Elanus leucurus*)

Northern Harrier (*Circus cyaneus*)

Red-tailed Hawk (*Buteo jamaicensis*)

*Red-shouldered Hawk (*Buteo lineatus*)

Ferruginous Hawk (*Buteo regalis*)

Sharp-Shinned Hawk (*Accipiter striatus*)

Cooper's Hawk (*Accipiter cooperii*)

Swainson's Hawk (*Buteo swainsoni*)

FAMILY: FALCONIDAE (Caracaras and Falcons)

American Kestrel (*Falco sparverius*)

ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)

FAMILY: CHARADRIIDAE (Plovers and relatives)

Killdeer (*Charadrius vociferus*)

ORDER: COLUMBIFORMES (Pigeons and Doves)

FAMILY: COLUMBIDAE (Pigeons and Doves)

Rock Pigeon (*Columba livia*)

*Mourning Dove (*Zenaida macroura*)

*Eurasian Collared-Dove (*Streptopelia decaocto*)

ORDER: STRIGIFORMES (Owls)

FAMILY: TYTONIDAE (Barn Owls)

Barn Owl (*Tyto alba*)

FAMILY: STRIGIDAE (Typical Owls)

Great Horned Owl (*Bubo virginianus*)

Western Screech Owl (*Otus kennicottii*)

ORDER: APODIFORMES (Swifts and Hummingbirds)

FAMILY: TROCHILIDAE (Hummingbirds)

Black-chinned Hummingbird (*Archilochus alexandri*)

Anna's Hummingbird (*Calypte anna*)

Rufous Hummingbird (*Selasphorus rufus*)

ORDER: PICIFORMES (Woodpeckers and relatives)

FAMILY: PICIDAE (Woodpecker and Wrynecks)

Northern Flicker (*Colaptes chrysoides*)

ORDER: PASSERIFORMES (Perching Birds)

FAMILY: TYRANNIDAE (Tyrant Flycatchers)

Black Phoebe (*Sayornis nigricans*)

Say's Phoebe (*Sayornis saya*)

Western Kingbird (*Tyrannus verticalis*)

FAMILY: LANIIDAE (Shrikes)

Loggerhead Shrike (*Lanius ludovicianus*)

FAMILY: CORVIDAE (Jays, Magpies, and Crows)

Western Scrub Jay (*Aphelocoma coerulescens*)

*American Crow (*Corvus brachyrhynchos*)

*Common Raven (*Corvus corax*)

FAMILY: ALAUDIDAE (Larks)

Horned Lark (*Eremophila alpestris*)

FAMILY: HIRUNDINIDAE (Swallows)

Cliff Swallow (*Hirundo pyrrhonota*)

Barn Swallow (*Hirundo rustica*)

FAMILY: TURDIDAE

American Robin (*Turdus migratorius*)

FAMILY: MIMIDAE (Mockingbirds and Thrashers)

*Northern Mockingbird (*Mimus polyglottos*)

FAMILY: STURNIDAE (Starlings)

*European Starling (*Sturnus vulgaris*)

FAMILY: MOTACILLIDAE (Wagtails and Pipits)

American Pipit (*Anthus rubescens*)

FAMILY: BOMBYCILLIDAE (Waxwings)

Cedar Waxwing (*Bombycilla cedrorum*)

FAMILY: PARULIDAE (Wood Warblers and Relatives)

Yellow-rumped Warbler (*Dendroica coronata*)

FAMILY: EMBERIZIDAE (Sparrows and Relatives)

Savannah Sparrow (*Passerculus sandwichensis*)

*White-crowned Sparrow (*Zonotrichia leucophrys*)

*Golden-crowned Sparrow (*Zonotrichia atricapilla*)

FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)

*Red-winged Blackbird (*Agelaius phoeniceus*)

Western Meadowlark (*Sturnella neglecta*)

*Brewer's Blackbird (*Euphagus cyanocephalus*)

Brown-headed Cowbird (*Molothrus ater*)

Bullock's Oriole (*Icterus bullockii*)

Hooded Oriole (*Icterus cucullatus*)

FAMILY: FRINGILLIDAE (Finches)

*House Finch (*Carpodacus mexicanus*)

Lesser Goldfinch (*Carduelis psaltria*)

FAMILY: PASSERIDAE (Old World Sparrows)

*House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)

ORDER: DIDELPHIMORPHIA (Marsupials)

FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum (*Didelphis virginiana*)

ORDER: CHIROPTERA (Bats)

FAMILY: PHYLLOSTOMIDAE (Leaf-nosed Bats)

Southern Long-nosed Bat (*Leptonycteris curasoae*)

FAMILY: VESPERTILIONIDAE (Evening Bats)

Yuma Myotis (*Myotis yumanensis*)

California Myotis (*Myotis californicus*)

Pale Big-eared Bat (*Corynorhinus townsendii pallescens*)

Western Pipistrelle (*Pipistrellus hesperus*)

Big Brown Bat (*Eptesicus fuscus*)

Pallid Bat (*Antrozous pallidus*)

FAMILY: MOLOSSIDAE (Free-tailed Bat)
 Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)
 Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)
FAMILY: LEPORIDAE (Rabbits and Hares)
 Audubon's Cottontail (*Sylvilagus audubonii*)
 Black-tailed (Hare) Jackrabbit (*Lepus californicus*)

ORDER: RODENTIA (Rodents)
FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)
 California Ground Squirrel (*Spermophilus beecheyi*)

FAMILY: GEOMYIDAE (Pocket Gophers)
 *Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)
 Western Harvest Mouse (*Reithrodontomys megalotis*)
 Deer Mouse (*Peromyscus maniculatus*)
 Norway Rat (*Rattus norvegicus*)
 House Mouse (*Mus musculus*)
 California Vole (*Microtus californicus*)

ORDER: CARNIVORA (Carnivores)
FAMILY: CANIDAE (Foxes, Wolves, and relatives)
 *Domesticated Dog (*Canus familiaris*)
 Coyote (*Canis latrans*)
 Red Fox (*Vulpes vulpes*)

FAMILY: PROCYONIDAE (Raccoons and relatives)
 Raccoon (*Procyon lotor*)

FAMILY: MEPHITIDAE (Skunks)
 Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)
 Bobcat (*Lynx rufus*)
 *Feral Cat (*Felis domesticus*)

APPENDIX C: SELECTED PHOTOGRAPHS OF THE PROJECT SITE



Photographs #1 and #2. Valley oak trees on the site provide suitable habitat for nesting birds and roosting bats.





Photographs #3 and #4. Fallow field of the project site provides suitable foraging habitat for San Joaquin kit fox and many avian species, and suitable breeding habitat for ground nesting birds.



**APPENDIX D: U.S. FISH AND WILDLIFE SERVICE STANDARDIZED
RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN
KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE**

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should 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 should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

APPENDIX E: TULARE COUNTY GENERAL PLAN POLICIES

8. Environmental Resources Management

the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region.

The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The U.S. Census Bureau estimated the 2003 Tulare County population to be 390,791.

8.1 Biological Resources

ERM-1

To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County.
[New Goal]

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. [New Policy based on ERME IV-C; Biological Resources; Issue 12, and ERME; Pg 32]

ERM-1.2 Development in Environmentally Sensitive Areas

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. [New Policy based on EMRE; Water; Issue 3; Recommendation 3, ERME; Pg 28]

ERM-1.3 Encourage Cluster Development

When reviewing development proposals, the County shall encourage cluster development in

areas with moderate to high potential for sensitive habitat. [New Policy]

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. [New Policy]

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans

The County shall require mining reclamation plans and other management plans include measures to protect, maintain and restore riparian resources and habitats. [New Policy]

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. [New Policy]

ERM-1.7 Planting of Native Vegetation

The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained. [New Policy]

ERM-1.8 Open Space Buffers

The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state. [New Policy based on EMRE policies]

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 while maintaining the ability to utilize and enjoy the natural resources in the County. [New Policy]

ERM-1.10 Appropriate Access for Recreation

The County shall encourage appropriate access to resource-managed lands. *[New Policy]*

ERM-1.11 Hunting and Fishing

The County shall provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code. *[New Policy]*

ERM-1.12 Management of Oak Woodland Communities

The County shall support the conservation and management of oak woodland communities and their habitats. *[New Policy]*

ERM-1.13 Pesticides

The Tulare County Agricultural Commissioner/Sealer will cooperate with State and federal agencies in evaluating the side effects of new materials and techniques in pesticide controls to limit effects on natural resources. *[ERME IV-C; Pesticides; Recommendation 1] [ERME; Pg 131, Modified]*

ERM-1.14, Mitigation and Conservation Banking Program

The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process. *[New Policy]*

8.2 Mineral Resources - Surface Mining

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. *[New Goal based on MRPAC June 28, 2006]*

ERM-2.1 Conserve Mineral Deposits

Emphasize 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. *[MRPAC June 28, 2006]*

ERM-2.2 Recognize Mineral Deposits

Recognize as a part of the General Plan those areas which have identified and/or potential mineral deposits. *[MRPAC June 28, 2006]*

ERM-2.3 Future Resource Development

Provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County. *[MRPAC June 28, 2006]*

ERM-2.4 Identify New Resources

Encourage exploration, evaluation, identification, and development of previously unrecognized but potentially significant hard rock resources for production of crushed stone aggregate. *[MRPAC June 28, 2006]*

ERM-2.5 Resources Development

The County will promote the responsible development of identified and/or potential mineral deposits. *[MRPAC June 28, 2006]*

ERM-2.6 Streamline Process

Create a streamlined and timely permitting process for the mining industry, which will help encourage long-range planning and the reasonable amortization of investments. *[MRPAC June 28, 2006]*

ERM-2.8 Minimize Adverse Impacts

Minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological and aesthetic factors. *[MRPAC June 28, 2006]*

8. Environmental Resources Management

ERM-2.9 Minimize Hazards and Nuisances

Minimize the hazards and nuisances to persons and properties in the area during extraction, processing and reclamation operations. [MRPAC June 28, 2006]

ERM-2.10 Compatibility

Develop mineral deposits in a manner compatible with surrounding land uses. [MRPAC June 28, 2006]

ERM-2.11 Incompatible Development

Proposed incompatible land uses shall not be on lands containing, or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted. [MRPAC June 28, 2006]

ERM-2.12 Conditions of Approval

Procedures shall be established to ensure compliance with conditions of approval on all active and idle mines. [MRPAC June 28, 2006]

ERM-2.13 Approved Limits

Procedures shall be established to ensure that vested interest mining operations remain within their approved area and/or production limits. [MRPAC June 28, 2006]

ERM-2.14 SMARA Requirements

All surface mines, unless otherwise exempted, shall be subject to reclamation plans that meet SMARA requirements. Reclamation procedures shall restore the site for future beneficial use of the land. Mine reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [MRPAC June 28, 2006]

8.3 Mineral Resources

ERM-3

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. [ERME IV-B; Land; Issue 8] [ERME; Pg 30, Modified]

ERM-3.1 Environmental Contamination

All mining operations shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site. [New Policy]

ERM-3.2 Limited In-City Mining

Within UDBs, new commercial mining operations should be limited due to environmental and compatibility concerns. [New Policy]

ERM-3.3 Small-Scale Oil and Gas Extraction

The County shall permit by special use permit small-scale oil and gas extraction activities and facilities that can be demonstrated to not have a significant adverse effect on surrounding or adjacent land and are within an established oil and gas field outside of a UDB. [New Policy]

ERM-3.4 Oil and Gas Extraction

Facilities related to oil and gas extraction and processing may be allowed in identified oil and gas fields subject to a special use permit. The extraction shall demonstrate that it will be compatible with surrounding land uses and land use designations. [New Policy]

ERM-3.5 Reclamation of Oil and Gas Sites

The County shall require the timely reclamation of oil and gas development sites upon termination of such activities to facilitate the conversion of the land to its primary land use as designated by the General Plan. Reclamation costs shall be born by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [New Policy, MRPAC Goals, Policies, Implementation Measures, and Development Standards, Goal F and associated policies]

8.4 Energy Resources

ERM-4

To encourage energy conservation in new and existing developments throughout the County. [New Goal]

ERM-4.1 Energy Conservation and Efficiency Measures

The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new

ATTACHMENT “B”

Cultural Resources Assessment



**CULTURAL RESOURCES ASSESSMENT, 27-ACRE PARCEL
(APN 079-190-017), 13401 AVENUE 328 AT BEN MADDOX WAY,
TULARE COUNTY, CALIFORNIA**

Prepared for:

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Sierra Valley Cultural Planning
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(559) 561-3816

2 May 2017

Topographic Quadrangle: Monson, 7.5' (1969)
Area: 27 acres (11 hectares)

(Keywords: Tulare, Township 18S, Range 25E, Wólase Yokuts)

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MANAGEMENT SUMMARY

On 23 March 2017, a cultural resources survey was performed of approximately 27 acres (11 hectares) of land located south of Avenue 328 and west of Road 132, northeast of the City of Visalia in Tulare County, California. The study area is located in Township 18S, Range 25E, Section 9, MDB&M; see Maps 1 and 2.

The cultural resources survey was performed at the request of Mr. Fred Weber on behalf of the property owners. The results of this study will supplement environmental studies performed in support of a tentative parcel map which will divide the 27 acres into three equal parcels of 2.515 acres with a remainder of 20.12 acres. Provisions and implementing guidelines of the California Environmental Quality Act (CEQA), as amended March 18, 2010, state that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which include archaeological resources.

No archaeological or other cultural resources were identified as a result of this study. Therefore, it is unlikely that the proposed action will have an effect on important archaeological, historical, or other cultural resources. No further cultural resources investigation is therefore recommended. In the unlikely event that buried archaeological deposits are encountered within the project area, the finds must be evaluated by a qualified archaeologist. Should human remains be encountered, the County Coroner must be contacted immediately; if the remains are determined to be Native American, then the Native American Heritage Commission must be contacted as well.

INTRODUCTION

This report presents the findings of a pedestrian archaeological survey of a 27-acre (11-hectare) parcel of land located south of Avenue 328 and west of Road 132, northeast of the City of Visalia in Tulare County, California. The study area is located in Township 18S, Range 25E, Section 9, MDB&M; see Maps 1 and 2. The survey was completed by SVCP on 23 March 2017.

The cultural resources survey was performed at the request of Mr. Fred Weber on behalf of the property owners. The results of this study will supplement environmental studies performed in support of a tentative parcel map which will divide the 27 acres into three equal parcels of 2.515 acres with a remainder of 20.12 acres. Provisions and implementing guidelines of the California Environmental Quality Act (CEQA), as amended March 18, 2010, state that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which include archaeological resources.

SVCP archaeologist Douglas S. McIntosh completed a cultural resource survey of the project Area of Potential Effect (APE). This report was completed by SVCP Principal Investigator C. Kristina Roper.

PROJECT LOCATION AND DESCRIPTION

The subject 27-acre parcel is located south of Avenue 328 and west of Road 132, northeast of the City of Visalia in Tulare County, California. The parcel is situated in a semi-rural setting, surrounded by single family homes on large parcels, open fields and walnut orchards. To the north of the project area are single family homes along the edge of a private road, to the south there is a walnut orchard, to the east are open parcels and private residences, and to the west is an irrigation ditch and low density residential housing.

The project area encompasses Assessor's Parcel Number (APN) 079-190-017. The project study area lies within Township 18S, Range 25E, Section 9, MDB&M (see Maps 1-2). The project Area of Potential Effect (APE) is depicted on Map 3.

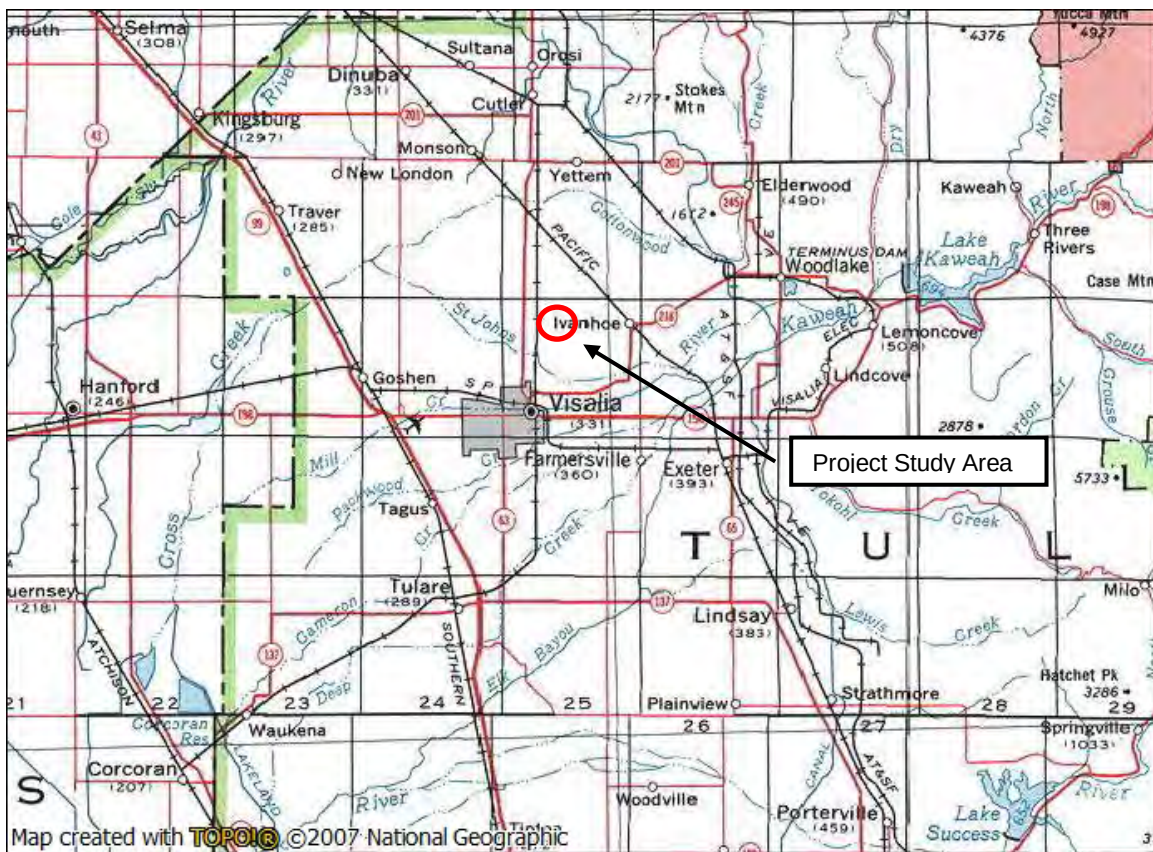
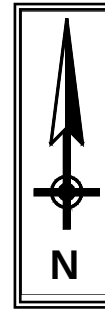
SOURCES CONSULTED

Prior to field inspection, a records search was completed by the Southern San Joaquin Valley Information Center (SSJV) of the California Historical Resources Information System staff to identify areas previously investigated and to identify known cultural resources present within or in close proximity to the Project APE. According to the Information Center records, there are no prehistoric or historic-period sites or structures identified within the project APE, and no prehistoric or historic-period sites or structures are identified within a ¼-mile radius of the study area. There have been no previous investigations within the APE or within ¼-mile radius. No cultural resource sites listed on the National Register of Historic Places, the California Register of Historic Resources, California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources have been documented within ¼-mile radius of the project APE.



MAP 1. PROJECT VICINITY

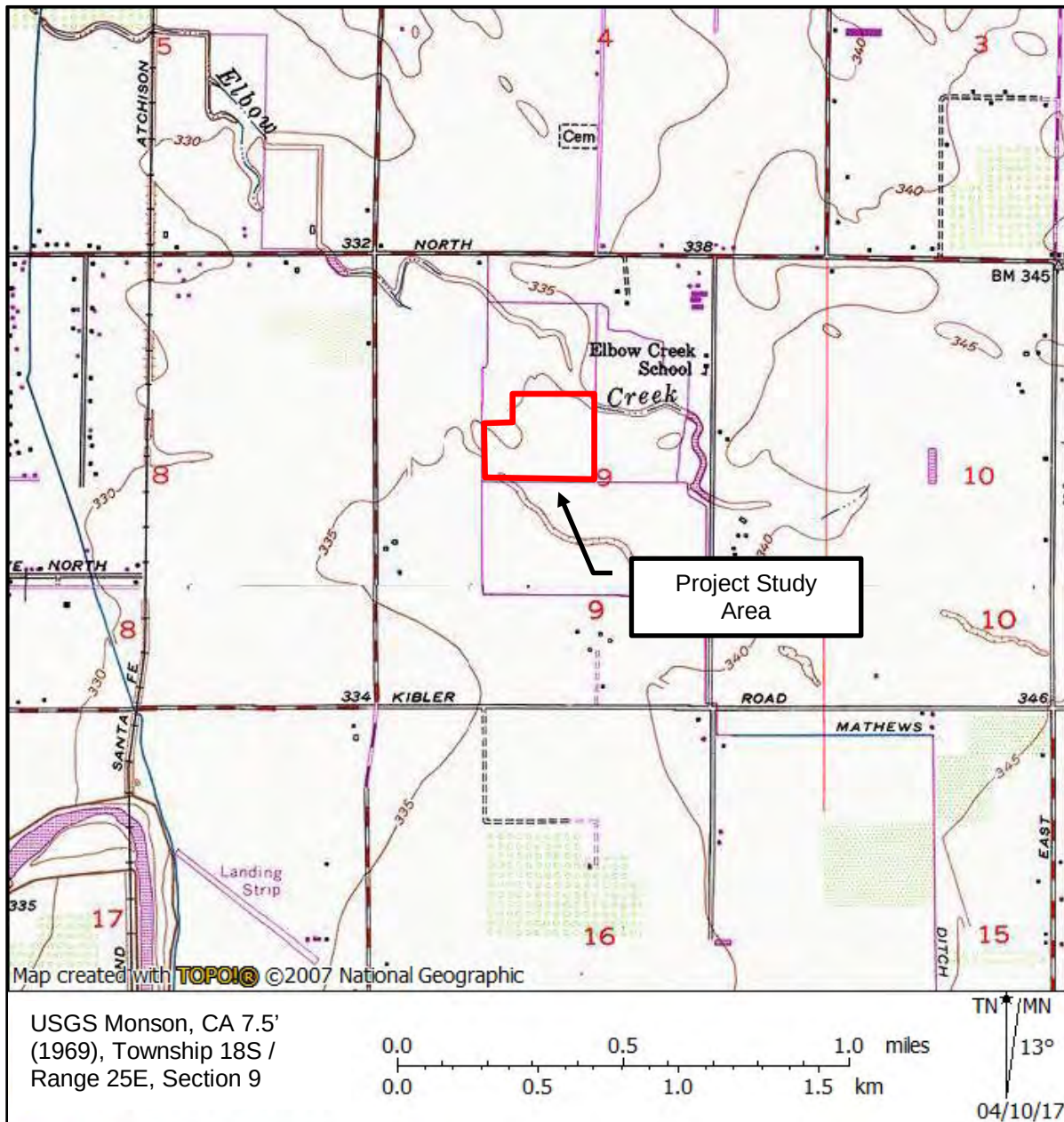
CULTURAL RESOURCES ASSESSMENT
27-ACRE PARCEL (APN 079-190-017),
13401 AVE. 328, TULARE COUNTY, CA.



USGS Monson (1969),
Calif., 7.5', T18S / R 25E,
Section 9.

0 5 10 15 20 25 miles
0 5 10 15 20 25 30 35 40 km

TN MN
13°
05/02/17



Map 2. Project Area Location

SETTING

The Project Study Area is located on valley bottom lands approximately one mile north of the St. John's River and two miles west of the community of Ivanhoe in north-central Tulare County, California. The parcel is situated in a semi-rural setting, surrounded by single family homes on large parcels, open fields and walnut orchards. To the north of the subject are single family homes along the edge of a private road, to the south there is a walnut orchard, to the east are open parcels and private residences, and to the west is an irrigation ditch and low density residential housing. Figures 1 through 4 provide a pictorial overview of the Project APE.



Map 3. Area of Potential Effect.



Figure 1. View from the southeast corner of project area, facing north.



Figure 2. View from the southeast corner of project area, facing west.



Figure 3. Valley oak tree located in southeast corner of project area, facing south.



Figure 4. View from the southwest corner of the project area, facing north.

Natural Environment

The Project Study Area is located along Elbow Creek in the Kaweah River drainage in the lower elevations of the western south-central Sierra Nevada foothills of eastern Tulare County, at an elevation of 335 ft (102 m) above mean sea level. The Kaweah River flows west from Terminus Dam which forms Lake Kaweah in the lower foothills to the east. A few miles below the dam the river breaks into numerous channelized offshoots, ultimately draining into numerous canals and ditches that provide irrigation water to agricultural parcels within the former Tulare lakebed. Soils within the study area include well-drained sandy loam. Current land use is a mix of single family homes and agricultural land. Vegetation within the parcel includes non-native grasses.

Prior to EuroAmerican exploration and settlement in the region, the central San Joaquin Valley was extensive grassland covered with spring-flowering herbs. Stands of trees -- sycamore, cottonwoods, box elders and willows -- lined the stream and river courses with groves of valley oaks in well-watered localities with rich soil. Rivers yielded fish, mussels, and pond turtles; migratory waterfowl nested in the dense tules along the river sloughs downstream. When the Spanish first set foot in the area, they found the deer and tule elk trails to be so broad and extensive that they first supposed that the area was occupied by cattle. Grizzly bears occupied the open grassland and riparian corridors on the valley floor and adjacent foothills. Smaller mammals and birds, including jackrabbits, ground squirrels, and quail were abundant. Native Americans occupants of the region describe abundant sedge beds, along with rich areas of deer grass, plants that figure prominently in the construction of Native American basketry items.

Prehistoric Period Summary

The San Joaquin Valley and adjacent Sierran foothills and Coast Range have a long and complex cultural history with distinct regional patterns that extend back more than 11,000 years (McGuire 1995). The first generally agreed-upon evidence for the presence of prehistoric peoples in the region is represented by the distinctive basally-thinned and fluted projectile points, found on the margins of extinct lakes in the San Joaquin Valley. These projectiles, often compared to Clovis points, have been found at three localities in the San Joaquin Valley including along the Pleistocene shorelines of former Tulare Lake. Based on evidence from these sites and other well-dated contexts elsewhere, these Paleo-Indian hunters who used these spear points existed during a narrow time range of 11550 cal B.C. to 8550 cal B.C. (Rosenthal et al. 2007).

As a result of climate change at the end of the Pleistocene, a period of extensive deposition occurred throughout the lowlands of central California, burying many older landforms and providing a distinct break between Pleistocene and subsequent occupations during the Holocene. Another period of deposition, also a product of climate change, had similar results around 7550 cal B.C., burying some of the oldest archaeological deposits discovered in California (Rosenthal and Meyer 2004).

The Lower Archaic (8550-5550 cal B.C.) is characterized by an apparent contrast in economies, although it is possible they may be seasonal expressions of the same economy. Archaeological deposits which date to this period on the valley floor frequently include only large stemmed spear points, suggesting an emphasis on large game such as artiodactyls (Wallace 1991). Recent discoveries in the adjacent Sierra Nevada have yielded distinct milling assemblages which clearly indicate a reliance on plant foods. Investigations at Copperopolis (LaJeunesse and Pryor 1996) argue that nut crops were the primary target of seasonal plant exploitation. Assemblages at these foothill sites include dense accumulations of handstones, millingslabs, and various cobble-core tools, representing "frequently visited camps in a seasonally structured settlement system" (Rosenthal et al. 2007:152). During the Lower Archaic, regional interaction spheres were well established. Marine shell from the central California coast

has been found in early Holocene contexts in the Great Basin east of the Sierra Nevada, and eastern Sierra obsidian comprises a large percentage of flaked stone debitage and tools recovered from sites on both sides of the Sierra (Rosenthal et al. 2007:152).

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to nut and seed gathering, as evidenced by the increase in food-grinding implements found in archeological sites dating to this period. This cultural pattern is best known for southern California, where it has been termed the Milling Stone Horizon (Wallace 1954, 1978a), but recent studies suggest that the horizon may be more widespread than originally described and is found throughout the central region during the Middle Archaic Period. Dates associated with this period vary between 9,000 and 2,000 cal BP, although most cluster in the 6,800 to 4,500 cal BP range (Basgall and True 1985).

On the valley floor, early Middle Archaic sites are relatively rare; this changes significantly toward the end of the Middle Archaic. In central California late Middle Archaic settlement focused on river courses on the valley floor. "Extended residential settlement at these sites is indicated by refined and specialized tool assemblages and features, a wide range of nonutilitarian artifacts, abundant trade objects, and plant and animal remains indicative of year-round occupation" (Rosenthal et al. 2007:154). Again, climate change apparently influence this shift, with warmer, drier conditions prevailing throughout California. The shorelines of many lakes including Tulare Lake, contracted substantially, while at the same time rising sea levels favored the expansion of the San Joaquin/Sacramento Delta region, with newly formed wetlands extending eastward from the San Francisco Bay.

In contrast with rare early Middle Archaic sites on the valley floor, early Middle Archaic sites are relatively common in the Sierran foothills, and their recovered, mainly utilitarian assemblages show relatively little change from the preceding period with a continued emphasis on acorns and pine nuts. Few bone or shell artifacts, beads, or ornaments have been recovered from these localities. Projectile points from this period reflect a high degree of regional morphological variability, with an emphasis on local toolstone material supplemented with a small amount of obsidian from eastern sources. In contrast with the more elaborate mortuary assemblages and extended burial mode documented at Valley sites, burials sites documented at some foothill sites such as CA-FRE-61 on Wahtoke Creek are reminiscent of "re-burial" features reported from Milling Stone Horizon sites in southern California. These re-burials are characterized by re-interment of incomplete skeletons often capped with inverted millingstones (McGuire 1995:57).

A return to colder and wetter conditions marked the Upper Archaic in Central California (550 cal B.C. to cal A.D. 1100). Previously desiccated lakes returned to spill levels and increased freshwater flowed in the San Joaquin and Sacramento watershed. Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, emerged during this period. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and valley populations expanded into the lower Sierran foothills. New and specialized technologies expanded and distinct shell bead types occurred across the region. The range of subsistence resources utilized and exchange systems expanded significantly from the previous period. In the Central Valley, archaeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items.

The period between approximately cal A.D. 1000 and Euro-American contact is referred to as the Emergent Period. The Emergent Period is marked by the introduction of bow and arrow technology which replaced the dart and atlatl at about cal A.D. 1000 and 1300. In the San Joaquin region, villages and small residential sites developed along the many stream courses in the lower

foothills and along the river channels and sloughs of the valley floor. A local form of pottery was developed in the southern Sierran foothills along the Kaweah River. Archaeological excavations at habitation sites in Merced and Fresno counties have revealed an artifact assemblage belonging to the Yokuts groups who inhabited the valley floor and adjacent foothills into historic times (Olsen and Payen 1968, 1969; Pritchard 1970).

Ethnographic Summary

Prior to EuroAmerican settlement, speakers of Yokutsan languages occupied most of the San Joaquin Valley and the bordering foothills of the Sierra Nevada and Diablo Range. Most of the Valley Yokuts lived on the eastern side of the San Joaquin River. The Project Study Area falls within territory probably occupied by the *Wólase* Yokut. The *Wólase*'s principal village was *Dawau Nawshid*, located five miles east of Visalia on Cameron Creek and occupied a very large mound. The mound was leveled in 1930 and over 800 burials were uncovered. The village is also referred to as *He-ahm-e-tau* (The Old Time Placed). The *Wólase* are credited with being the pioneer settlers of the San Joaquin Valley (Latta 1999:190).

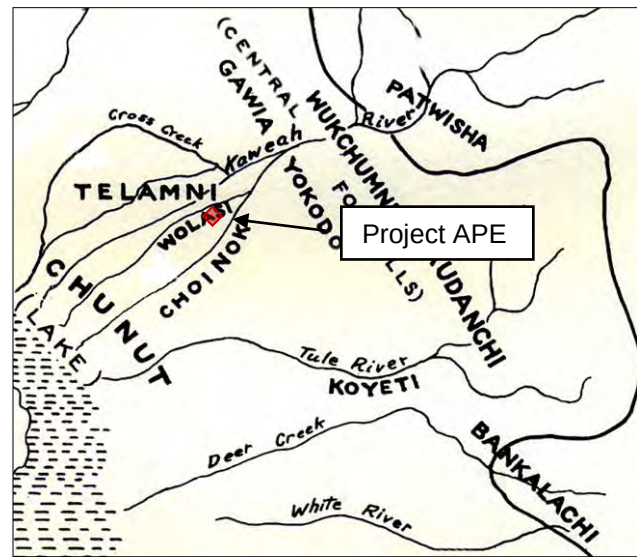


Figure 5. Southern Valley Yokuts Tribelet Locations (from Latta 1999).

Due to the abundance and diversity of wildlife habitats and plant communities within the Sierran foothills and nearby San Joaquin Valley and higher elevations of the Sierra Nevada, Native American population densities in the region were quite high (Baumhoff 1963). While the acorn was the dietary staple, the diversity of accessible natural resources provided an omnivorous diet. The reader is referred to Gayton (1948), Kroeber (1925), Latta (1999), and Wallace 1978b for additional information on pre-contact Yokuts subsistence and culture. Figure 7 depicts the territory of the location of *Wólase* Yokut relative to the Project APE.

Historic Period Summary

The San Joaquin Valley was visited in the early 1800s by Spanish expeditions exploring the interior in search of potential mission sites. The Moraga (1806) expedition may have passed through *Wólase* territory (Cook 1960; Smith 1939). One of the earliest Americans to explore the Tulare area was Jedediah Strong Smith in 1826-27. In 1832-33 Colonel Jose J. Warner, a member of the Ewing-Young trapping expedition, passed through the San Joaquin Valley. Warner described Native villages densely packed along the valley waterways, from the foothills down into the slough area. The next year he revisited the area following a devastating malaria epidemic. Whereas the previous year the region had been densely occupied by Native peoples, during this trip not more than five Indians were observed between the head of the Sacramento Valley and the Kings River (Cook 1955).

EuroAmerican appreciation for the land did not include acceptance of its indigenous human populations, and pressure was exerted upon the US military to remove the Native population from the region, leaving the region open for American settlement and resource development. EuroAmerican settlement of the region began in 1851 with the establishment of Fort Miller on the San Joaquin River. Hostilities between Native inhabitants and American settlers initially prevented widespread settlement of the region; however, by 1860 such threats had been reduced and settlers began taking up large tracts in the region.

In late 1849 or early 1850, a party under the leadership of John Wood settled on the south bank of the Kaweah River, about seven miles east of the present city of Visalia (Hoover et al. 1990:508). In April, 1852, Tulare County was created, with the county seat initially located at Woodville. In 1853 the county seat was removed to Fort Visalia, located in the area bounded by Oak, Center, Garden and Bridge streets.

METHODS AND FINDING

On March 23, 2017, Sierra Valley Cultural Planning archaeologist Douglas S. McIntosh, under the direction of Kristina Roper, conducted a cursory archaeological survey of parcel number 079-190-017.

The subject 27-acre parcel is located south of Avenue 328 and west of Road 132, northeast of the City of Visalia in Tulare County, California. The parcel is situated in a semi-rural setting, surrounded by single family homes on large parcels, open fields and walnut orchards. To the north of the subject are single family homes along the edge of a private road, to the south there is a walnut orchard, to the east are open parcels and private residences, and to the west is an irrigation ditch and low density residential housing.

The survey sought to identify any archaeological sites, features and artifacts which might be present on the ground surface. Items such as chipped stone tools, grinding implements, hearths and midden deposits are indicators of prehistoric activities. In addition, the survey also sought to identify and historic artifacts, features and structures over fifty years old.

Survey methods involved walking the perimeters of the parcel and attempting to walk several east to west transects within the 27-acre parcel. A Panasonic DMC-TS20 digital camera was used to photo document the project setting and any items of note within the study area. All photo information was recorded in the field on a photo-log.

Ground visibility across the entire project area was extremely poor (0 to 2 percent). Dense non-native grasses two to four feet tall completely obscured all of the ground surfaces. Along the edges of the parcel vegetation had been mowed in the recent past. In these areas grasses were ten to twelve inches tall. Soils across the parcel are a fine grain silty sandy loam with clay. Inspected soils have a general Munsell color value of 10yr 3/2, dark grayish brown (wet).

Summary of Findings

Two items were documented as a result of this survey. Along the western edge of the parcel is a north- to south-trending irrigation ditch. This unlined ditch measures approximately ten feet wide by four feet deep. The banks of the ditch area are level and free of any vegetation. No associated ditch gates or concrete features were observed along the inspected portion of the ditch.

At the southeast corner of the study area is a Fairbanks-Morse Pomona turbine pump (Figures 6-7). The above ground portion of the pump motor is four feet tall. The electrical source for the pump is a nearby wooden utility pole. On September 02, 1944, the Fairbanks-Morse and Company purchased the Pomona Pump Company. After the acquisition, Pomona pumps were labeled "Fairbanks-Morse Pomona" (The Log of West Coast Maritime Industries, July 1944, Volume 39, No.7, page 126. Source accessed via Google Books March 24, 2017).

No archaeological or other cultural resources were identified as a result of this study. Therefore, it is unlikely that the proposed action will have an effect on important archaeological,

historical, or other cultural resources. No further cultural resources investigation is therefore recommended. In the unlikely event that buried archaeological deposits are encountered within the project area, the finds must be evaluated by a qualified archaeologist. Should human remains be encountered, the County Coroner must be contacted immediately; if the remains are determined to be Native American, then the Native American Heritage Commission must be contacted as well.



Figure 6. Fairbanks-Morse Pomona Turbine Pump at SE corner of project area.



Figure 7. I.D. tag of Fairbanks-Morse Pomona Turbine Pump.

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PREPARER'S QUALIFICATIONS

C. Kristina Roper conducted the historical resources inventory and background research, and assisted in the preparation of this Historic Resource Evaluation Report. Ms. Roper has over 30 years of professional experience in the field of archaeology, historical research and architectural evaluation, specifically in the investigation and management of cultural resources within the context of local, state and federal regulatory compliance for projects in the Far West. Ms. Roper holds a Master's degree in Cultural Resources Management awarded in 1993 from Sonoma State University, and is certified as a Registered Professional Archaeologist. She has completed graduate-level coursework in historical architectural evaluation and historic research. Her experience in cultural resources management includes both government and private sector employment and contracting for archaeological field services and historic research, documentation of resource assessments for Initial Studies (IS), Environmental Assessments (EA), Environmental Impact Reports (EIR), and Environmental Impact Statements (EIS). Ms. Roper is a registered archaeologist with the California Historic Resources Information System.

Ms. Roper has participated in planning efforts with numerous governmental entities in the San Joaquin Valley. She has prepared heritage preservation ordinances for the City of Chowchilla, serves as advisory staff to the Chowchilla Heritage Preservation Commission, and has recently completed a multi-year survey and assessment of Chowchilla's built environment. Ms. Roper has prepared a cultural resources records search and sensitivity analysis to be used in the development of a revised General Plan for the City of Coalinga, Fresno County. Ms. Roper has consulted with Native American tribes in the San Joaquin Valley and Sierra foothills under Senate Bill 18 (SB 18), which applies to General Plans, Specific Plans, and amendments proposed on or after March 1, 2005. SB 18 expands CEQA for the protection of California's traditional tribal cultural places by requiring consultation with Native American Groups during these planning efforts to define resources and sacred areas and incorporate protection of these important resources into the planning process.

Ms. Roper has served as a Lecturer in Anthropology at California State University Fresno from 1995 to the present. Among her many courses taught is an upper division course in Cultural Resources Management which provides an overview of state and federal historic preservation law and the identification and evaluation of cultural resources. From 2002 through June of 2009, Ms. Roper served as Project Director for a services contract with the California Department of Transportation, District 6, Cultural Resources Branch, administered by the California State University Foundation. Ms. Roper supervised a team of cultural resources technicians who performed professional and technical services required by Caltrans for cultural resource studies. These included archaeological survey, title search for historic structures and properties, prehistoric and historic background research, excavation of archaeological sites, electronic data entry, and maintenance of confidential archaeological records and files.

ATTACHMENT A

**RECORDS SEARCH RESULTS
(SSJCIC Records Search No. 17-225)**



4/13/2017

C. Kristina Roper
Sierra Valley Cultural Planning
40854 Oak Ridge Drive
Three Rivers, CA 93271

Re: Tentative Parcel Map, APN 079-190-017
Records Search File No.: 17-225

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Monson USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.25 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☐ custom GIS maps ☐ shapefiles ☐ hand-drawn maps

Resources within project area:	None
Resources within 0.25 mile radius:	None
Reports within project area:	None
Reports within 0.25 mile radius:	None

Resource Database Printout (list):

☐ enclosed ☐ not requested ☒ nothing listed

Resource Database Printout (details):

☐ enclosed ☐ not requested ☒ nothing listed

Resource Digital Database Records:

☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (list):

☐ enclosed ☐ not requested ☒ nothing listed

Report Database Printout (details):

☐ enclosed ☐ not requested ☒ nothing listed

Report Digital Database Records:

☐ enclosed ☒ not requested ☐ nothing listed

Resource Record Copies:

☐ enclosed ☐ not requested ☒ nothing listed

Report Copies:

☐ enclosed ☐ not requested ☒ nothing listed

OHP Historic Properties Directory:

☐ enclosed ☐ not requested ☒ nothing listed

Archaeological Determinations of Eligibility:

☐ enclosed ☐ not requested ☒ nothing listed

CA Inventory of Historic Resources (1976):

☐ enclosed ☐ not requested ☒ nothing listed

<u>Caltrans Bridge Survey:</u>	Not available at SSJVIC; please see http://www.dot.ca.gov/hq/structur/strmaint/historic.htm
<u>Ethnographic Information:</u>	Not available at SSJVIC
<u>Historical Literature:</u>	Not available at SSJVIC
<u>Historical Maps:</u>	Not available at SSJVIC; please see http://historicalmaps.arcgis.com/usgs/
<u>Local Inventories:</u>	Not available at SSJVIC
<u>GLO and/or Rancho Plat Maps:</u>	Not available at SSJVIC
<u>Shipwreck Inventory:</u>	Not available at SSJVIC; please see http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp
<u>Soil Survey Maps:</u>	Not available at SSJVIC; please see http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

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

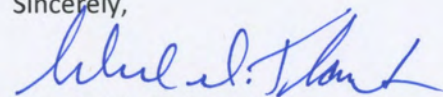
The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained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

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

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

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

Sincerely,



Celeste M. Thomson
Coordinator

ATTACHMENT “C”

Groundwater Report

KENNETH D. SCHMIDT AND ASSOCIATES

GROUNDWATER QUALITY CONSULTANTS

600 WEST SHAW, SUITE 250

FRESNO, CALIFORNIA 93704

TELEPHONE (559) 224-4412

August 8, 2017

Ms. Paula Simon
844 N. High Road
Palm Springs, CA 92262

Re: Property North of Avenue 324
Between Roads 134 and 136

Dear Paula:

Pursuant to your request, following is my report on groundwater conditions and expected well yields for domestic wells on the subject property. The property is located in Section 9, T18S/R25E, west of Ivanhoe. I understand that three 2.5-acre parcels would be developed and the remaining lot would be about 20 acres in size.

Subsurface Geologic Conditions

We obtained drillers logs and well completion reports for wells in Section 9 and adjoining sections from the California Department of Water Resources. Logs are also available for three deep oil or gas exploration holes, about a mile and a half south of the property which are about 1,700 feet deep. Water-productive alluvial deposits are present to a depth of about 1,400 feet deep in the vicinity of the project site. Brackish groundwater (connate water) is indicated to be about 1,450 feet deep, which is thus the base of the fresh groundwater. The coarsest water producing deposits in the vicinity are generally above a depth ranging from about 280 to 350 feet.

Water Wells

A test hole was drilled for a new irrigation well at the Elbow Creek School in 2011. Inter-layered productive sands were indicated to the total depth of 360 feet. The completed well is indicated to be one of the deepest water supply wells in the vicinity, as productive deposits to provide adequate yields for irrigation wells are normally present above a depth of about 300 feet. Thus deeper drilling hasn't been necessary.

Drillers logs are available for a number of older domestic wells in and near Section 9. Some of these were less than about 140 feet deep and are likely no longer active. Logs for eight deeper domestic wells in Section 9 are provided in Attachment A. All but one of these wells tap strata below a depth of 195 feet, and total depths of these wells range from 220 to 280 feet. These are indicated to be wells that are expected to be usable for many decades into the future. The pumping rates of these wells ranged from about 30 to 250 gpm, and all but one of them produced at least 50 gpm. Many of these are open-bottomed wells, drilled by cable-tool or casing hammer drillers.

Water Levels

Water-level elevation maps prepared by the California Department of Water Resources indicate a northwesterly direction of groundwater flow. Attachment B contains long-term water-level measurements and hydrographs for six wells in Sections 4, 5, 15, and 16. They are the closest wells with such records to the subject property. Depth to water (static levels) in most of these wells has ranged from about 30 to 90 feet. The average rate of static water-level decline has been about 0.8 foot per year for the past several decades. Tabs are attached on each hydrograph documenting the water-level declines. It is expected that with the implementation of the Sustainable Groundwater Management Act (SGMA), water levels should be stabilized within several decades due to groundwater management activities. Even if the water levels continued to decline at 0.8 foot per year, in 30 years they would only be about 24 feet deeper. Productive water producing strata would still be present below a depth of about 150 feet.

Water Use

I understand that ditch water has been used for irrigation in the vicinity. I understand that hay and cotton were grown on the 27 acres. The consumptive use of applied water for cotton is about 2.4 acre-feet per acre per year and for hay is about 2.9 acre-feet per acre per year (from California Department of Water Resources Bulletin 113-3). Thus on a 2.5-acre parcel, the consumptive use of applied water would range from 6.0 to 7.3 acre-feet per year. For a rural residential lot of 2.5 acres, if 1.5 acres was irrigated, the consumptive use would be about 4.5 acre-feet per year, or less than for the pre-existing situation.

Recharge

Recharge to groundwater in the area is from seepage of stream flow from Elbow Creek and the St. Johns River, and deep percolation of lands irrigated with canal water.

Summary and Conclusions

Pumping rates of at least 50 to 100 gpm can be obtained from properly constructed and developed domestic wells ranging in depth from about 220 to 280 feet on the subject property. These yields will be sustainable for many decades into the future. Water levels in the area have been falling at an average rate of about 0.8 foot per year. Even in 30 years from now, if the levels continue to fall at this rate, there will be sufficient groundwater for such wells. Implementation of the SGMA regulations should stabilize groundwater levels in the area within several decades.

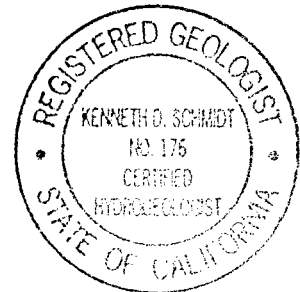
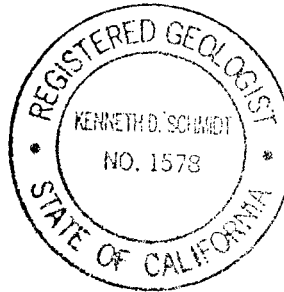
Please call me if you have any questions.

Sincerely yours,



Kenneth D. Schmidt
Geologist No. 1578
Certified Hydrogeologist
No. 176

KDS/ms



ATTACHMENT A

DRILLERS LOGS FOR
DEEPER DOMESTIC WELLS

185/25E-9A

Do Not Fill In

No 68039

ORIGINAL
File with DWRSTATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

State Well No. _____

Other Well No. _____

(2) LOCATION OF WELL:

County Tulare Owner's number, if any _____Township, Range, and Section T18s R25e Sec. 9Distance from cities, roads, railroads, etc. 3 miles north of Visalia
on Rd. 132, 3/4 mi. east on Ave 328, 1/4 south

(3) TYPE OF WORK (check): Rd. 138, 200' west side of rd.

New Well ☒ Deepening ☐ Reconditioning ☐ Destroying ☐

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Other ☐

(6) CASING INSTALLED:

STEEL: ☒ OTHER: _____SINGLE ☒ DOUBLE ☐

If gravel packed

From ft.	To ft.	Diam. in.	Gage or Wall	Diameter of Bore	From ft.	To ft.
0	228	8	12			

Size of shoe or well ring: Sp. Band Size of gravel: _____Describe joint Plain End

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen None

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.

CONFIDENTIAL

Water Code Sec. 13752

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes ☐ No ☒ To what depth _____ ft.Were any strata sealed against pollution? Yes ☐ No ☒ If yes, note depth of strata _____

From _____ ft. to _____ ft.

From _____ ft. to _____ ft.

Method of sealing _____

(9) WATER LEVELS:

Depth at which water was first found, if known 49 ft.Standing level before perforating, if known 49 ft.Standing level after perforating and developing 49 ft.

(10) WELL TESTS: Blowing (Air)

Was pump test made? Yes ☒ No ☐ If yes, by whom? NationYield: 150 gal./min. with 25 ft. drawdown after 11 hrs.Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒Was electric log made of well? Yes ☐ No ☒ If yes, attach copy _____

(11) WELL LOG:

Total depth 230 ft. Depth of completed well 230 ft.

Formation: Describe by color, character, size of material, and structure

ft. to _____ ft.

0 - 8 Red Clay8 - 29 Med Sand29 - 64 Soft Sandy Clay64 - 76 L.B. Clay76 - 84 Coarse Sand84 - 96 L.B. Clay96 - 108 Coarse Sand108 - 134 L.B. Clay134 - 145 Very Fine Sand145 - 150 Coarse Sand & Sm. Rocks150 - 156 Soft L.B. Clay156 - 172 L.B. Clay172 - 176 Fine Sand176 - 182 Very Soft Sandy Clay182 - 186 Dark Tight Sand186 - 189 L.B. Clay189 - 193 Dark Tight Sand193 - 198 L.B. Clay198 - 202 Dark Tight Sand202 - 212 Flakely Clay212 - 216 Dark Tight Sand (No Good)216 - 230 Sandy Clay230 - Coarse SandWork started 9/15 19 71 Completed 9/25 19 71

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ROGER L. NATION

(Person, firm, or corporation) (Typed or printed)

Address 26521 South MooneyVISALIA, CALIFORNIA[SIGNED] Roger L. Nation
(Well Driller)License No. 259884Dated 10/13, 19 71

SKETCH LOCATION OF WELL ON REVERSE SIDE

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

Notice of Intent No. 235199
Local Permit No. or Date 8-6-87

No. 251049
State Well No. 18/25-9
Other Well No. _____

(12) WELL LOG: Total depth 206 ft. Completed depth 180 ft.
from ft. to ft. Formation (Describe by color, character, size or material)

0'-58' sandy loam
58'-60' clay
60'-63' sand
63'-66' clay
66'-120' sandy loam
120'-126' coarse sand
126'-140' silt
140'-146' coarse sand
146'-150' sand
150'-155' cemented sands w/clay
155'-166' silty clay
166'-206' tight sand

(2) LOCATION OF WELL (See instructions):

County Tulare Owner's Well Number _____
Well address if different from above _____
Township 18-S Range 25-E Section 9
Distance from cities, roads, railroads, fences, etc. _____
APN 079-040-20-000-50 15 Acres
On Road 138 Between Avenues 320 & 328

(3) TYPE OF WORK:

New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe
destruction materials and pro-
cedures in Item 12)

(4) PROPOSED USE

Domestic ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Municipal ☐
Other ☒ (Describe)

WELL LOCATION SKETCH

(5) EQUIPMENT:

Rotary ☐ Reverse ☐
Cable ☐ Air ☐
Other ☒ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☒ Size _____
Diameter of bore _____
Packed from _____ to _____

(7) CASING INSTALLED:

Steel ☒ Plastic ☐ Concrete ☐

(8) PERFORATIONS:

Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	153	12-3/4"	.188"			
0	20	16"	.188"			

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 20 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.
Method of sealing driven conductor

(10) WATER LEVELS:

Depth of first water, if known _____ ft.
Standing level after well completion _____ ft.

(11) WELL TESTS: Approx. 500+ GPM Air Test During Drilling

Was well test made? Yes ☐ No ☐ If yes, by whom? _____
Type of test Pump ☐ Bailor ☐ Air lift ☐
Depth to water at start of test _____ ft. At end of test _____ ft.
Discharge _____ gal/min after _____ hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made Yes ☐ No ☒ If yes, attach copy to this report

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed _____ (Well Driller)
NAME Johnson Drilling Co.
(Person, firm, or corporation) (Typed or printed)
Address 23489 E. Kings Canyon
City Reedley, Ca. ZIP 93654
License No. 245802 Date of this report 8-14-87

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

No. 287173
18/25-9
State Well No. _____
Other Well No. _____

Notice of Intent No. _____
Local Permit No. or Date _____

(12) WELL LOG: Total depth 270 ft. Completed depth 270 ft.
from ft. to ft. Formation (Describe by color, character, size or material)

0'-170' existing well
170'-186' clay
186'-192' sand
192'-210' clay
210'-211' sand
211'-218' clay
218'-221' sand
221'-230' clay
230'-231' sand
231'-255' clay
255'-268' light sand
268'-270' clay

(2) LOCATION OF WELL (See instructions):

County Tulare Owner's Well Number _____
Well address if different from above _____
Township 18-S Range 25-E Section 9
Distance from cities, roads, railroads, fences, etc. _____
South & East of Avenue 328 & Road 132

(3) TYPE OF WORK:

New Well ☐ Deepening ☒
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe
destruction materials and pro-
cedures in Item 12)

(4) PROPOSED USE:

Domestic ☐
Irrigation ☒
Industrial ☐
Test Well ☐
Municipal ☐
Other ☒

(Describe)

WELL LOCATION SKETCH

(5) EQUIPMENT:

Rotary ☒ Reverse ☐
Cable ☐ Air ☒
Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☐ No ☒ Size _____
Diameter of bore _____
Packed from _____ to _____

(7) CASING INSTALLED:

Steel ☐ Plastic ☐ Concrete ☐

(8) PERFORATIONS:

Type of perforation or size of screen

From ft.	To ft.	Dia. in.	Gage or Wall
Existing	14'		Casing

From ft.	To ft.	Slot size

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☐ No ☐ If yes, to depth _____ ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval _____ ft.
Method of sealing _____

(10) WATER LEVELS:

Depth of first water, if known _____ ft.
Standing level after well completion _____ ft.

(11) WELL TESTS:

Was well test made? Yes ☐ No ☐ If yes, by whom? _____
Type of test Pump ☐ Bailor ☐ Air lift ☒
Depth to water at start of test 51.1' ft. At end of test 68.10" ft.
Discharge 300+ gal/min after 4 hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made Yes ☐ No ☒ If yes, attach copy to this report

Work started 3-14 19 89 Completed 3-17- 19 89

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Signed _____ (Well Driller)
NAME Johnson Drilling Co.
(Person, firm, or corporation) (Typed or printed)
Address 23489 E. Kings Canyon
City Reedley, Ca. ZIP 93654
License No. 245802 Date of this report 3-21-89

ORIGINAL

File with DWR

Page 1 of 1

Owner's Well No.

Date Work Began 6-28-91

Local Permit Agency Tulare County Environmental Health

Permit No.

Permit Date 6-21-91

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No.

480911

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE

LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE (SPECIFY)

DEPTH TO FIRST WATER (Ft.) BELOW SURFACE

DESCRIPTION

Describe material, grain size, color, etc.

DEPTH FROM SURFACE
Ft. to Ft.

0 4 top soil
4 47 sand
47 54 clay
54 64 sand
64 74 sandy clay
74 116 sand
116 118 cemented sand
118 134 sand
134 146 clay, sandy
146 150 sand & gravel
150 156 clay w/cemented sand
156 200 sand

WELL LOCATION

Address 32638 Ray Court Road

City Visalia

County Tulare

APN Book 079 Page 200 Parcel 13

Township 18 Range 25 Section 9

Latitude

DEG. MIN. SEC.

NORTH

Longitude

DEG. MIN. SEC.

WEST

LOCATION SKETCH

NORTH

2.5 Acres at the end of Ray Court Road off Avenue 328

ACTIVITY (✓)

☒ NEW WELL

MODIFICATION/REPAIR

☐ Deepen☐ Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S)

☐ MONITORING

WATER SUPPLY

☒ Domestic☐ Public☐ Irrigation☐ Industrial☐ "TEST WELL"☐ CATHODIC PROTECTION☐ OTHER (Specify)

WEST EAST

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

DRILLING METHOD Casing driven

FLUID

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC

WATER LEVEL (Ft.) & DATE MEASURED

ESTIMATED YIELD 100 (GPM) & TEST TYPE air lift

TEST LENGTH (Hrs.) TOTAL DRAWDOWN (Ft.)

* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 200 (Feet)
TOTAL DEPTH OF COMPLETED WELL 180 (Feet)

DEPTH FROM SURFACE			BORE-HOLE DIA. DIA. (Inches)	CASING(S)							DEPTH FROM SURFACE			ANNULAR MATERIAL			
				TYPE (✓)				MATERIAL/ GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS				SLOT SIZE IF ANY (Inches)	TYPE		
Ft.	to	Ft.	BLANK	SCREEN	CON- DUCTOR	FILL PIPE									CE- MENT (✓)	BEN- TONITE (✓)	FILL (✓)
1½	153		6-5/8	x				steel	6-5/800	.188"							
0	52		10-3/4			x		steel	10-3/400	.188"			x	enviroplug			

ATTACHMENTS (✓)

- ☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Johnson Drilling Co.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)ADDRESS 23489 E. Kings Canyon, Reedley, Ca. 93654
CITY STATE ZIPSigned Patrick A. Rhodes
WELL DRILLER/AUTHORIZED REPRESENTATIVE8-8-91
DATE SIGNED245802
C-57 LICENSE NUMBER

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

Page 1 of 1

Owner's Well No. 1

No. **e0113814**

Date Work Began 8/5/2010, Ended 8/6/2010

Local Permit Agency Tulare Co Environmental Health

Permit No. 10-0275 Permit Date 7/26/2010

DWR USE ONLY -- DO NOT FILL IN

193125E-109

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE ☐ (SPECIFY)	
DEPTH FROM SURFACE	DRILLING METHOD <u>CASING HAMMER</u> FLUID ☐
Fl. to Fl.	DESCRIPTION <i>Describe material, grain, size, color, etc.</i>
0	5 Top soil
5	45 Sandy clay
45	50 Sand
50	60 Clay
60	110 Sandy clay
110	115 Sand, water
115	160 Sandy clay
160	180 Sand, water
180	220 Sandy clay
220	260 Clay
260	280 Sand and gravel, incoming water
280	Clay
Bit Size: 6"	
Location: On south side of Ave. 328, west of Rd. 138.	

TOTAL DEPTH OF BORING 280' (Feet)

TOTAL DEPTH OF COMPLETED WELL 280' (Feet)

WELL LOCATION

Address 13747 Avenue 328

City Visalia CA 93292

County Tulare

APN Book 079 Page 200 Parcel 006

Township 18 S Range 25 E Section 9

Latitude _____

DEG. MIN. SEC. _____

LOCATION SKETCH

NORTH

WEST

EAST

SOUTH

ACTIVITY (✓)

☒ NEW WELL

MODIFICATION/REPAIR

☐ Deepen

☐ Other (Specify) _____

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY

☒ Domestic ☐ Public

☐ Irrigation ☐ Industrial

MONITORING _____

TEST WELL _____

CATHODIC PROTECTION _____

HEAT EXCHANGE _____

DIRECT PUSH _____

INJECTION _____

VAPOR EXTRACTION _____

SPARGING _____

REMEDIATION _____

OTHER (SPECIFY) _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER _____ (Fl.) BELOW SURFACE 1

DEPTH OF STATIC _____

WATER LEVEL _____ (Fl.) & DATE MEASURED _____

ESTIMATED YIELD • 75 (GPM) & TEST TYPE AIR LIFT

TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Fl.)

May not be representative of a well's long-term yield.

DEPTH FROM SURFACE		BORE-HOLE DIA. (Inches)	CASING (S)				SLOT SIZE IF ANY (Inches)
Fl.	to Fl.		TYPE (✓)	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	
0	55	12-3/4"	☒	STEEL	6.249	.188	
55	250	6-5/8"	☒	STEEL	6.249	.188	

DEPTH FROM SURFACE		ANNULAR MATERIAL		
Fl.	to Fl.	CE-MENT (✓)	BEN-TO-NITE (✓)	FILL (✓)
0	55	☒	☒	☒

ATTACHMENTS (✓)

- ☐ Geologic Log
- ☐ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analysis
- ☐ Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME JOHNSON DRILLING COMPANY

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

23489 East Kings Canyon

ADDRESS

Reedley

CITY

CA

STATE

93654-9760

ZIP

Signed Tammy Chumade

WELL DRILLER/AUTHORIZED REPRESENTATIVE

08/09/10

DATE SIGNED

245802

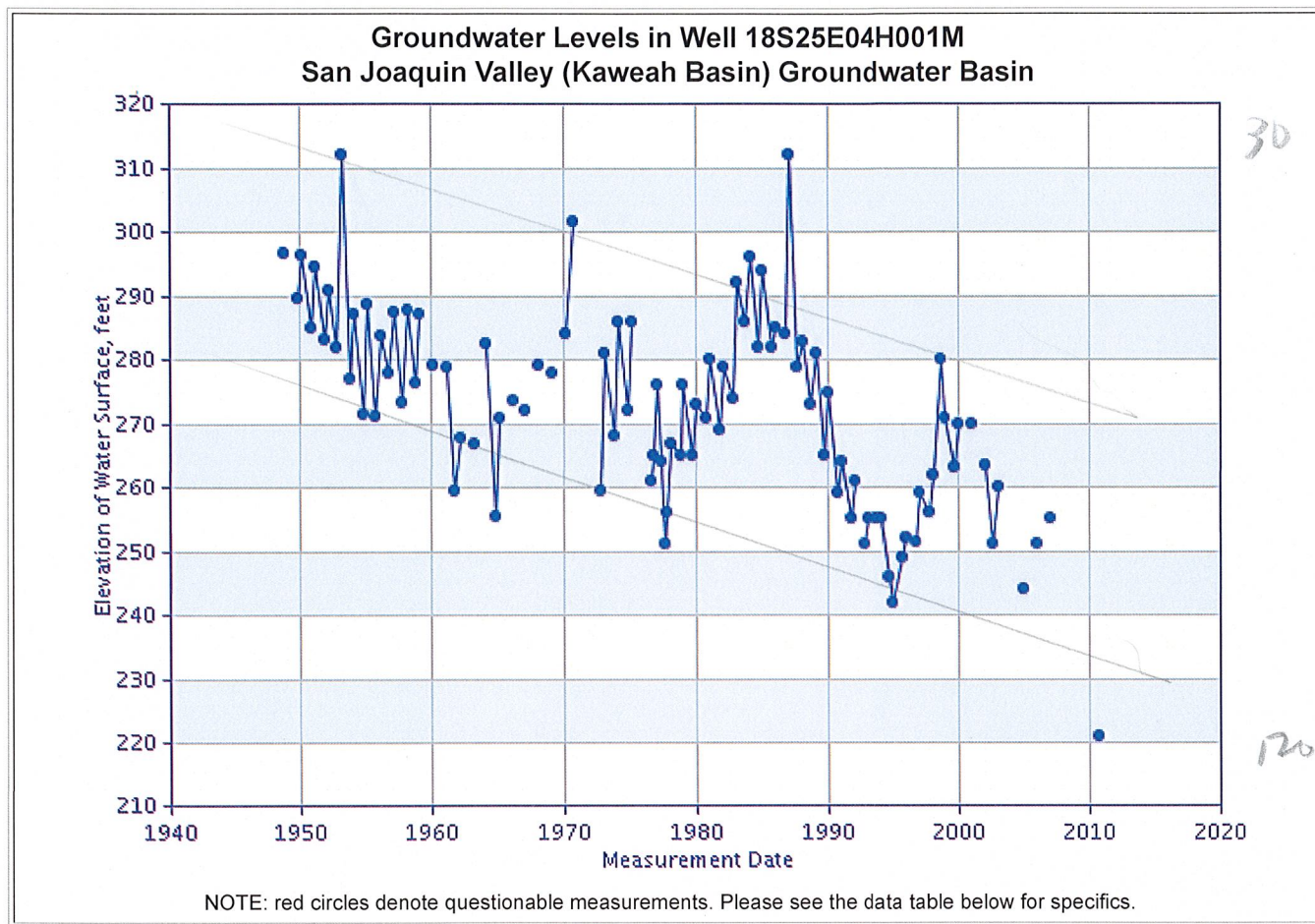
C-57 LICENSE NUMBER

ATTACHMENT B

**LONG-TERM WATER-LEVEL
MEASUREMENTS & HYDROGRAPHS**

Groundwater Level Data for Well 18S25E04H001M

Your selection returned a total of **106** records. Wells in the Department of Water Resources monitoring network are identified by a [State Well Number](#), which is based on the Public Land Grid System. The table headings and records contain several [codes and abbreviations](#). Press the **New Search** or **Nearby Search** buttons or at the bottom of the page to begin a new data retrieval. Data for this well can also be downloaded in [MS Excel](#) or [text delimited format](#).



Summary Statistics of Depth to Water below Ground Surface by Month (displays to internal users only)

Month	Lowest Level	10th %ile	25th %ile	50th %ile	75th %ile	90th %ile	Highest Level	Number of Values	Number of Years
JAN	313	1950	78.8	69.5	59.3	51.0	28.0	26	31
FEB	203	2010	66.8	58.3	52.3	44.9	28.0	28	56
MAR				---	---	---	---	0	---
APR				---	---	---	---	0	---
MAY	40' / 60 yrs			---	---	---	---	0	---
JUN				76.0	---	---	76.0	1	---
JUL	6.7 ft / yr			79.0	---	---	79.0	1	---
AUG				89.0	---	---	89.0	1	---
SEP			76.4	68.7	60.3	55.0	38.4	16	47
OCT			84.0	75.0	61.0	56.1	43.4	27	61

NOV	---	---	---	---	---	---	---	0	---
DEC	---	---	---	---	---	---	---	0	---
Most Recent Measurement			119.0 feet on 10/04/2010						
Lowest Water Level			119.0 feet on 10/04/2010						
Highest Water Level			28.0 feet on 02/11/1953						
NOTE: The statistical summary shown above is based on an inverse distribution function that assumes a continuous distribution model. Nulls and questionable measurements are ignored in the calculation. The statistical summary is shown only if 10 or more measurements were taken in a given month. Bold values in the table above indicate the closest statistic to the most recent measurement. A measurement must have been taken in the last two years to be considered recent.									

Groundwater Level Readings

Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
10-30-1948	341.0	340.0	44.4	296.6	43.4			5603	
10-10-1949	341.0	340.0	51.4	289.6	50.4			5603	
02-15-1950	341.0	340.0	44.6	296.4	43.6			5603	
10-11-1950	341.0	340.0	56.0	285.0	55.0			5603	
02-06-1951	341.0	340.0	46.3	294.7	45.3			5603	
10-18-1951	341.0	340.0	57.9	283.1	56.9			5603	
02-27-1952	341.0	340.0	50.0	291.0	49.0			5603	
10-13-1952	341.0	340.0	58.9	282.1	57.9			5603	
02-11-1953	341.0	340.0	29.0	312.0	28.0			5603	
10-03-1953	341.0	340.0	64.0	277.0	63.0			5603	
02-16-1954	341.0	340.0	53.8	287.2	52.8			5603	
09-29-1954	341.0	340.0	69.6	271.4	68.6			5603	
02-21-1955	341.0	340.0	52.4	288.6	51.4			5603	
09-29-1955	341.0	340.0	69.7	271.3	68.7			5603	
02-16-1956	341.0	340.0	57.2	283.8	56.2			5603	
10-12-1956	341.0	340.0	63.0	278.0	62.0			5603	
02-14-1957	341.0	340.0	53.4	287.6	52.4			5603	
10-22-1957	341.0	340.0	67.7	273.3	66.7			5603	
02-27-1958	341.0	340.0	53.1	287.9	52.1			5603	
10-07-1958	341.0	340.0	64.7	276.3	63.7			5603	
02-20-1959	341.0	340.0	53.7	287.3	52.7			5603	
10-01-1959	341.0	340.0					1	5603	
02-10-1960	341.0	340.0	61.8	279.2	60.8			5603	
10-31-1960	341.0	340.0					1	5603	
02-21-1961	341.0	340.0	62.1	278.9	61.1			5603	
10-18-1961	341.0	340.0	81.5	259.5	80.5			5603	
02-07-1962	341.0	340.0	73.2	267.8	72.2			5603	
02-25-1963	341.0	340.0	74.2	266.8	73.2			5603	
02-03-1964	341.0	340.0	58.5	282.5	57.5			5603	
10-08-1964	341.0	340.0	85.4	255.6	84.4			5603	
02-05-1965	341.0	340.0	70.1	270.9	69.1			5603	
02-07-1966	341.0	340.0	67.4	273.6	66.4			5603	
02-06-1967	341.0	340.0	68.8	272.2	67.8			5603	
02-06-1968	341.0	340.0	61.9	279.1	60.9			5603	

02-03-1969	341.0	340.0	63.2	277.8	62.2			5603	
02-04-1970	341.0	340.0	56.8	284.2	55.8			5603	
09-28-1970	341.0	340.0	39.4	301.6	38.4			5603	
09-30-1971	341.0	340.0					<u>1</u>	5603	
01-27-1972	341.0	340.0					<u>9</u>	5603	
09-25-1972	341.0	340.0	81.5	259.5	80.5			5603	
02-12-1973	341.0	340.0	60.0	281.0	59.0			5603	
10-02-1973	341.0	340.0	73.0	268.0	72.0			5603	
01-28-1974	341.0	340.0	55.0	286.0	54.0			5603	
10-12-1974	341.0	340.0	69.0	272.0	68.0			5603	
02-12-1975	341.0	340.0	55.0	286.0	54.0			5603	
09-29-1975	341.0	340.0					<u>1</u>	5603	
01-22-1976	341.0	340.0					<u>1</u>	5603	
07-19-1976	341.0	340.0	80.0	261.0	79.0			5603	
10-06-1976	341.0	340.0	76.0	265.0	75.0			5603	
01-18-1977	341.0	340.0	65.0	276.0	64.0			5603	
06-01-1977	341.0	340.0	77.0	264.0	76.0			5603	
08-05-1977	341.0	340.0	90.0	251.0	89.0			5603	
10-03-1977	341.0	340.0	85.0	256.0	84.0			5603	
01-25-1978	341.0	340.0	74.0	267.0	73.0			5603	
10-10-1978	341.0	340.0	76.0	265.0	75.0			5603	
01-11-1979	341.0	340.0	65.0	276.0	64.0			5603	
09-17-1979	341.0	340.0	76.0	265.0	75.0			5603	
01-25-1980	341.0	340.0	68.0	273.0	67.0			5603	
09-22-1980	341.0	340.0	70.0	271.0	69.0			5603	
01-26-1981	341.0	340.0	61.0	280.0	60.0			5603	
09-21-1981	341.0	340.0	72.0	269.0	71.0			5001	
02-01-1982	341.0	340.0	62.0	279.0	61.0			5001	
09-22-1982	341.0	340.0	67.0	274.0	66.0			5603	
01-24-1983	341.0	340.0	49.0	292.0	48.0			5603	
09-29-1983	341.0	340.0	55.0	286.0	54.0			5001	
02-03-1984	341.0	340.0	45.0	296.0	44.0			5001	
10-01-1984	341.0	340.0	59.0	282.0	58.0			5001	
01-29-1985	341.0	340.0	47.0	294.0	46.0			5001	
09-30-1985	341.0	340.0	59.0	282.0	58.0			5001	
01-28-1986	341.0	340.0	56.0	285.0	55.0			5001	
09-26-1986	341.0	340.0	57.0	284.0	56.0			5001	
01-21-1987	341.0	340.0	29.0	312.0	28.0			5603	
09-17-1987	341.0	340.0	62.0	279.0	61.0			5603	
01-29-1988	341.0	340.0	58.0	283.0	57.0			5603	
09-27-1988	341.0	340.0	68.0	273.0	67.0			5603	
01-23-1989	341.0	340.0	60.0	281.0	59.0			5603	
10-02-1989	341.0	340.0	76.0	265.0	75.0			5603	
01-25-1990	341.0	340.0	66.0	275.0	65.0			5603	
10-05-1990	341.0	340.0	82.0	259.0	81.0			5603	
01-30-1991	341.0	340.0	77.0	264.0	76.0			5603	
10-11-1991	341.0	340.0	86.0	255.0	85.0			5603	
01-22-1992	341.0	340.0	80.0	261.0	79.0			5603	

10-22-1992	341.0	340.0	90.0	251.0	89.0			5603	
02-02-1993	341.0	340.0	86.0	255.0	85.0			5603	
10-07-1993	341.0	340.0	86.0	255.0	85.0			5603	
01-27-1994	341.0	340.0	86.0	255.0	85.0			5603	
10-07-1994	341.0	340.0	95.0	246.0	94.0			5603	
02-01-1995	341.0	340.0	99.0	242.0	98.0			5603	
09-26-1995	341.0	340.0	92.0	249.0	91.0			5603	
01-17-1996	341.0	340.0	89.0	252.0	88.0			5603	
09-30-1996	341.0	340.0	89.5	251.5	88.5			5603	
01-21-1997	341.0	340.0	82.0	259.0	81.0			5603	
10-10-1997	341.0	340.0	85.0	256.0	84.0			5603	
01-27-1998	341.0	340.0	79.0	262.0	78.0			5603	
10-12-1998	341.0	340.0	61.0	280.0	60.0			5603	
01-28-1999	341.0	340.0	70.0	271.0	69.0			5603	
10-07-1999	341.0	340.0	78.0	263.0	77.0			5603	
01-28-2000	341.0	340.0	71.0	270.0	70.0			5603	
01-25-2001	341.0	340.0	71.0	270.0	70.0			5603	
01-21-2002	341.0	340.0	77.5	263.5	76.5			5001	
09-18-2002	341.0	340.0	90.0	251.0	89.0			5001	
01-24-2003	341.0	340.0	81.0	260.0	80.0			5603	
01-27-2005	341.0	340.0	97.0	244.0	96.0			5603	
01-25-2006	341.0	340.0	90.0	251.0	89.0			5603	
02-02-2007	341.0	340.0	86.0	255.0	85.0			5603	
10-04-2010	341.0	340.0	120.0	221.0	119.0			5603	

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	297253	4029745	metres	11
LL	NAD27	119.2606	36.3933	decimal degrees	
LL	NAD83	119.2615	36.3933	decimal degrees	

Well Use: Undetermined

For more information contact:

Department of Water Resources, San Joaquin District
Water Management Section
3374 East Shields Avenue
Fresno, CA 93726

Phone: 559-230-3326

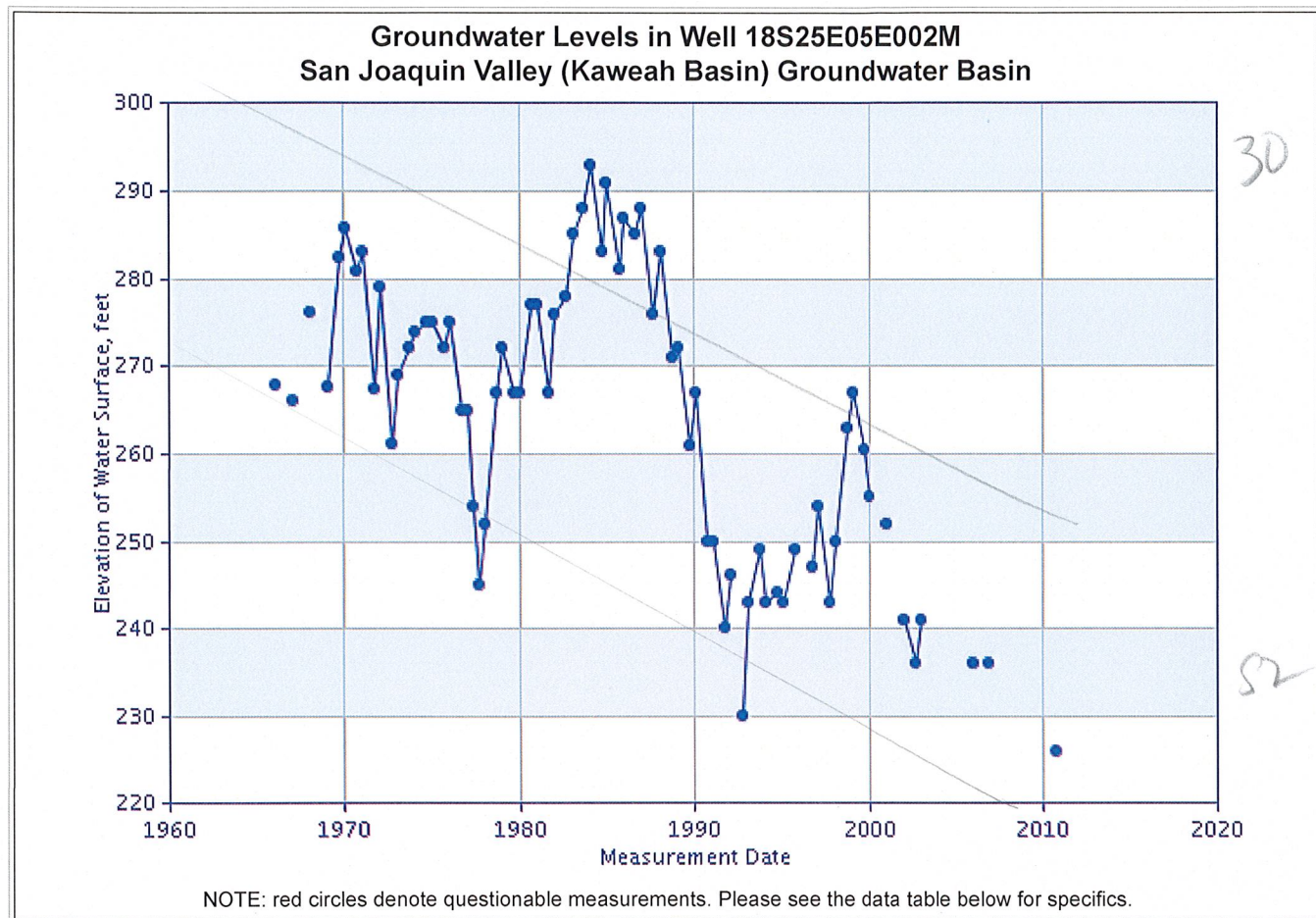
Fax: 559-230-3301

[New Search](#)

Search for wells within mile radius. [Nearby Search](#)

Groundwater Level Data for Well 18S25E05E002M

Your selection returned a total of **75** records. Wells in the Department of Water Resources monitoring network are identified by a [State Well Number](#), which is based on the Public Land Grid System. The table headings and records contain several [codes and abbreviations](#). Press the **New Search** or **Nearby Search** buttons or at the bottom of the page to begin a new data retrieval. Data for this well can also be downloaded in [MS Excel](#) or [text delimited format](#).



Summary Statistics of Depth to Water below Ground Surface by Month (displays to internal users only)

Month	Lowest Level	10th %ile	25th %ile	50th %ile	75th %ile	90th %ile	Highest Level	Number of Values	Number of Years
JAN	254	80.0	74.0	58.0	48.5	40.4	34.0	27	34
FEB	253	82.0	58.2	56.0	44.5	39.3	32.0	11	28
MAR				---	---	---	---	0	---
APR				---	---	---	---	0	---
MAY				---	---	---	---	0	---
JUN	71' / 40.75 = 1.0 ft/yr			71.0	---	---	71.0	1	---
JUL				---	---	---	---	0	---
AUG				---	---	---	---	0	---
SEP		89.0	79.2	54.0	47.0	42.4	37.0	17	31
OCT		90.0	80.5	64.3	56.8	46.4	42.0	16	41

NOV	89.0	---	---	89.0	---	---	89.0	1	---
DEC	---	---	---	---	---	---	---	0	---
Most Recent Measurement			99.0 feet on 10/04/2010						
Lowest Water Level			99.0 feet on 10/04/2010						
Highest Water Level			32.0 feet on 02/03/1984						
NOTE: The statistical summary shown above is based on an inverse distribution function that assumes a continuous distribution model. Nulls and questionable measurements are ignored in the calculation. The statistical summary is shown only if 10 or more measurements were taken in a given month. Bold values in the table above indicate the closest statistic to the most recent measurement. A measurement must have been taken in the last two years to be considered recent.									

Groundwater Level Readings

Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
02-02-1966	326.0	325.0	58.2	267.8	57.2			5603	
02-06-1967	326.0	325.0	60.0	266.0	59.0			5603	
02-06-1968	326.0	325.0	49.9	276.1	48.9			5603	
02-03-1969	326.0	325.0	58.4	267.6	57.4			5603	
10-01-1969	326.0	325.0	43.7	282.3	42.7			5001	
02-04-1970	326.0	325.0	40.3	285.7	39.3			5603	
09-28-1970	326.0	325.0	45.1	280.9	44.1			5603	
01-29-1971	326.0	325.0	43.0	283.0	42.0			5603	
09-30-1971	326.0	325.0	58.5	267.5	57.5			5603	
01-27-1972	326.0	325.0	47.0	279.0	46.0			5603	
09-25-1972	326.0	325.0	64.8	261.2	63.8			5603	
02-12-1973	326.0	325.0	57.0	269.0	56.0			5603	
10-02-1973	326.0	325.0	54.0	272.0	53.0			5603	
01-30-1974	326.0	325.0	52.0	274.0	51.0			5603	
10-11-1974	326.0	325.0	51.0	275.0	50.0			5603	
02-12-1975	326.0	325.0	51.0	275.0	50.0			5603	
09-29-1975	326.0	325.0	54.0	272.0	53.0			5603	
01-20-1976	326.0	325.0	51.0	275.0	50.0			5603	
10-05-1976	326.0	325.0	61.0	265.0	60.0			5603	
01-18-1977	326.0	325.0	61.0	265.0	60.0			5603	
06-01-1977	326.0	325.0	72.0	254.0	71.0			5603	
10-03-1977	326.0	325.0	81.0	245.0	80.0			5603	
01-25-1978	326.0	325.0	74.0	252.0	73.0			5603	
10-10-1978	326.0	325.0	59.0	267.0	58.0			5603	
01-10-1979	326.0	325.0	54.0	272.0	53.0			5603	
09-17-1979	326.0	325.0	59.0	267.0	58.0			5603	
01-25-1980	326.0	325.0	59.0	267.0	58.0			5603	
09-22-1980	326.0	325.0	49.0	277.0	48.0			5603	
01-26-1981	326.0	325.0	49.0	277.0	48.0			5603	
09-21-1981	326.0	325.0	59.0	267.0	58.0			5001	
01-25-1982	326.0	325.0	50.0	276.0	49.0			5001	
09-22-1982	326.0	325.0	48.0	278.0	47.0			5603	
02-17-1983	326.0	325.0	41.0	285.0	40.0			5603	
09-29-1983	326.0	325.0	38.0	288.0	37.0			5001	

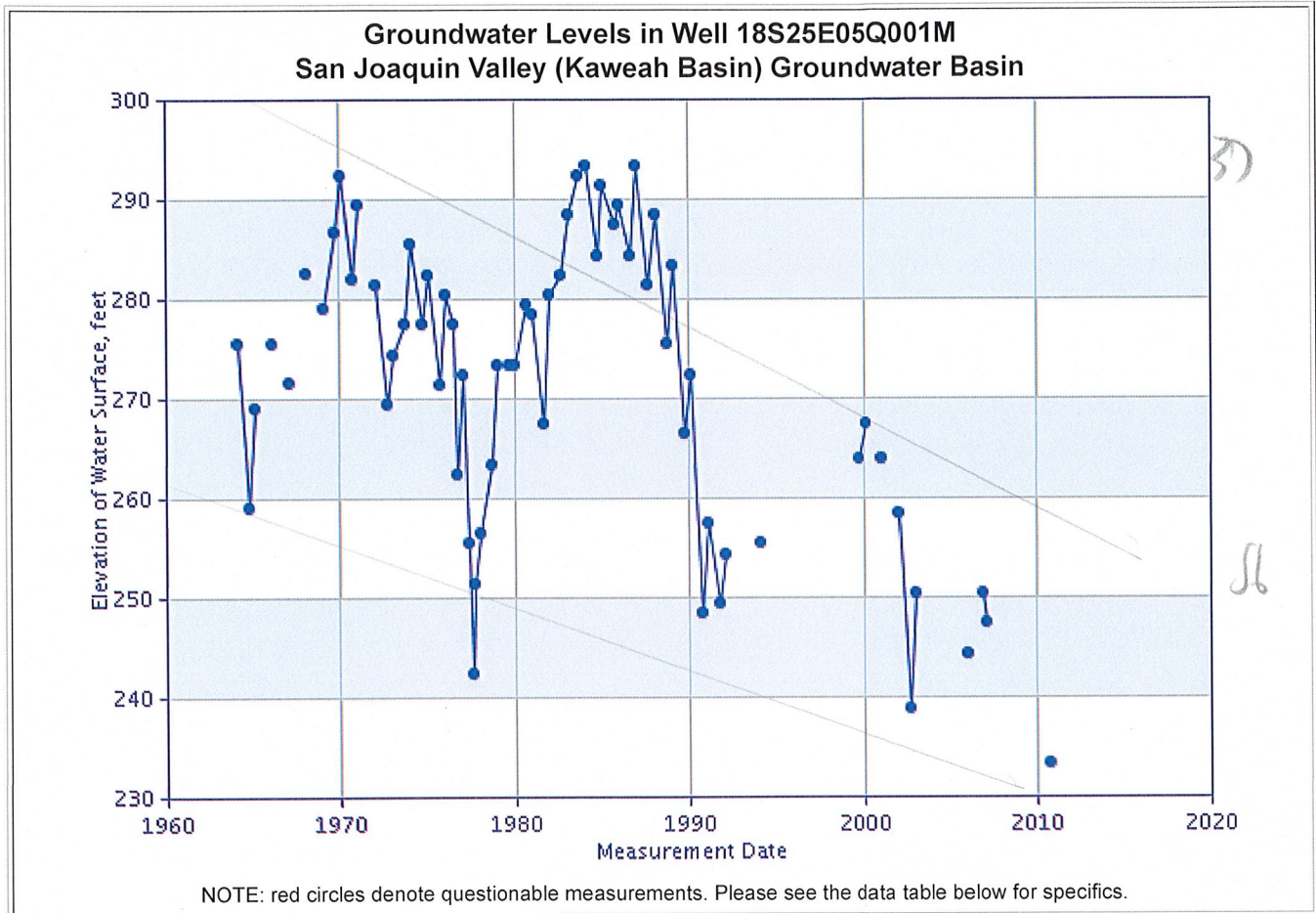
02-03-1984	326.0	325.0	33.0	293.0	32.0			5001	
10-01-1984	326.0	325.0	43.0	283.0	42.0			5001	
01-29-1985	326.0	325.0	35.0	291.0	34.0			5001	
09-30-1985	326.0	325.0	45.0	281.0	44.0			5001	
01-27-1986	326.0	325.0	39.0	287.0	38.0			5001	
09-26-1986	326.0	325.0	41.0	285.0	40.0			5001	
01-21-1987	326.0	325.0	38.0	288.0	37.0			5603	
09-17-1987	326.0	325.0	50.0	276.0	49.0			5603	
01-29-1988	326.0	325.0	43.0	283.0	42.0			5603	
09-27-1988	326.0	325.0	55.0	271.0	54.0			5603	
01-23-1989	326.0	325.0	54.0	272.0	53.0			5603	
10-02-1989	326.0	325.0	65.0	261.0	64.0			5603	
01-25-1990	326.0	325.0	59.0	267.0	58.0			5603	
10-05-1990	326.0	325.0	76.0	250.0	75.0			5603	
01-30-1991	326.0	325.0	76.0	250.0	75.0			5603	
10-14-1991	326.0	325.0	86.0	240.0	85.0			5603	
01-22-1992	326.0	325.0	80.0	246.0	79.0			5603	
10-22-1992	326.0	325.0	96.0	230.0	95.0			5603	
02-01-1993	326.0	325.0	83.0	243.0	82.0			5603	
10-07-1993	326.0	325.0	77.0	249.0	76.0			5603	
01-27-1994	326.0	325.0	83.0	243.0	82.0			5603	
09-29-1994	326.0	325.0	82.0	244.0	81.0			5603	
02-01-1995	326.0	325.0	83.0	243.0	82.0			5603	
09-26-1995	326.0	325.0	77.0	249.0	76.0			5603	
01-16-1996	326.0	325.0					4	5603	
09-30-1996	326.0	325.0	79.0	247.0	78.0			5603	
01-21-1997	326.0	325.0	72.0	254.0	71.0			5603	
10-13-1997	326.0	325.0	83.0	243.0	82.0			5603	
01-27-1998	326.0	325.0	76.0	250.0	75.0			5603	
10-12-1998	326.0	325.0	63.0	263.0	62.0			5603	
01-28-1999	326.0	325.0	59.0	267.0	58.0			5603	
10-07-1999	326.0	325.0	65.5	260.5	64.5			5603	
01-28-2000	326.0	325.0	71.0	255.0	70.0			5603	
01-25-2001	326.0	325.0	74.0	252.0	73.0			5603	
01-21-2002	326.0	325.0	85.0	241.0	84.0			5001	
09-18-2002	326.0	325.0	90.0	236.0	89.0			5001	
01-24-2003	326.0	325.0	85.0	241.0	84.0			5603	
01-27-2005	326.0	325.0					7	5603	
01-25-2006	326.0	325.0	90.0	236.0	89.0			5603	
11-14-2006	326.0	325.0	90.0	236.0	89.0			5603	
10-04-2010	326.0	325.0	100.0	226.0	99.0			5603	

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	294470	4029938	metres	11
LL	NAD27	119.2917	36.3944	decimal degrees	
LL	NAD83	119.2926	36.3944	decimal degrees	

Groundwater Level Data for Well 18S25E05Q001M

Your selection returned a total of **81** records. Wells in the Department of Water Resources monitoring network are identified by a [State Well Number](#), which is based on the Public Land Grid System. The table headings and records contain several [codes and abbreviations](#). Press the **New Search** or **Nearby Search** buttons or at the bottom of the page to begin a new data retrieval. Data for this well can also be downloaded in [MS Excel](#) or [text delimited format](#).



Summary Statistics of Depth to Water below Ground Surface by Month (displays to internal users only)

Month	Lowest Level	10th %ile	25th %ile	50th %ile	75th %ile	90th %ile	Highest Level	Number of Values	Number of Years
JAN	296	75.9	70.9	54.5	45.5	41.0	37.0	22	34
FEB	290	70.0	60.7	55.0	47.9	39.2	37.0	14	42
MAR	269			---	---	---	---	0	---
APR				---	---	---	---	0	---
MAY	39			---	---	---	---	0	---
JUN		75.0		75.0	---	---	75.0	1	---
JUL		53.0		53.0	---	---	53.0	1	---
AUG		88.0		88.0	---	---	88.0	1	---
SEP		51.0	48.0	43.6	38.0	13	31		
OCT		67.0	53.0	47.4	43.7	13	46		

NOV	80.0	---	---	80.0	---	---	80.0	1	---
DEC	---	---	---	---	---	---	---	0	---
Most Recent Measurement			97.0 feet on 10/04/2010						
Lowest Water Level			97.0 feet on 10/04/2010						
Highest Water Level			37.0 feet on 02/03/1984						
NOTE: The statistical summary shown above is based on an inverse distribution function that assumes a continuous distribution model. Nulls and questionable measurements are ignored in the calculation. The statistical summary is shown only if 10 or more measurements were taken in a given month. Bold values in the table above indicate the closest statistic to the most recent measurement. A measurement must have been taken in the last two years to be considered recent.									

Groundwater Level Readings

Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
02-03-1964	332.5	330.5	57.0	275.5	55.0			5603	
10-01-1964	332.5	330.5	73.3	259.2	71.3			5603	
02-05-1965	332.5	330.5	63.3	269.2	61.3			5603	
02-07-1966	332.5	330.5	57.0	275.5	55.0			5603	
02-06-1967	332.5	330.5	60.9	271.6	58.9			5603	
02-06-1968	332.5	330.5	49.9	282.6	47.9			5603	
02-03-1969	332.5	330.5	53.3	279.2	51.3			5603	
10-01-1969	332.5	330.5	45.7	286.8	43.7			5001	
02-04-1970	332.5	330.5	40.0	292.5	38.0			5603	
09-28-1970	332.5	330.5	50.4	282.1	48.4			5603	
01-29-1971	332.5	330.5	43.0	289.5	41.0			5603	
09-30-1971	332.5	330.5					<u>1</u>	5603	
01-27-1972	332.5	330.5	51.0	281.5	49.0			5603	
09-25-1972	332.5	330.5	63.0	269.5	61.0			5603	
02-12-1973	332.5	330.5	58.0	274.5	56.0			5603	
10-02-1973	332.5	330.5	55.0	277.5	53.0			5603	
01-28-1974	332.5	330.5	47.0	285.5	45.0			5603	
10-01-1974	332.5	330.5	55.0	277.5	53.0			5603	
02-13-1975	332.5	330.5	50.0	282.5	48.0			5603	
09-29-1975	332.5	330.5	61.0	271.5	59.0			5603	
01-21-1976	332.5	330.5	52.0	280.5	50.0			5603	
07-19-1976	332.5	330.5	55.0	277.5	53.0			5603	
10-06-1976	332.5	330.5	70.0	262.5	68.0			5603	
01-18-1977	332.5	330.5	60.0	272.5	58.0			5603	
06-01-1977	332.5	330.5	77.0	255.5	75.0			5603	
08-05-1977	332.5	330.5	90.0	242.5	88.0			5603	
10-03-1977	332.5	330.5	81.0	251.5	79.0			5603	
01-25-1978	332.5	330.5	76.0	256.5	74.0			5603	
10-10-1978	332.5	330.5	69.0	263.5	67.0			5603	
01-10-1979	332.5	330.5	59.0	273.5	57.0			5603	
09-17-1979	332.5	330.5	59.0	273.5	57.0			5603	
01-25-1980	332.5	330.5	59.0	273.5	57.0			5603	
09-22-1980	332.5	330.5	53.0	279.5	51.0			5603	
01-26-1981	332.5	330.5	54.0	278.5	52.0			5603	

09-21-1981	332.5	330.5	65.0	267.5	63.0			5001	
01-25-1982	332.5	330.5	52.0	280.5	50.0			5001	
09-22-1982	332.5	330.5	50.0	282.5	48.0			5603	
02-17-1983	332.5	330.5	44.0	288.5	42.0			5603	
09-29-1983	332.5	330.5	40.0	292.5	38.0			5001	
02-03-1984	332.5	330.5	39.0	293.5	37.0			5001	
10-01-1984	332.5	330.5	48.0	284.5	46.0			5001	
01-29-1985	332.5	330.5	41.0	291.5	39.0			5001	
09-30-1985	332.5	330.5	45.0	287.5	43.0			5001	
01-27-1986	332.5	330.5	43.0	289.5	41.0			5001	
09-26-1986	332.5	330.5	48.0	284.5	46.0			5001	
01-21-1987	332.5	330.5	39.0	293.5	37.0			5603	
09-17-1987	332.5	330.5	51.0	281.5	49.0			5603	
01-29-1988	332.5	330.5	44.0	288.5	42.0			5603	
09-27-1988	332.5	330.5	57.0	275.5	55.0			5603	
01-23-1989	332.5	330.5	49.0	283.5	47.0			5603	
10-02-1989	332.5	330.5	66.0	266.5	64.0			5603	
01-25-1990	332.5	330.5	60.0	272.5	58.0			5603	
10-05-1990	332.5	330.5	84.0	248.5	82.0			5603	
02-08-1991	332.5	330.5	75.0	257.5	73.0			5603	
10-04-1991	332.5	330.5	83.0	249.5	81.0			5603	
01-22-1992	332.5	330.5	78.0	254.5	76.0			5603	
10-19-1992	332.5	330.5					<u>4</u>	5603	
02-02-1993	332.5	330.5					<u>4</u>	5603	
10-07-1993	332.5	330.5					<u>4</u>	5603	
01-27-1994	332.5	330.5	77.0	255.5	75.0			5603	
10-07-1994	332.5	330.5					<u>4</u>	5603	
02-01-1995	332.5	330.5					<u>4</u>	5603	
09-26-1995	332.5	330.5					<u>4</u>	5603	
01-16-1996	332.5	330.5					<u>4</u>	5603	
09-30-1996	332.5	330.5					<u>9</u>	5603	
01-21-1997	332.5	330.5					<u>9</u>	5603	
10-10-1997	332.5	330.5					<u>4</u>	5603	
01-27-1998	332.5	330.5					<u>0</u>	5603	
10-12-1998	332.5	330.5					<u>9</u>	5603	
01-25-1999	332.5	330.5					<u>9</u>	5603	
10-07-1999	332.5	330.5	68.5	264.0	66.5			5603	
02-10-2000	332.5	330.5	65.0	267.5	63.0			5603	
01-25-2001	332.5	330.5	68.5	264.0	66.5			5603	
01-21-2002	332.5	330.5	74.0	258.5	72.0			5001	
09-18-2002	332.5	330.5	93.5	239.0	91.5			5001	
01-24-2003	332.5	330.5	82.0	250.5	80.0			5603	
01-27-2005	332.5	330.5					<u>7</u>	5603	
01-25-2006	332.5	330.5	88.0	244.5	86.0			5603	
11-14-2006	332.5	330.5	82.0	250.5	80.0			5603	
02-02-2007	332.5	330.5	85.0	247.5	83.0			5603	
10-04-2010	332.5	330.5	99.0	233.5	97.0			5603	



Welcome: Michael Scott

Public: Well Details

[View Well Data](#)

Identification

Local Well Designation	18S25E05Q001M
Is Local Designation the same as State Well #?	Yes
State Well Number	18S25E05Q001M
Master Site Code	363864N1192834W001
CASGEM Well Id	34223
Data submittals for this well are under	CASGEM

Geography

Latitude	36.3864 North
Longitude	-119.2834 West
	View on Map
Method	GPS
Accuracy	10 ft.
Physical Basin	5-022.11 Kaweah
County	Tulare

Reference and Ground Surface

RP Elevation ?	334.80 ft.
Description	None Provided
GS Elevation ?	333.30 ft.
Method	USGS quad
Accuracy	5 ft.
Distance from RP	1.50

Well Associations

Organization

Kaweah Delta Water Conservation District

Please contact your local regional office to dissociate your organization from a CASGEM well.

Primary Well Org	Kaweah Delta Water Conservation District
Notification Basin/Portion	5-022.11 - Kaweah / Kaweah (less TID)

Well Use

Well Use	Irrigation
Well Status	Active

Well Construction

Completion Type	Single Well
Total Depth	278 ft.
Do you have well construction data?	No
Well completion report available?	No

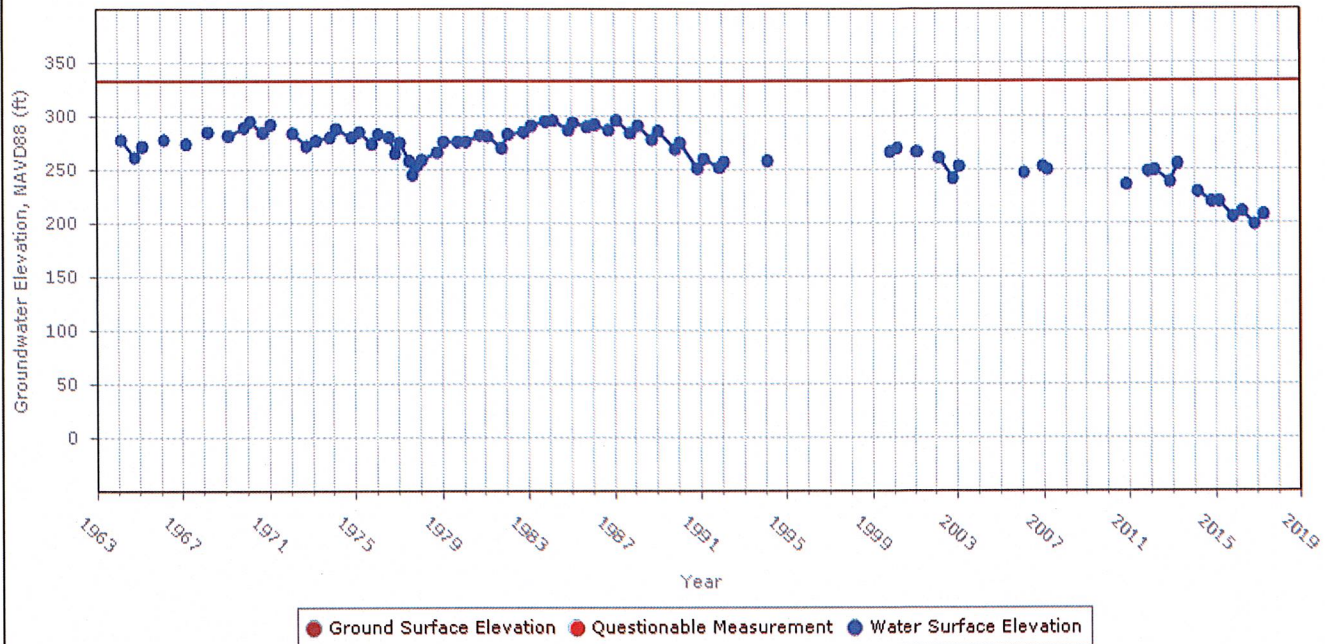
Additional Information

Written description of location of well

Any additional comments

[View Hydrograph](#)

Groundwater Elevation Data for 363864N1192834W001

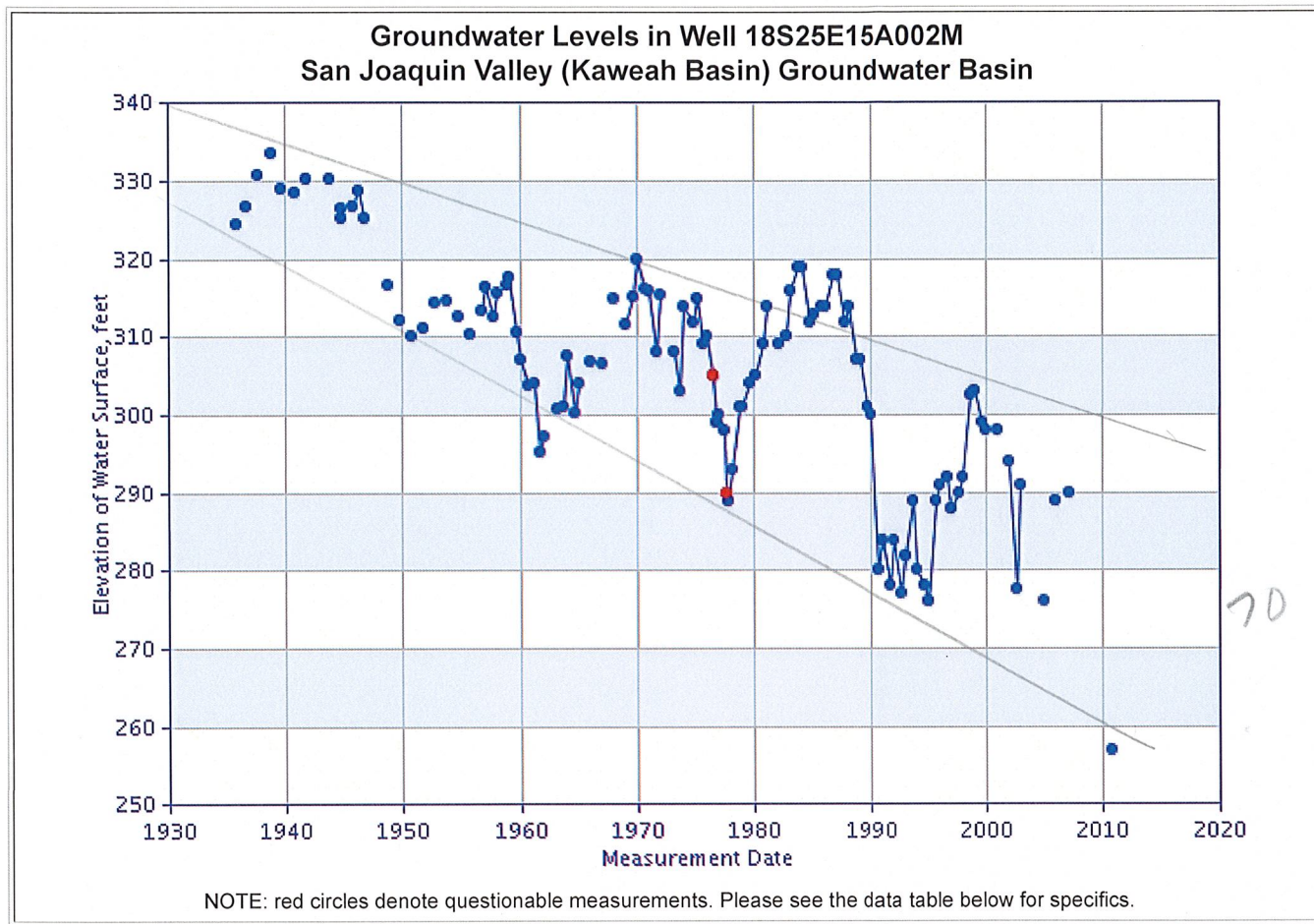


View Elevation Data

Date	Military Time (PST)	NM	QM	Reading @RP	Reading @WS	RP to WS	RP Elev	GS Elev	WSE	GS to WS	Measurement Method	Measurement Accuracy	Co-
03/17/2017	00:00			126.700	0.000	126.700	334.800	333.300	208.100	125.200	ES	0.1 Ft	Kav Cor
10/16/2016	00:00			136.000	0.000	136.000	334.800	333.300	198.800	134.500	ES	0.1 Ft	Kav Cor
03/10/2016	00:00			124.200	0.000	124.200	335.200	333.200	211.000	122.200	ES	0.1 Ft	Kav Cor
10/14/2015	00:00			129.500	0.000	129.500	335.200	333.200	205.700	127.500	ES	0.1 Ft	Kav Cor
02/27/2015	00:00			115.000	0.000	115.000	335.200	333.200	220.200	113.000	ES	0.1 Ft	Kav Cor
10/16/2014	00:00			115.000	0.000	115.000	335.200	333.200	220.200	113.000	ES	0.1 Ft	Kav Cor
02/14/2014	00:00			106.000	0.000	106.000	335.200	333.200	229.200	104.000	ES	0.1 Ft	Kav Cor
10/15/2013	00:00	1					335.200	333.200					Kav Cor
03/05/2013	00:00			77.000	0.000	77.000	332.500	330.500	255.500	75.000	ES	0.1 Ft	Kav Cor
10/10/2012	00:00			94.000	0.000	94.000	332.500	330.500	238.500	92.000	ES	0.1 Ft	Kav Cor
02/08/2012	00:00			83.000	0.000	83.000	332.500	330.500	249.500	81.000	ES	0.1 Ft	Kav Cor
10/17/2011	00:00			84.000	0.000	84.000	332.500	330.500	248.500	82.000	ES	0.1 Ft	Kav Cor
10/04/2010	00:00			99.000	0.000	99.000	335.190	333.190	236.190	97.000	UNK	Unknown	Kav Cor
02/02/2007	00:00			85.000	0.000	85.000	335.190	333.190	250.190	83.000	UNK	Unknown	Kav Cor
11/14/2006	00:00			82.000	0.000	82.000	335.190	333.190	253.190	80.000	UNK	Unknown	Kav Cor
01/25/2006	00:00			88.000	0.000	88.000	335.190	333.190	247.190	86.000	UNK	Unknown	Kav Cor

Groundwater Level Data for Well 18S25E15A002M

Your selection returned a total of **117** records. Wells in the Department of Water Resources monitoring network are identified by a [State Well Number](#), which is based on the Public Land Grid System. The table headings and records contain several [codes and abbreviations](#). Press the **New Search** or **Nearby Search** buttons or at the bottom of the page to begin a new data retrieval. Data for this well can also be downloaded in [MS Excel](#) or [text delimited format](#).



Summary Statistics of Depth to Water below Ground Surface by Month (displays to internal users only)

Month	Lowest Level	10th %ile	25th %ile	50th %ile	75th %ile	90th %ile	Highest Level	Number of Values	Number of Years
JAN	1840 331	65.0	58.0	49.0	35.0	33.4	31.0	29	34
FEB		59.8	45.7	41.2	33.8	31.2	29.0	20	49
MAR	2010 300			44.8	---	---	44.8	1	---
APR				---	---	---	---	0	---
MAY	35' / 100 gal = 0.5 LL/W			20.3	---	---	20.3	1	---
JUN				51.0	---	---	51.0	1	---
JUL				---	---	---	---	0	---
AUG				---	---	---	---	0	---
SEP		71.5	64.4	41.0	38.5	34.1	30.0	17	46
OCT		62.0	64.5	37.4	31.9	21.1	15.4	36	73

NOV	34.3	---	---	24.2	---	---	18.8	6	23
DEC	---	---	---	---	---	---	---	0	---
Most Recent Measurement			92.0 feet on 10/01/2010						
Lowest Water Level			92.0 feet on 10/01/2010						
Highest Water Level			15.4 feet on 10/19/1938						
NOTE: The statistical summary shown above is based on an inverse distribution function that assumes a continuous distribution model. Nulls and questionable measurements are ignored in the calculation. The statistical summary is shown only if 10 or more measurements were taken in a given month. Bold values in the table above indicate the closest statistic to the most recent measurement. A measurement must have been taken in the last two years to be considered recent.									

Groundwater Level Readings

Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
11-09-1935	350.0	349.0	25.5	324.5	24.5			5050	
10-13-1936	350.0	349.0	23.2	326.8	22.2			5050	
10-13-1937	350.0	349.0	19.1	330.9	18.1			5050	
10-19-1938	350.0	349.0	16.4	333.6	15.4			5050	
10-11-1939	350.0	349.0	21.0	329.0	20.0			5050	
11-05-1940	350.0	349.0	21.4	328.6	20.4			5050	
11-01-1941	350.0	349.0	19.8	330.2	18.8			5050	
10-19-1943	350.0	349.0	19.8	330.2	18.8			5050	
10-25-1944	350.0	349.0	23.5	326.5	22.5			5050	
11-17-1944	350.0	349.0	24.8	325.2	23.8			5050	
10-19-1945	350.0	349.0	23.3	326.7	22.3			5050	
05-23-1946	350.0	349.0	21.3	328.7	20.3			5050	
10-14-1946	350.0	349.0	24.7	325.3	23.7			5050	
10-30-1948	350.0	349.0	33.2	316.8	32.2			5050	
10-05-1949	350.0	349.0	37.8	312.2	36.8			5050	
10-22-1950	350.0	349.0	39.8	310.2	38.8			5050	
10-16-1951	350.0	349.0	38.8	311.2	37.8			5050	
10-14-1952	350.0	349.0	35.6	314.4	34.6			5050	
11-04-1953	350.0	349.0	35.3	314.7	34.3			5050	
10-08-1954	350.0	349.0	37.3	312.7	36.3			5050	
09-26-1955	350.0	349.0	39.5	310.5	38.5			5050	
03-06-1956	350.0	349.0					<u>1</u>	5050	
10-22-1956	350.0	349.0	36.6	313.4	35.6			5050	
02-19-1957	350.0	349.0	33.5	316.5	32.5			5050	
10-23-1957	350.0	349.0	37.3	312.7	36.3			5050	
02-26-1958	350.0	349.0	34.3	315.7	33.3			5050	
11-12-1958	350.0	349.0	33.2	316.8	32.2			5050	
02-24-1959	350.0	349.0	32.3	317.7	31.3			5050	
10-16-1959	350.0	349.0	39.4	310.6	38.4			5603	
02-20-1960	350.0	349.0	43.0	307.0	42.0			5603	
10-25-1960	350.0	349.0	46.2	303.8	45.2			5603	
03-01-1961	350.0	349.0	45.8	304.2	44.8			5603	
10-18-1961	350.0	349.0	54.8	295.2	53.8			5603	
02-07-1962	350.0	349.0	52.8	297.2	51.8			5603	

02-25-1963	350.0	349.0	49.3	300.7	48.3			5603	
09-25-1963	350.0	349.0	48.9	301.1	47.9			5603	
02-03-1964	350.0	349.0	42.4	307.6	41.4			5603	
10-01-1964	350.0	349.0	49.8	300.2	48.8			5603	
02-05-1965	350.0	349.0	45.8	304.2	44.8			5603	
02-07-1966	350.0	349.0	43.2	306.8	42.2			5603	
02-06-1967	350.0	349.0	43.3	306.7	42.3			5603	
02-06-1968	350.0	349.0	35.0	315.0	34.0			5603	
02-03-1969	350.0	349.0	38.4	311.6	37.4			5603	
10-01-1969	350.0	349.0	34.9	315.1	33.9			5001	
02-04-1970	350.0	349.0	30.0	320.0	29.0			5603	
09-28-1970	350.0	349.0	33.8	316.2	32.8			5603	
01-29-1971	350.0	349.0	34.0	316.0	33.0			5603	
09-30-1971	350.0	349.0	42.0	308.0	41.0			5603	
01-27-1972	350.0	349.0	34.5	315.5	33.5			5603	
09-25-1972	350.0	349.0					<u>1</u>	5603	
02-12-1973	350.0	349.0	42.0	308.0	41.0			5603	
10-02-1973	350.0	349.0	47.0	303.0	46.0			5603	
01-28-1974	350.0	349.0	36.0	314.0	35.0			5603	
10-02-1974	350.0	349.0	38.0	312.0	37.0			5603	
02-13-1975	350.0	349.0	35.0	315.0	34.0			5603	
09-29-1975	350.0	349.0	41.0	309.0	40.0			5603	
01-21-1976	350.0	349.0	40.0	310.0	39.0			5603	
07-19-1976	350.0	349.0	45.0	305.0	44.0	<u>4</u>		5603	
10-06-1976	350.0	349.0	51.0	299.0	50.0			5603	
01-17-1977	350.0	349.0	50.0	300.0	49.0			5603	
06-01-1977	350.0	349.0	52.0	298.0	51.0			5603	
08-05-1977	350.0	349.0	60.0	290.0	59.0	<u>4</u>		5603	
10-03-1977	350.0	349.0	61.0	289.0	60.0			5603	
01-26-1978	350.0	349.0	57.0	293.0	56.0			5603	
09-25-1978	350.0	349.0	49.0	301.0	48.0			5603	
01-11-1979	350.0	349.0	49.0	301.0	48.0			5603	
09-17-1979	350.0	349.0	46.0	304.0	45.0			5603	
01-25-1980	350.0	349.0	45.0	305.0	44.0			5603	
09-22-1980	350.0	349.0	41.0	309.0	40.0			5603	
01-26-1981	350.0	349.0	36.0	314.0	35.0			5603	
09-21-1981	350.0	349.0					<u>1</u>	5001	
02-01-1982	350.0	349.0	41.0	309.0	40.0			5001	
09-22-1982	350.0	349.0	40.0	310.0	39.0			5603	
01-24-1983	350.0	349.0	34.0	316.0	33.0			5603	
09-29-1983	350.0	349.0	31.0	319.0	30.0			5001	
02-03-1984	350.0	349.0	31.0	319.0	30.0			5001	
10-01-1984	350.0	349.0	38.0	312.0	37.0			5001	
01-29-1985	350.0	349.0	37.0	313.0	36.0			5001	
09-27-1985	350.0	349.0	36.0	314.0	35.0			5001	
01-28-1986	350.0	349.0	36.0	314.0	35.0			5001	
10-02-1986	350.0	349.0	32.0	318.0	31.0			5001	
01-21-1987	350.0	349.0	32.0	318.0	31.0			5603	

09-17-1987	350.0	349.0	38.0	312.0	37.0			5603	
01-29-1988	350.0	349.0	36.0	314.0	35.0			5603	
09-27-1988	350.0	349.0	43.0	307.0	42.0			5603	
01-23-1989	350.0	349.0	43.0	307.0	42.0			5603	
10-02-1989	350.0	349.0	49.0	301.0	48.0			5603	
01-25-1990	350.0	349.0	50.0	300.0	49.0			5603	
10-05-1990	350.0	349.0	70.0	280.0	69.0			5603	
01-30-1991	350.0	349.0	66.0	284.0	65.0			5603	
10-01-1991	350.0	349.0	72.0	278.0	71.0			5603	
01-22-1992	350.0	349.0	66.0	284.0	65.0			5603	
10-20-1992	350.0	349.0	73.0	277.0	72.0			5603	
02-02-1993	350.0	349.0	68.0	282.0	67.0			5603	
10-07-1993	350.0	349.0	61.0	289.0	60.0			5603	
01-27-1994	350.0	349.0	70.0	280.0	69.0			5603	
09-29-1994	350.0	349.0	72.0	278.0	71.0			5603	
02-01-1995	350.0	349.0	74.0	276.0	73.0			5603	
09-26-1995	350.0	349.0	61.0	289.0	60.0			5603	
01-17-1996	350.0	349.0	59.0	291.0	58.0			5603	
09-30-1996	350.0	349.0	58.0	292.0	57.0			5603	
01-21-1997	350.0	349.0	62.0	288.0	61.0			5603	
10-10-1997	350.0	349.0	60.0	290.0	59.0			5603	
01-23-1998	350.0	349.0	58.0	292.0	57.0			5603	
10-12-1998	350.0	349.0	47.5	302.5	46.5			5603	
01-28-1999	350.0	349.0	47.0	303.0	46.0			5603	
10-07-1999	350.0	349.0	51.0	299.0	50.0			5603	
01-28-2000	350.0	349.0	52.0	298.0	51.0			5603	
01-25-2001	350.0	349.0	52.0	298.0	51.0			5603	
01-21-2002	350.0	349.0	56.0	294.0	55.0			5001	
09-18-2002	350.0	349.0	72.5	277.5	71.5			5001	
01-24-2003	350.0	349.0	59.0	291.0	58.0			5603	
01-27-2005	350.0	349.0	74.0	276.0	73.0			5603	
01-25-2006	350.0	349.0	61.0	289.0	60.0			5603	
11-14-2006	350.0	349.0					<u>1</u>	5603	<u>2</u>
02-02-2007	350.0	349.0	60.0	290.0	59.0			5603	
10-01-2010	350.0	349.0	93.0	257.0	92.0			5603	

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	298818	4027153	metres	11
LL	NAD27	119.2425	36.3703	decimal degrees	
LL	NAD83	119.2434	36.3703	decimal degrees	

Well Use: Undetermined

For more information contact:

Department of Water Resources, San Joaquin District
Water Management Section
3374 East Shields Avenue
Fresno, CA 93726

Phone: 559-230-3326

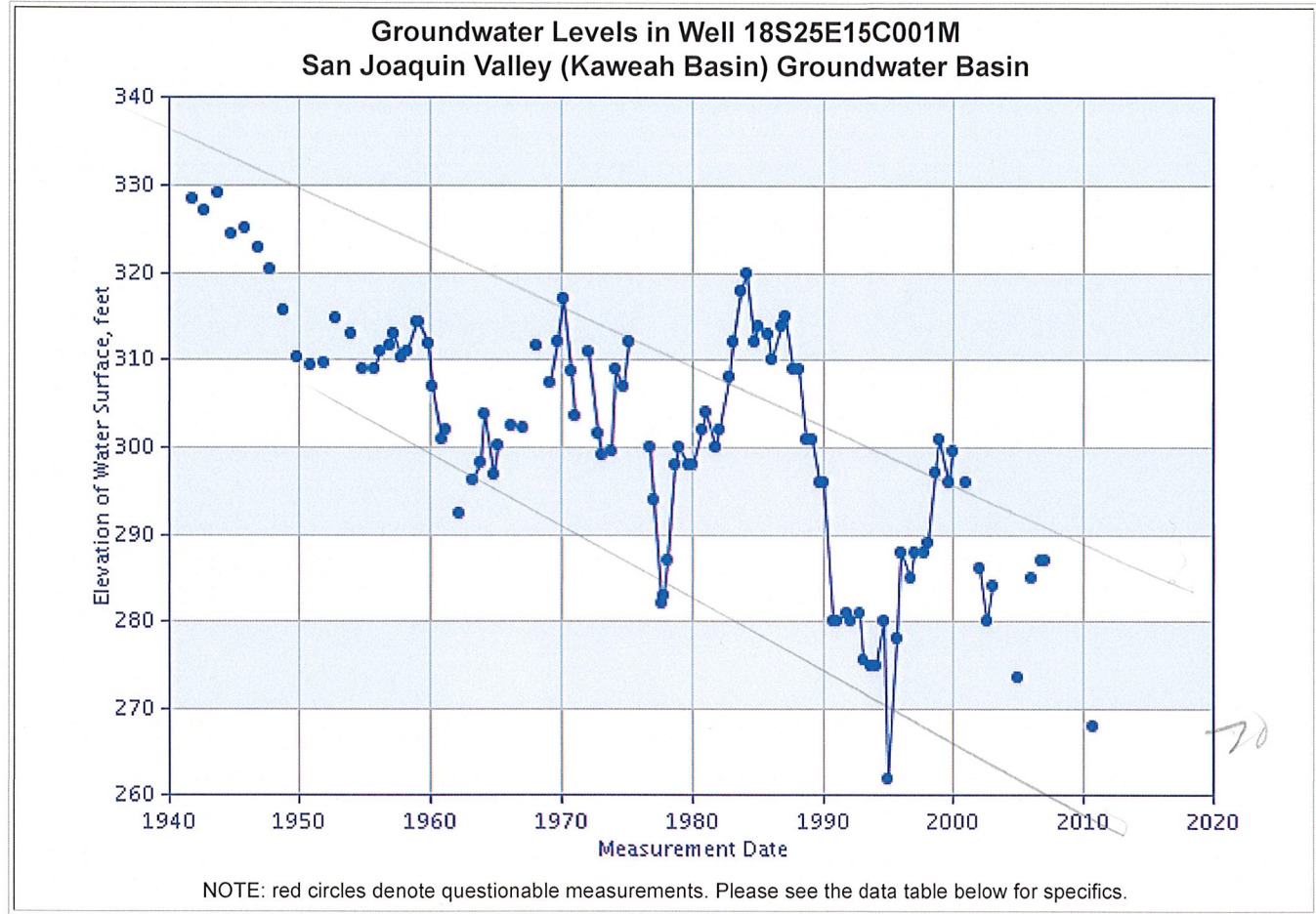
Fax: 559-230-3301

New Search

Search for wells within mile radius. [Nearby Search](#)

Groundwater Level Data for Well 18S25E15C001M

Your selection returned a total of **109** records. Wells in the Department of Water Resources monitoring network are identified by a [State Well Number](#), which is based on the Public Land Grid System. The table headings and records contain several [codes and abbreviations](#). Press the **New Search** or **Nearby Search** buttons or at the bottom of the page to begin a new data retrieval. Data for this well can also be downloaded in [MS Excel](#) or [text delimited format](#).



Summary Statistics of Depth to Water below Ground Surface by Month (displays to internal users only)

Month	Lowest Level	10th %ile	25th %ile	50th %ile	75th %ile	90th %ile	Highest Level	Number of Values	Number of Years
JAN	330	72.5	1950	49.0	40.8	34.7	31.0	28	34
FEB	330	72.5	1950	43.5	34.3	31.6	26.0	21	49
MAR	287	70.0	2010	35.0	---	---	35.0	1	---
APR	41'	70.0	2010	---	---	---	---	0	---
MAY	41'	70.0	2010	---	---	---	---	0	---
JUN	41'	70.0	2010	---	---	---	---	0	---
JUL	41'	70.0	2010	---	---	---	---	0	---
AUG	41'	70.0	2010	64.0	---	---	64.0	1	---
SEP	41'	70.0	2010	45.0	37.3	35.4	28.0	17	46
OCT	41'	70.0	2010	36.4	31.4	21.2	16.8	34	68

Handwritten notes on the table:
 - In the first column (Month), there are handwritten values: 330, 287, 41', and a calculation = 0.756/yr.
 - In the second column (Lowest Level), there are handwritten values: 72.5, 70.0, 70.0, and 70.0.
 - In the third column (10th %ile), there are handwritten values: 1950, 2010, 2010, and 2010.
 - In the fourth column (25th %ile), there are handwritten values: 1950, 2010, 2010, and 2010.
 - In the fifth column (50th %ile), there are handwritten values: 49.0, 43.5, 35.0, and 64.0.
 - In the sixth column (75th %ile), there are handwritten values: 40.8, 34.3, ---, and 37.3.
 - In the seventh column (90th %ile), there are handwritten values: 34.7, 31.6, ---, and 35.4.
 - In the eighth column (Highest Level), there are handwritten values: 31.0, 26.0, 35.0, and 64.0.
 - In the ninth column (Number of Values), there are handwritten values: 28, 21, 1, 0, 0, 0, 0, 1, 17, 34.
 - In the tenth column (Number of Years), there are handwritten values: 34, 49, ---, ---, ---, ---, ---, ---, 46, 68.

NOV	59.0	---	---	32.9	---	---	31.7	3	53
DEC	---	---	---	---	---	---	---	0	---
Most Recent Measurement			78.0 feet on 10/01/2010						
Lowest Water Level			84.0 feet on 02/01/1995						
Highest Water Level			16.8 feet on 10/15/1943						
NOTE: The statistical summary shown above is based on an inverse distribution function that assumes a continuous distribution model. Nulls and questionable measurements are ignored in the calculation. The statistical summary is shown only if 10 or more measurements were taken in a given month. Bold values in the table above indicate the closest statistic to the most recent measurement. A measurement must have been taken in the last two years to be considered recent.									

Groundwater Level Readings									
Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
10-24-1941	347.0	346.0	18.5	328.5	17.5			5050	
10-17-1942	347.0	346.0	19.8	327.2	18.8			5050	
10-15-1943	347.0	346.0	17.8	329.2	16.8			5050	
10-14-1944	347.0	346.0	22.6	324.4	21.6			5050	
10-12-1945	347.0	346.0	22.0	325.0	21.0			5050	
10-21-1946	347.0	346.0	24.1	322.9	23.1			5050	
10-22-1947	347.0	346.0	26.6	320.4	25.6			5050	
10-30-1948	347.0	346.0	31.4	315.6	30.4			5050	
10-04-1949	347.0	346.0	36.7	310.3	35.7			5050	
10-21-1950	347.0	346.0	37.5	309.5	36.5			5050	
10-16-1951	347.0	346.0	37.3	309.7	36.3			5050	
10-13-1952	347.0	346.0	32.2	314.8	31.2			5050	
11-13-1953	347.0	346.0	33.9	313.1	32.9			5050	
10-08-1954	347.0	346.0	38.0	309.0	37.0			5050	
09-26-1955	347.0	346.0	38.0	309.0	37.0			5050	
03-06-1956	347.0	346.0	36.0	311.0	35.0			5050	
10-22-1956	347.0	346.0	35.4	311.6	34.4			5050	
02-19-1957	347.0	346.0	34.0	313.0	33.0			5050	
10-23-1957	347.0	346.0	36.7	310.3	35.7			5050	
02-26-1958	347.0	346.0	36.1	310.9	35.1			5050	
11-12-1958	347.0	346.0	32.7	314.3	31.7			5050	
02-24-1959	347.0	346.0	32.6	314.4	31.6			5050	
10-16-1959	347.0	346.0	35.2	311.8	34.2			5603	
02-20-1960	347.0	346.0	40.0	307.0	39.0			5603	
10-25-1960	347.0	346.0	46.0	301.0	45.0			5603	
02-21-1961	347.0	346.0	44.9	302.1	43.9			5603	
10-18-1961	347.0	346.0					1	5603	
02-07-1962	347.0	346.0	54.7	292.3	53.7			5603	
02-25-1963	347.0	346.0	50.8	296.2	49.8			5603	
09-25-1963	347.0	346.0	48.8	298.2	47.8			5603	
02-03-1964	347.0	346.0	43.2	303.8	42.2			5603	
10-01-1964	347.0	346.0	50.1	296.9	49.1			5603	
02-05-1965	347.0	346.0	46.7	300.3	45.7			5603	
02-07-1966	347.0	346.0	44.5	302.5	43.5			5603	

02-06-1967	347.0	346.0	44.8	302.2	43.8			5603	
02-06-1968	347.0	346.0	35.3	311.7	34.3			5603	
02-03-1969	347.0	346.0	39.5	307.5	38.5			5603	
10-01-1969	347.0	346.0	34.8	312.2	33.8			5001	
02-04-1970	347.0	346.0	30.0	317.0	29.0			5603	
09-28-1970	347.0	346.0	38.3	308.7	37.3			5603	
01-29-1971	347.0	346.0	43.5	303.5	42.5			5603	
09-30-1971	347.0	346.0					1	5603	
01-27-1972	347.0	346.0	36.0	311.0	35.0			5603	
09-25-1972	347.0	346.0	45.5	301.5	44.5			5603	
02-12-1973	347.0	346.0	48.0	299.0	47.0			5603	
10-02-1973	347.0	346.0	47.5	299.5	46.5			5603	
01-28-1974	347.0	346.0	38.0	309.0	37.0			5603	
10-02-1974	347.0	346.0	40.0	307.0	39.0			5603	
02-13-1975	347.0	346.0	35.0	312.0	34.0			5603	
09-29-1975	347.0	346.0					1	5603	
01-21-1976	347.0	346.0					1	5603	
10-06-1976	347.0	346.0	47.0	300.0	46.0			5603	
01-18-1977	347.0	346.0	53.0	294.0	52.0			5603	
08-05-1977	347.0	346.0	65.0	282.0	64.0			5603	
10-03-1977	347.0	346.0	64.0	283.0	63.0			5603	
01-26-1978	347.0	346.0	60.0	287.0	59.0			5603	
09-25-1978	347.0	346.0	49.0	298.0	48.0			5603	
01-11-1979	347.0	346.0	47.0	300.0	46.0			5603	
09-17-1979	347.0	346.0	49.0	298.0	48.0			5603	
01-25-1980	347.0	346.0	49.0	298.0	48.0			5603	
09-22-1980	347.0	346.0	45.0	302.0	44.0			5603	
01-26-1981	347.0	346.0	43.0	304.0	42.0			5603	
09-21-1981	347.0	346.0	47.0	300.0	46.0			5001	
02-01-1982	347.0	346.0	45.0	302.0	44.0			5001	
09-22-1982	347.0	346.0	39.0	308.0	38.0			5603	
01-24-1983	347.0	346.0	35.0	312.0	34.0			5603	
09-29-1983	347.0	346.0	29.0	318.0	28.0			5001	
02-03-1984	347.0	346.0	27.0	320.0	26.0			5001	
10-01-1984	347.0	346.0	35.0	312.0	34.0			5001	
01-29-1985	347.0	346.0	33.0	314.0	32.0			5001	
09-27-1985	347.0	346.0	34.0	313.0	33.0			5001	
01-28-1986	347.0	346.0	37.0	310.0	36.0			5001	
10-02-1986	347.0	346.0	33.0	314.0	32.0			5001	
01-21-1987	347.0	346.0	32.0	315.0	31.0			5603	
09-17-1987	347.0	346.0	38.0	309.0	37.0			5603	
01-29-1988	347.0	346.0	38.0	309.0	37.0			5603	
09-27-1988	347.0	346.0	46.0	301.0	45.0			5603	
01-23-1989	347.0	346.0	46.0	301.0	45.0			5603	
10-02-1989	347.0	346.0	51.0	296.0	50.0			5603	
01-25-1990	347.0	346.0	51.0	296.0	50.0			5603	
10-05-1990	347.0	346.0	67.0	280.0	66.0			5603	
01-30-1991	347.0	346.0	67.0	280.0	66.0			5603	

10-01-1991	347.0	346.0	66.0	281.0	65.0			5603	
01-22-1992	347.0	346.0	67.0	280.0	66.0			5603	
10-20-1992	347.0	346.0	66.0	281.0	65.0			5603	
02-02-1993	347.0	346.0	71.5	275.5	70.5			5603	
10-07-1993	347.0	346.0	72.0	275.0	71.0			5603	
01-27-1994	347.0	346.0	72.0	275.0	71.0			5603	
09-29-1994	347.0	346.0	67.0	280.0	66.0			5603	
02-01-1995	347.0	346.0	85.0	262.0	84.0			5603	
09-26-1995	347.0	346.0	69.0	278.0	68.0			5603	
01-17-1996	347.0	346.0	59.0	288.0	58.0			5603	
09-30-1996	347.0	346.0	62.0	285.0	61.0			5603	
01-27-1997	347.0	346.0	59.0	288.0	58.0			5603	
10-10-1997	347.0	346.0	59.0	288.0	58.0			5603	
01-23-1998	347.0	346.0	58.0	289.0	57.0			5603	
10-12-1998	347.0	346.0	50.0	297.0	49.0			5603	
01-28-1999	347.0	346.0	46.0	301.0	45.0			5603	
10-07-1999	347.0	346.0	51.0	296.0	50.0			5603	
01-28-2000	347.0	346.0	47.5	299.5	46.5			5603	
01-25-2001	347.0	346.0	51.0	296.0	50.0			5603	
01-21-2002	347.0	346.0	61.0	286.0	60.0			5001	
09-18-2002	347.0	346.0	67.0	280.0	66.0			5001	
01-24-2003	347.0	346.0	63.0	284.0	62.0			5603	
01-27-2005	347.0	346.0	73.5	273.5	72.5			5603	
01-25-2006	347.0	346.0	62.0	285.0	61.0			5603	
11-14-2006	347.0	346.0	60.0	287.0	59.0			5603	
02-02-2007	347.0	346.0	60.0	287.0	59.0			5603	
10-01-2010	347.0	346.0	79.0	268.0	78.0			5603	

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	298042	4027048	metres	11
LL	NAD27	119.2511	36.3692	decimal degrees	
LL	NAD83	119.2520	36.3692	decimal degrees	

Well Use: Undetermined

For more information contact:

Department of Water Resources, San Joaquin District
Water Management Section
3374 East Shields Avenue
Fresno, CA 93726

Phone: 559-230-3326

Fax: 559-230-3301

New Search

Search for wells within mile radius. [Nearby Search](#)

Welcome: **Michael Scott****Public: Well Details**[View Well Data](#)**Identification**

Local Well Designation	18S25E15C001M
Is Local Designation the same as State Well #?	Yes
State Well Number	18S25E15C001M
Master Site Code	363692N1192520W001
CASGEM Well Id	20922
Data submittals for this well are under	CASGEM

Geography

Latitude	36.3692 North
Longitude	-119.2520 West
	View on Map
Method	GPS
Accuracy	10 ft.
Physical Basin	5-022.11 Kaweah
County	Tulare

Reference and Ground Surface

RP Elevation ?	348.10 ft.
Description	None Provided
GS Elevation ?	348.10 ft.
Method	USGS quad
Accuracy	5 ft.
Distance from RP	0.00

Well Associations**Organization**

Kaweah Delta Water Conservation District

Please contact your local regional office to dissociate your organization from a CASGEM well.

Primary Well Org	Kaweah Delta Water Conservation District
Notification Basin/Portion	5-022.11 - Kaweah / Kaweah (less TID)

Well Use

Well Use	Residential
Well Status	Inactive

Well Construction

Completion Type	Single Well
Total Depth	90 ft.
Do you have well construction data?	No
Well completion report available?	No

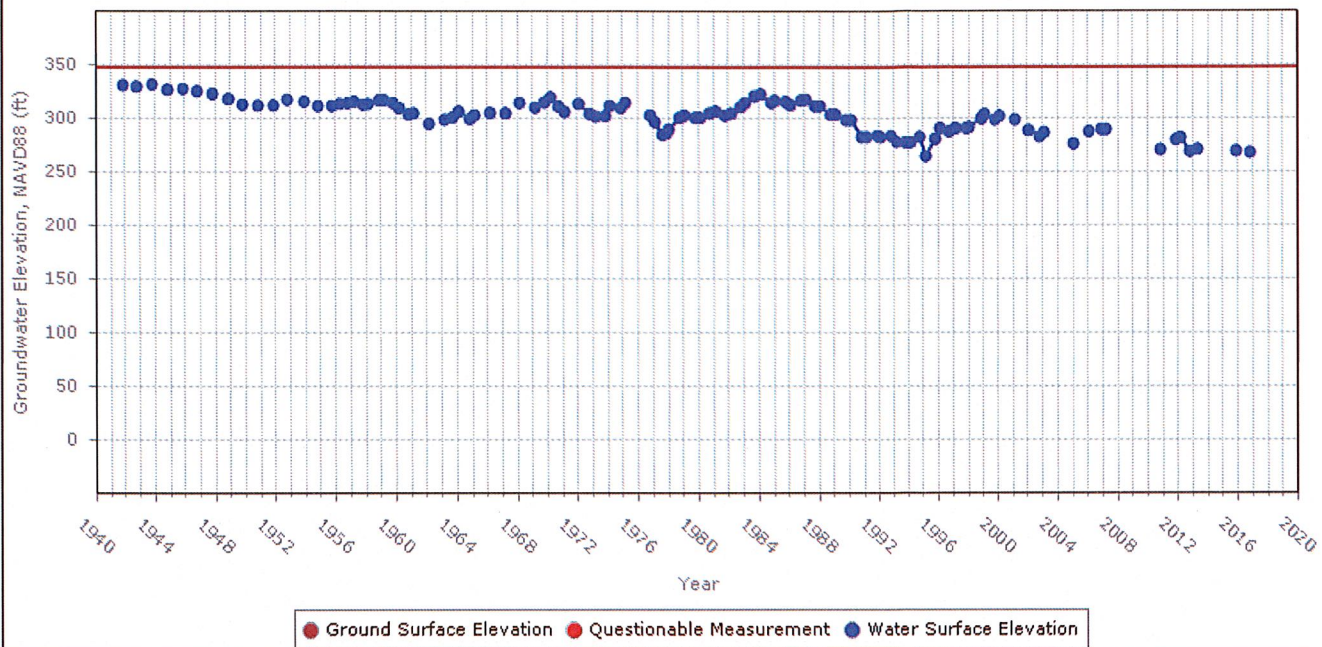
Additional Information

Written description of location of well

Any additional comments

[View Hydrograph](#)

Groundwater Elevation Data for 363692N1192520W001

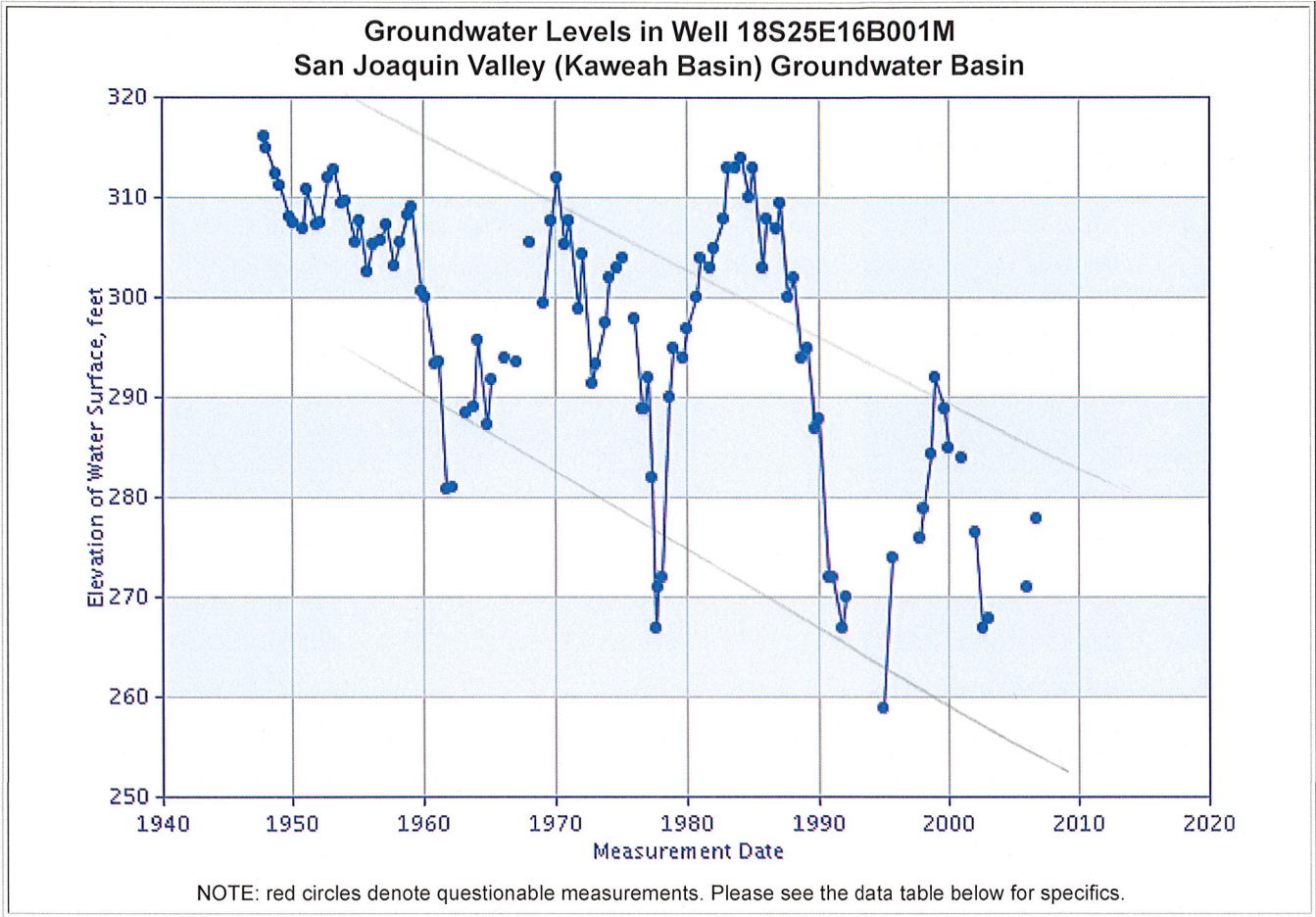


View Elevation Data

Date	Military Time (PST)	NM	QM	Reading @RP	Reading @WS	RP to WS	RP Elev	GS Elev	WSE	GS to WS	Measurement Method	Measurement Accuracy	Co-
03/17/2017	00:00	D					348.100	348.100					Kav Cor
10/16/2016	00:00			80.100	0.000	80.100	348.100	348.100	268.000	80.100	ES	0.1 Ft	Kav Cor
03/10/2016	00:00	D					348.700	348.700					Kav Cor
10/14/2015	00:00			80.300	0.000	80.300	349.700	348.700	269.400	79.300	ES	0.1 Ft	Kav Cor
02/27/2015	00:00	D					349.700	348.700					Kav Cor
10/20/2014	00:00	D					349.700	348.700					Kav Cor
02/14/2014	00:00	D					349.700	348.700					Kav Cor
10/15/2013	00:00	D					349.700	348.700					Kav Cor
03/05/2013	00:00			76.000	0.000	76.000	347.000	346.000	271.000	75.000	ES	0.1 Ft	Kav Cor
10/10/2012	00:00			78.000	0.000	78.000	347.000	346.000	269.000	77.000	ES	0.1 Ft	Kav Cor
02/09/2012	00:00			65.000	0.000	65.000	347.000	346.000	282.000	64.000	ES	0.1 Ft	Kav Cor
10/17/2011	00:00			67.000	0.000	67.000	347.000	346.000	280.000	66.000	ES	0.1 Ft	Kav Cor
10/01/2010	00:00			79.000	0.000	79.000	349.690	348.690	270.690	78.000	UNK	Unknown	Kav Cor
02/02/2007	00:00			60.000	0.000	60.000	349.690	348.690	289.690	59.000	UNK	Unknown	Kav Cor
11/14/2006	00:00			60.000	0.000	60.000	349.690	348.690	289.690	59.000	UNK	Unknown	Kav Cor
01/25/2006	00:00			62.000	0.000	62.000	349.690	348.690	287.690	61.000	UNK	Unknown	Kav Cor

Groundwater Level Data for Well 18S25E16B001M

Your selection returned a total of 112 records. Wells in the Department of Water Resources monitoring network are identified by a [State Well Number](#), which is based on the Public Land Grid System. The table headings and records contain several [codes and abbreviations](#). Press the **New Search** or **Nearby Search** buttons or at the bottom of the page to begin a new data retrieval. Data for this well can also be downloaded in [MS Excel](#) or [text delimited format](#).



Summary Statistics of Depth to Water below Ground Surface by Month (displays to internal users only)									
Month	Lowest Level	10th %ile	25th %ile	50th %ile	75th %ile	90th %ile	Highest Level	Number of Values	Number of Years
JAN	73.0	69.6	62.0	6.0	37.0	32.1	28.0	25	34
FEB	82.0	72.0	47.1	5.6	31.7	28.8	26.0	28	46
MAR	311'	1960		---	---	---	---	0	---
APR	283'	2010		---	---	---	---	0	---
MAY				---	---	---	---	0	---
JUN	33' / 50 yrs			9.0	---	---	59.0	1	---
JUL				2.0	---	---	52.0	1	---
AUG				4.0	---	---	74.0	1	---
SEP				1.0	36.3	31.7	28.0	18	53
OCT				0.4	33.6	31.9	29.0	25	50

$$= \frac{311' - 283'}{50 \text{ yrs}}$$
$$= 0.56 \text{ ft/yr}$$

NOV	63.0	---	---	44.0	---	---	24.9	2	58
DEC	---	---	---	---	---	---	---	0	---
Most Recent Measurement			63.0 feet on 11/14/2006						
Lowest Water Level			82.0 feet on 02/01/1995						
Highest Water Level			24.9 feet on 11/24/1947						
NOTE: The statistical summary shown above is based on an inverse distribution function that assumes a continuous distribution model. Nulls and questionable measurements are ignored in the calculation. The statistical summary is shown only if 10 or more measurements were taken in a given month. Bold values in the table above indicate the closest statistic to the most recent measurement. A measurement must have been taken in the last two years to be considered recent.									

Groundwater Level Readings									
Meas. Date	R.P. Elev.	G.S. Elev.	RPWS	WSE	GSWS	QM Code	NM Code	Agency	Comment
11-24-1947	342.0	341.0	25.9	316.1	24.9			5603	
02-05-1948	342.0	341.0	27.0	315.0	26.0			5603	
09-26-1948	342.0	341.0	29.5	312.5	28.5			5603	
02-18-1949	342.0	341.0	30.8	311.2	29.8			5603	
10-07-1949	342.0	341.0	33.9	308.1	32.9			5603	
02-15-1950	342.0	341.0	34.4	307.6	33.4			5603	
10-11-1950	342.0	341.0	35.1	306.9	34.1			5603	
02-06-1951	342.0	341.0	31.1	310.9	30.1			5603	
10-18-1951	342.0	341.0	34.6	307.4	33.6			5603	
02-27-1952	342.0	341.0	34.4	307.6	33.4			5603	
10-13-1952	342.0	341.0	30.0	312.0	29.0			5603	
02-11-1953	342.0	341.0	29.2	312.8	28.2			5603	
10-03-1953	342.0	341.0	32.5	309.5	31.5			5603	
02-16-1954	342.0	341.0	32.2	309.8	31.2			5603	
09-29-1954	342.0	341.0	36.4	305.6	35.4			5603	
02-21-1955	342.0	341.0	34.2	307.8	33.2			5603	
09-29-1955	342.0	341.0	39.4	302.6	38.4			5603	
02-17-1956	342.0	341.0	36.6	305.4	35.6			5603	
10-12-1956	342.0	341.0	36.3	305.7	35.3			5603	
02-13-1957	342.0	341.0	34.7	307.3	33.7			5603	
10-22-1957	342.0	341.0	38.7	303.3	37.7			5603	
02-27-1958	342.0	341.0	36.5	305.5	35.5			5603	
10-07-1958	342.0	341.0	33.6	308.4	32.6			5603	
02-20-1959	342.0	341.0	32.9	309.1	31.9			5603	
10-01-1959	342.0	341.0	41.4	300.6	40.4			5603	
02-19-1960	342.0	341.0	42.0	300.0	41.0			5603	
10-10-1960	342.0	341.0	48.5	293.5	47.5			5603	
02-21-1961	342.0	341.0	48.4	293.6	47.4			5603	
10-18-1961	342.0	341.0	61.1	280.9	60.1			5603	
02-07-1962	342.0	341.0	60.9	281.1	59.9			5603	
02-25-1963	342.0	341.0	53.5	288.5	52.5			5603	
09-25-1963	342.0	341.0	52.9	289.1	51.9			5603	
02-03-1964	342.0	341.0	46.2	295.8	45.2			5603	
10-01-1964	342.0	341.0	54.6	287.4	53.6			5603	

02-05-1965	342.0	341.0	50.2	291.8	49.2			5603	
02-07-1966	342.0	341.0	48.0	294.0	47.0			5603	
02-06-1967	342.0	341.0	48.4	293.6	47.4			5603	
02-06-1968	342.0	341.0	36.4	305.6	35.4			5603	
02-03-1969	342.0	341.0	42.5	299.5	41.5			5603	
10-01-1969	342.0	341.0	34.2	307.8	33.2			5001	
02-04-1970	342.0	341.0	30.0	312.0	29.0			5603	
09-28-1970	342.0	341.0	36.7	305.3	35.7			5603	
01-29-1971	342.0	341.0	34.2	307.8	33.2			5603	
09-30-1971	342.0	341.0	43.0	299.0	42.0			5603	
01-27-1972	342.0	341.0	37.5	304.5	36.5			5603	
09-25-1972	342.0	341.0	50.5	291.5	49.5			5603	
02-12-1973	342.0	341.0	48.5	293.5	47.5			5603	
10-02-1973	342.0	341.0	44.5	297.5	43.5			5603	
01-28-1974	342.0	341.0	40.0	302.0	39.0			5603	
10-02-1974	342.0	341.0	39.0	303.0	38.0			5603	
02-13-1975	342.0	341.0	38.0	304.0	37.0			5603	
09-29-1975	342.0	341.0					1	5603	
01-21-1976	342.0	341.0	44.0	298.0	43.0			5603	
07-19-1976	342.0	341.0	53.0	289.0	52.0			5603	
10-01-1976	342.0	341.0	53.0	289.0	52.0			5603	
01-18-1977	342.0	341.0	50.0	292.0	49.0			5603	
06-01-1977	342.0	341.0	60.0	282.0	59.0			5603	
08-05-1977	342.0	341.0	75.0	267.0	74.0			5603	
10-03-1977	342.0	341.0	71.0	271.0	70.0			5603	
01-26-1978	342.0	341.0	70.0	272.0	69.0			5603	
09-25-1978	342.0	341.0	52.0	290.0	51.0			5603	
01-11-1979	342.0	341.0	47.0	295.0	46.0			5603	
09-17-1979	342.0	341.0	48.0	294.0	47.0			5603	
01-25-1980	342.0	341.0	45.0	297.0	44.0			5603	
09-22-1980	342.0	341.0	42.0	300.0	41.0			5603	
01-26-1981	342.0	341.0	38.0	304.0	37.0			5603	
09-21-1981	342.0	341.0	39.0	303.0	38.0			5001	
02-01-1982	342.0	341.0	37.0	305.0	36.0			5001	
09-22-1982	342.0	341.0	34.0	308.0	33.0			5603	
01-24-1983	342.0	341.0	29.0	313.0	28.0			5603	
09-29-1983	342.0	341.0	29.0	313.0	28.0			5001	
02-03-1984	342.0	341.0	28.0	314.0	27.0			5001	
10-01-1984	342.0	341.0	32.0	310.0	31.0			5001	
01-29-1985	342.0	341.0	29.0	313.0	28.0			5001	
09-27-1985	342.0	341.0	39.0	303.0	38.0			5001	
01-28-1986	342.0	341.0	34.0	308.0	33.0			5001	
10-02-1986	342.0	341.0	35.0	307.0	34.0			5001	
01-21-1987	342.0	341.0	32.5	309.5	31.5			5603	
09-17-1987	342.0	341.0	42.0	300.0	41.0			5603	
01-29-1988	342.0	341.0	40.0	302.0	39.0			5603	
09-27-1988	342.0	341.0	48.0	294.0	47.0			5603	
01-23-1989	342.0	341.0	47.0	295.0	46.0			5603	



Welcome: Michael Scott

Public: Well Details

[View Well Data](#)

Identification

Local Well Designation 18S25E16B001M
Is Local Designation the same as State Well #? Yes
State Well Number 18S25E16B001M
Master Site Code 363706N1192665W001
CASGEM Well Id 39336
Data submittals for this well are under CASGEM

Geography

Latitude 36.3706 North
Longitude -119.2665 West
[View on Map](#)
Method GPS
Accuracy 10 ft.
Physical Basin 5-022.11 Kaweah
County Tulare

Reference and Ground Surface

RP Elevation 343.60 ft.
Description None Provided
GS Elevation 343.10 ft.
Method USGS quad
Accuracy 5 ft.
Distance from RP 0.50

Well Associations

Organization

Kaweah Delta Water Conservation District

Please contact your local regional office to dissociate your organization from a CASGEM well.

Primary Well Org Kaweah Delta Water Conservation District
Notification Basin/Portion 5-022.11 - Kaweah / Kaweah (less TID)

Well Use

Well Use Irrigation
Well Status Active

Well Construction

Completion Type Single Well
Total Depth 110 ft.
Do you have well construction data? Yes
Depth of screened interval(s)

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Top										
Bottom										

Well completion report available? Yes
Well Completion Report # 077163

Additional Information

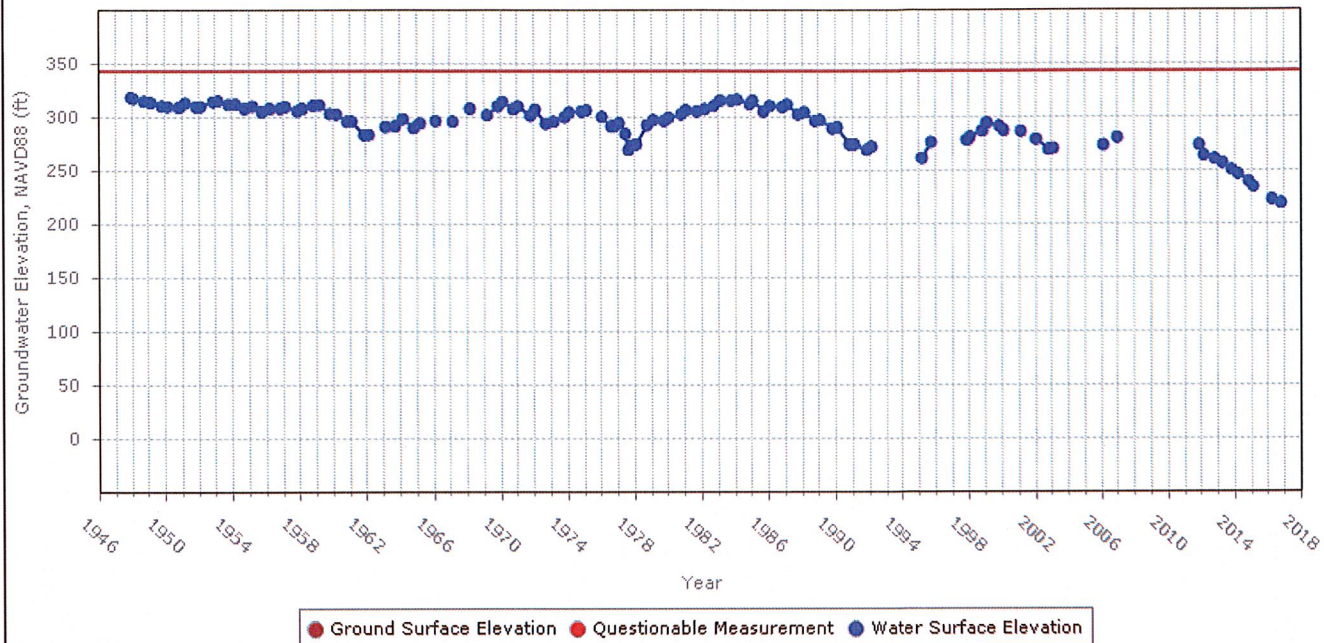
Written description of location of well

Any additional comments

Open Bottom Well - Casing to 96 ft.

[View Hydrograph](#)

Groundwater Elevation Data for 363706N1192665W001



View Elevation Data

Date	Military Time (PST)	NM	QM	Reading @RP	Reading @WS	RP to WS	RP Elev	GS Elev	WSE	GS to WS	Measurement Method	Measurement Accuracy	Co-
03/17/2017	00:00	9					343.600	343.100					Kav Cor
10/16/2016	00:00			124.000	0.000	124.000	343.600	343.100	219.600	123.500	ES	0.1 Ft	Kav Cor
03/10/2016	00:00			121.200	0.000	121.200	344.200	343.700	223.000	120.700	ES	0.1 Ft	Kav Cor
10/14/2015	00:00	9					344.700	343.700					Kav Cor
02/27/2015	00:00			110.000	0.000	110.000	344.700	343.700	234.700	109.000	ES	0.1 Ft	Kav Cor
10/20/2014	00:00			105.000	0.000	105.000	344.700	343.700	239.700	104.000	ES	0.1 Ft	Kav Cor
02/14/2014	00:00			98.000	0.000	98.000	344.700	343.700	246.700	97.000	ES	0.1 Ft	Kav Cor
10/15/2013	00:00			94.000	0.000	94.000	344.700	343.700	250.700	93.000	ES	0.1 Ft	Kav Cor
03/05/2013	00:00			85.000	0.000	85.000	342.000	341.000	257.000	84.000	ES	0.1 Ft	Kav Cor
10/10/2012	00:00			81.000	0.000	81.000	342.000	341.000	261.000	80.000	ES	0.1 Ft	Kav Cor
02/09/2012	00:00			78.000	0.000	78.000	342.000	341.000	264.000	77.000	ES	0.1 Ft	Kav Cor
10/17/2011	00:00			68.000	0.000	68.000	342.000	341.000	274.000	67.000	ES	0.1 Ft	Kav Cor
10/01/2010	00:00	D					344.690	343.690					Kav Cor
11/14/2006	00:00			64.000	0.000	64.000	344.690	343.690	280.690	63.000	UNK	Unknown	Kav Cor
01/25/2006	00:00			71.000	0.000	71.000	344.690	343.690	273.690	70.000	UNK	Unknown	Kav Cor
01/27/2005	00:00	7					344.690	343.690					Kav Cor

10-02-1989	342.0	341.0	55.0	287.0	54.0			5603	
01-25-1990	342.0	341.0	54.0	288.0	53.0			5603	
10-05-1990	342.0	341.0	70.0	272.0	69.0			5603	
01-30-1991	342.0	341.0	70.0	272.0	69.0			5603	
10-01-1991	342.0	341.0	75.0	267.0	74.0			5603	
01-22-1992	342.0	341.0	72.0	270.0	71.0			5603	
10-20-1992	342.0	341.0					D	5603	
02-02-1993	342.0	341.0					D	5603	
10-07-1993	342.0	341.0					D	5603	
01-27-1994	342.0	341.0					D	5603	
09-29-1994	342.0	341.0					7	5603	
02-01-1995	342.0	341.0	83.0	259.0	82.0			5603	
09-26-1995	342.0	341.0	68.0	274.0	67.0			5603	
01-16-1996	342.0	341.0					4	5603	
09-30-1996	342.0	341.0					9	5603	
01-21-1997	342.0	341.0					9	5603	
10-10-1997	342.0	341.0	66.0	276.0	65.0			5603	
01-23-1998	342.0	341.0	63.0	279.0	62.0			5603	
10-12-1998	342.0	341.0	57.5	284.5	56.5			5603	
01-28-1999	342.0	341.0	50.0	292.0	49.0			5603	
10-07-1999	342.0	341.0	53.0	289.0	52.0			5603	
01-28-2000	342.0	341.0	57.0	285.0	56.0			5603	
01-25-2001	342.0	341.0	58.0	284.0	57.0			5603	
01-21-2002	342.0	341.0	65.5	276.5	64.5			5001	
09-18-2002	342.0	341.0	75.0	267.0	74.0			5001	
01-24-2003	342.0	341.0	74.0	268.0	73.0			5603	
01-27-2005	342.0	341.0					7	5603	
01-25-2006	342.0	341.0	71.0	271.0	70.0			5603	
11-14-2006	342.0	341.0	64.0	278.0	63.0			5603	
10-01-2010	342.0	341.0					D	5603	

Well Coordinates

Projection	Datum	Easting	Northing	Units	Zone
UTM	NAD27	296750	4027232	metres	11
LL	NAD27	119.2656	36.3706	decimal degrees	
LL	NAD83	119.2665	36.3706	decimal degrees	

Well Use: Undetermined

For more information contact:

Department of Water Resources, San Joaquin District
Water Management Section
3374 East Shields Avenue
Fresno, CA 93726

Phone: 559-230-3326

Fax: 559-230-3301

[New Search](#)

Search for wells within mile radius. [Nearby Search](#)

ATTACHMENT “D”

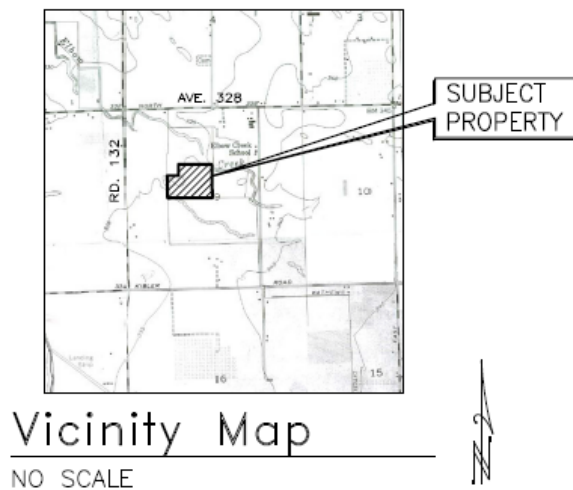
Traffic Generation Analysis

Memorandum

To:	Tulare County RMA	Date:	March 24, 2017
Attn:	Hector Guerra	Project:	Trip Generation Analysis
From:	Gary A. Mills		SEC Ave. 328/Rd. 132
Re:	Trip Generation Analysis	Job No.:	55-5123-01
	SEC Ave. 328/Rd. 132	File No.:	C22292MEM001.DOCX
CC:	Ms. Paula Simon; Fred Weber, Forester & Weber		

Introduction

The purpose of this Memorandum is to identify any potential traffic impacts that may occur as a result of splitting a parcel to add additional single family dwelling units (SFDU). The proposed project is generally located on the southeast corner of Avenue 328/Road 132 in Tulare County, just north of the city limits of Visalia. A vicinity map of the subject project site is shown below.



Avenue 328 and Road 132 are both County owned and maintained roads. They are two-lane undivided roadways with narrow shoulders and are in good condition, based upon visual review of the exterior pavement. An all-way stop-controlled intersection is the traffic control that is currently in operation. All of the approaches on Avenue 328 and Road 132 operate with shared movements, i.e., a single lane with shared left, through and right movements.



Existing Traffic Volumes

Based upon Omni-Means' understanding of the project, the following existing intersection was identified as important intersection for this study.

- Avenue 328/Road 132

At the study intersection, existing weekday AM and PM peak-hour traffic volume counts were conducted by Metro Traffic Count Data, Inc., on Thursday, March 9, 2017, while local schools were in session and the weather was clear (reference Appendix for turning movement report). The traditional AM peak period is defined as one-hour of peak traffic flow counted between 7:00 AM and 9:00 AM and the traditional PM peak period is defined as one-hour of peak traffic flow counted between 4:00 PM and 6:00 PM. Actual peak hour factors and heavy-duty truck percentages were applied to the existing conditions evaluation.

Existing Traffic Operations

Traffic operations have been quantified through the determination of "Level of Service" (LOS). LOS is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. LOS was calculated for intersection control types using the methods documented in the *Highway Capacity Manual 2010 (HCM 2010)*. LOS definitions for different types of intersection controls are outlined in the Appendix.

According to the *Tulare County General Plan Circulation Element*, LOS "D" is the standard used for all county streets and roads. For purposes of this report, LOS "D" is taken as the CEQA significance threshold for minimum acceptable traffic operations on non-state highway facilities. Intersection turning movement volumes and LOS worksheets are contained in the Appendix.

"Existing" peak-hour intersection traffic operations were quantified applying existing traffic volumes and existing intersection lane geometrics and control (shown on Figure 1). Table 1 presents the "Existing" peak hour intersection delay and LOS.

**TABLE 1
EXISTING CONDITIONS:
INTERSECTION LEVEL-OF-SERVICE**

No.	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
1	Avenue 328/Road 132	AWSC	19.1	C	No	12.9	B	No

Legend: AWSC: All-Way Stop-Control; Warrant: CA MUTCD Peak-Hour Warrant-3.

As shown in Table 1, the intersection at Avenue 328/Road 132 currently operates at acceptable LOS "C" conditions during the AM peak hour period and LOS "B" conditions during the PM peak hour period.

Project Trip Generation

Table 2 identifies the estimated trip generation of the project's land-use based upon data presented in *ITE Trip Generation* (9th Edition). As shown in Table 2, the project is estimated to

generate 29 daily trips, including 2 AM peak hour trips (1 in and 2 out) and 3 PM peak hour trips (2 in and 1 out).

TABLE 2
PROJECT TRIP GENERATION

Land Use Category (ITE Code)	Unit ¹	Daily Trip Rate/Unit ²	AM Peak Hour Trip Rate/Unit			PM Peak Hour Trip Rate/Unit		
			Total	In %	Out %	Total	In %	Out %
Single-Family Detached Housing (210)	DU	9.57	0.75	25%	75%	1.01	63%	37%
Project Name	Quantity (Units)	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			Total	In	Out	Total	In	Out
	3	29	2	1	2	3	2	1
Net New Project Trips³		29	2	1	2	3	2	1

Notes:

1. DU = dwelling unit
2. Trip rates based on ITE Trip Generation Manual 9th edition average rates
3. Rounding errors may occur

Project Trip Nature, Distribution and Assignment

The project is expected to “generate” and “attract” a small amount of trips throughout the area. Directional trip distribution for project generated trips was estimated based upon existing traffic flow patterns, geographic location of the project sites and location of other similar destinations. These considerations resulted in a distribution project trips throughout the study area and is summarized below:

- 65% to/from Avenue 328 west of project driveway via Road 132
- 35% to/from Avenue 328 east of project driveway

Existing plus Project Operations

Adding the project trips (as shown in Table 2) to Existing traffic conditions, Table 3 identifies Existing plus Project traffic operations at the study intersection.

TABLE 3
EXISTING PLUS PROJECT CONDITIONS:
INTERSECTION LEVEL-OF-SERVICE

No.	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
1	Avenue 328/Road 132	AWSC	19.3	C	No	13.0	B	No

Legend: AWSC: All-Way Stop-Control; Warrant: CA MUTCD Peak-Hour Warrant-3.

As shown in Table 3, the study intersection is projected to continue operate at acceptable LOS “C” and “B” conditions, respectively, during the AM and PM peak hour periods under the Existing plus Project scenario.

CEQA ENVIRONMENTAL CHECKLIST**XVI. TRANSPORTATION/TRAFFIC:** Would the project:

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?	☐	☐	☒	☐
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

As shown in the CEQA Environmental Checklist, this Trip Generation Analysis has demonstrated that the proposed project will have a less than significant impact to the transportation system. With the low amount of project trips expected to be generated by the project, no adverse transportation related impacts are anticipated.

Technical Appendix

- AM and PM Peak Hour Turning Movement Reports
- Intersection Level-of-Service Methodology for Intersections
- Figure 1 – Peak Hour Turning Movements and Lane Geometrics & Control
- Synchro Output Worksheets



Metro Traffic Data Inc.
 310 N. Irwin Street - Suite 20
 Hanford, CA 93230
 800-975-6938 Phone/Fax
 www.metrotrafficdata.com

Turning Movement Report

Prepared For:

OMNI-Means
 943 Reserve Drive
 Roseville, CA 95678

LOCATION Ave 328 @ Rd 132

LATITUDE 36.385583°

COUNTY Tulare

LONGITUDE -119.278818°

COLLECTION DATE Thursday, March 09, 2017

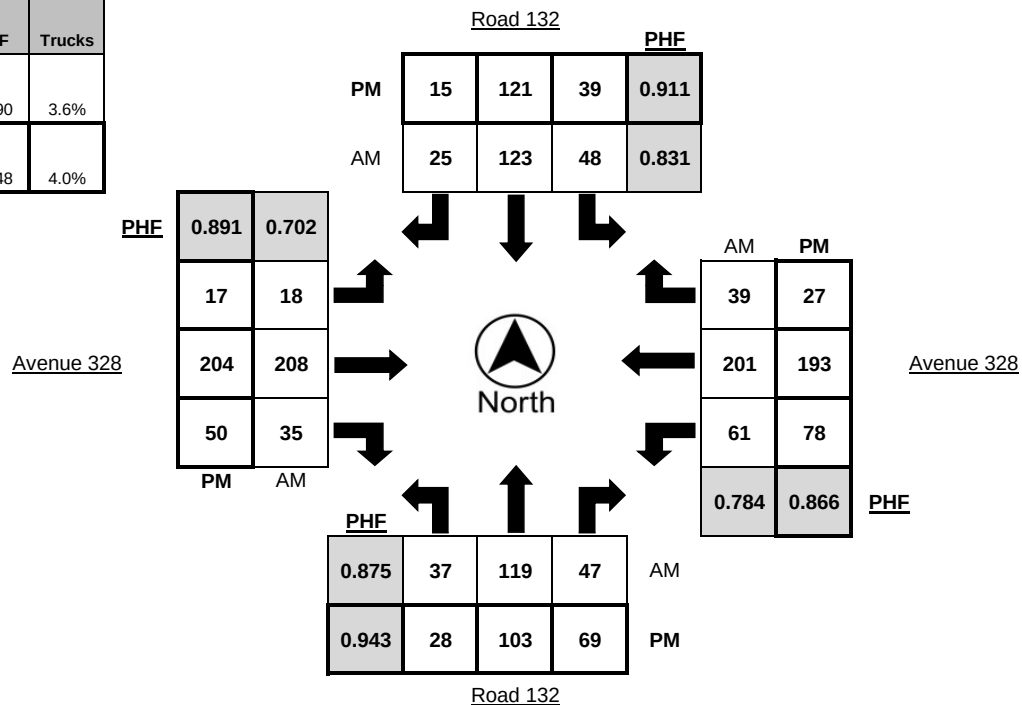
WEATHER Clear

Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
7:00 AM - 7:15 AM	12	19	9	0	5	15	4	1	5	33	14	5	18	31	7	1
7:15 AM - 7:30 AM	11	30	5	2	8	27	5	1	4	49	8	2	14	36	6	0
7:30 AM - 7:45 AM	9	34	15	2	7	35	7	3	4	45	10	4	14	51	8	1
7:45 AM - 8:00 AM	10	29	17	2	17	35	7	3	6	77	10	2	20	63	13	2
8:00 AM - 8:15 AM	7	26	10	6	16	26	6	1	4	37	7	2	13	51	12	2
8:15 AM - 8:30 AM	5	20	14	2	7	39	3	1	3	46	4	7	10	39	9	4
8:30 AM - 8:45 AM	12	21	4	2	11	16	1	0	3	22	3	3	11	29	7	2
8:45 AM - 9:00 AM	10	16	8	0	3	35	5	0	6	29	6	5	15	48	12	3
TOTAL	76	195	82	16	74	228	38	10	35	338	62	30	115	348	74	15

Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	6	29	18	0	8	23	5	3	6	53	17	8	28	47	8	2
4:15 PM - 4:30 PM	9	22	15	0	14	27	7	3	3	55	11	6	15	62	9	5
4:30 PM - 4:45 PM	4	26	19	1	8	38	2	0	5	46	10	2	14	41	3	1
4:45 PM - 5:00 PM	9	26	17	1	9	33	1	1	3	50	12	2	21	43	7	3
5:00 PM - 5:15 PM	4	41	14	2	7	30	3	0	3	55	6	3	21	45	10	3
5:15 PM - 5:30 PM	10	29	14	0	8	29	3	2	4	59	9	1	15	51	7	1
5:30 PM - 5:45 PM	8	30	19	2	8	26	4	0	7	50	9	3	14	29	6	4
5:45 PM - 6:00 PM	12	27	18	0	2	13	7	0	4	59	7	5	20	46	2	1
TOTAL	62	230	134	6	64	219	32	9	35	427	81	30	148	364	52	20

PEAK HOUR	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
7:15 AM - 8:15 AM	37	119	47	12	48	123	25	8	18	208	35	10	61	201	39	5
4:00 PM - 5:00 PM	28	103	69	2	39	121	15	7	17	204	50	18	78	193	27	11

	PHF	Trucks
AM	0.790	3.6%
PM	0.948	4.0%





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LOCATION Ave 328 @ Rd 132

LATITUDE 36.385583°

COUNTY Tulare

LONGITUDE -119.278818°

COLLECTION DATE Thursday, March 09, 2017

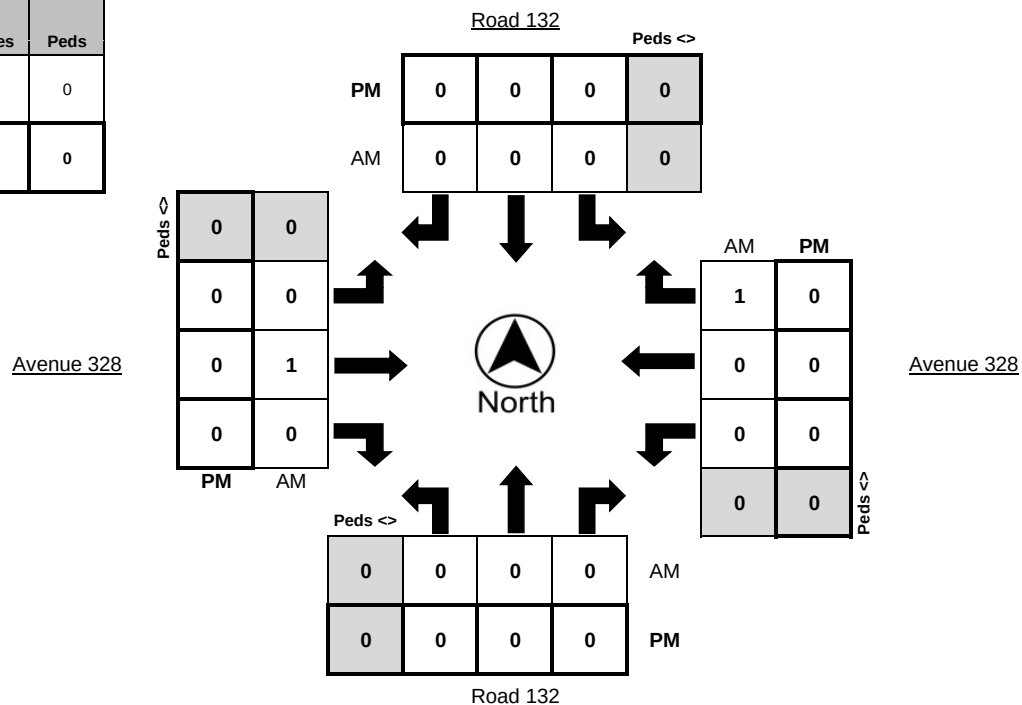
WEATHER Clear

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0

Time	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

PEAK HOUR	Northbound Bikes			N.Leg Peds	Southbound Bikes			S.Leg Peds	Eastbound Bikes			E.Leg Peds	Westbound Bikes			W.Leg Peds
	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right	
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	2	0
PM Peak Total	0	0





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Turning Movement Report

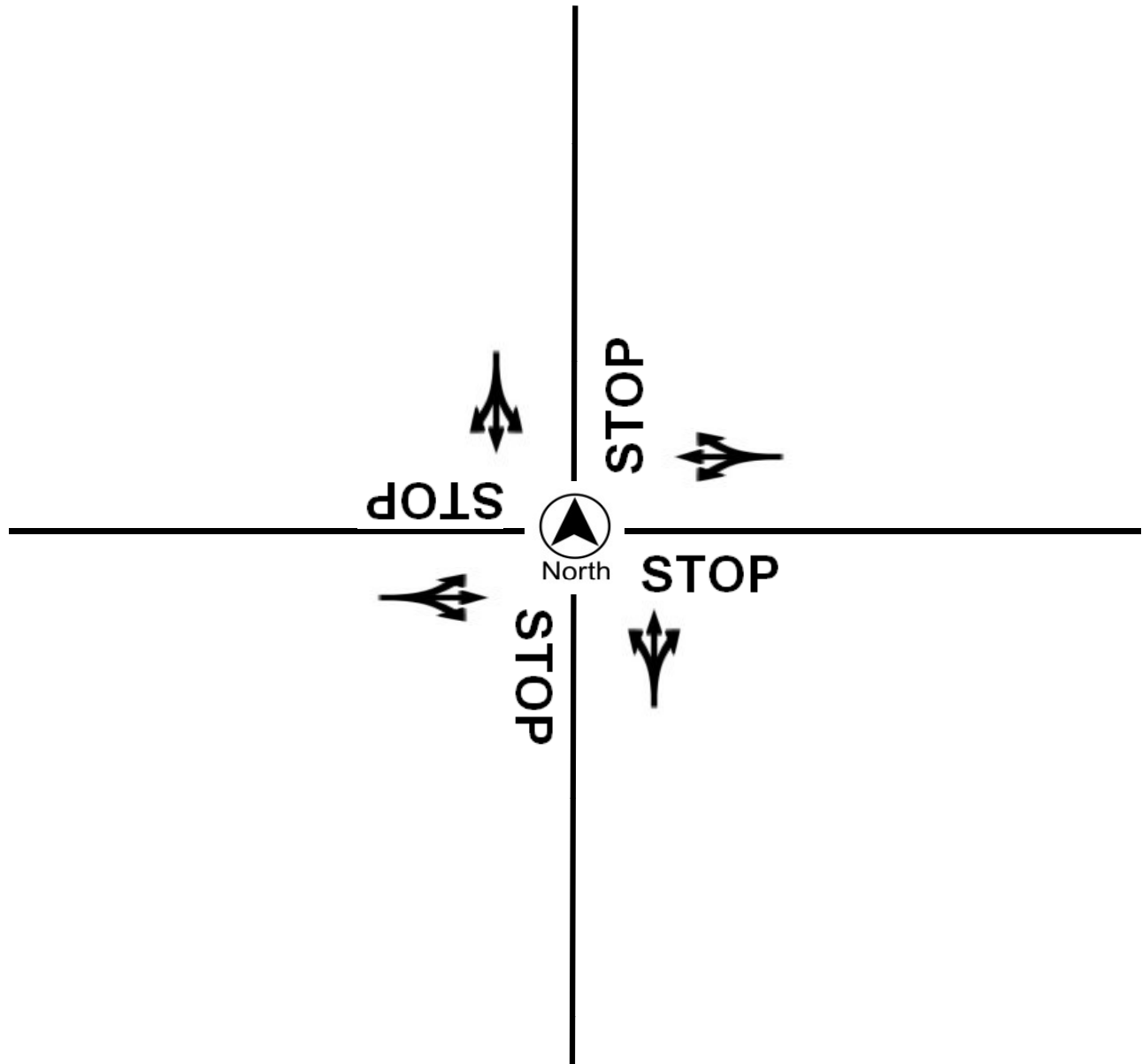
Prepared For:

OMNI-Means
943 Reserve Drive
Roseville, CA 95678

LOCATION Ave 328 @ Rd 132
COUNTY Tulare
COLLECTION DATE Thursday, March 09, 2017
CYCLE TIME N/A

N/S STREET Road 132
E/W STREET Avenue 328
WEATHER Clear
CONTROL TYPE All-Way Stop

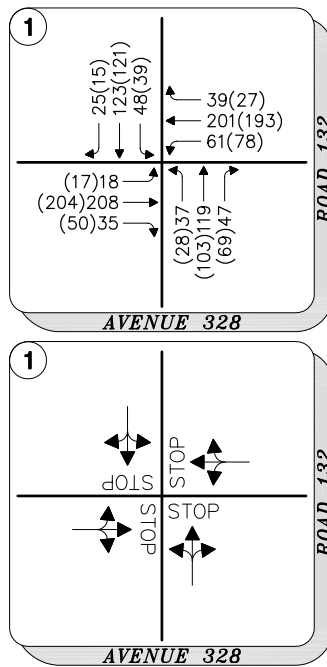
COMMENTS



LOS METHODOLOGY FOR INTERSECTIONS

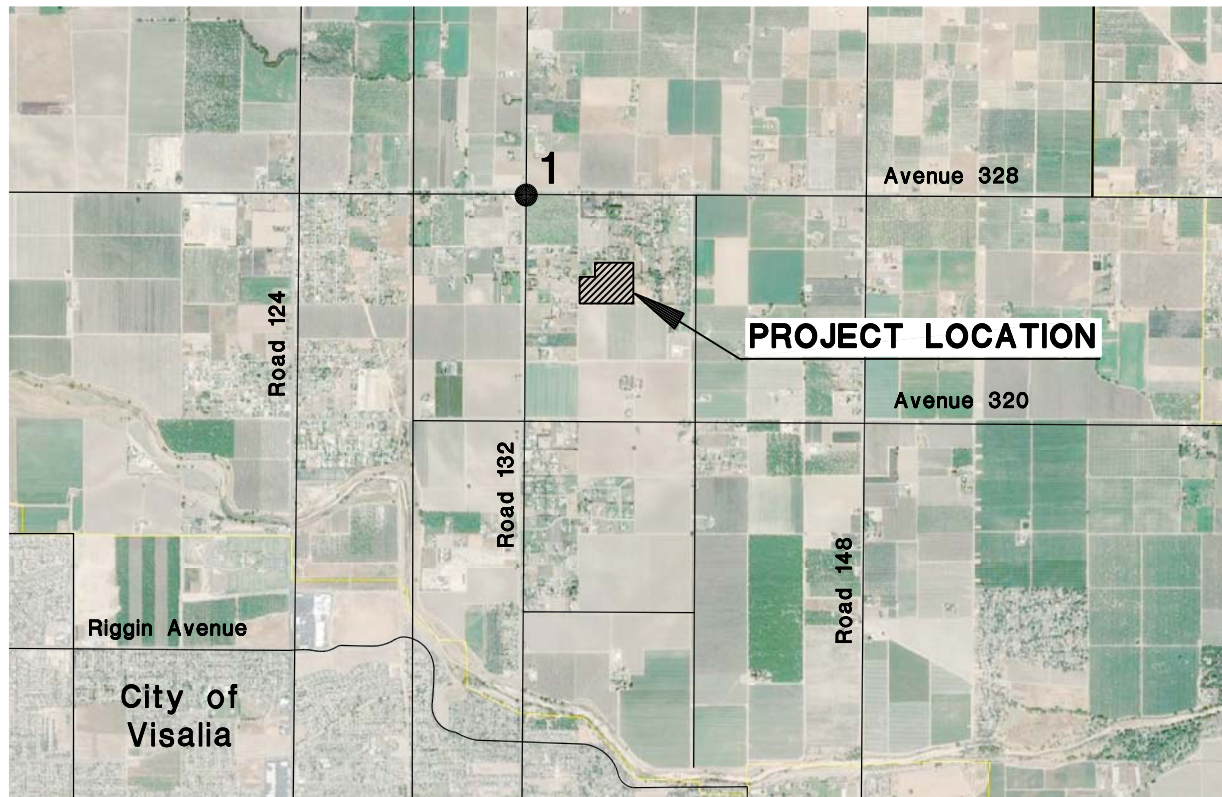
Level of Service	Type of Flow	Delay	Maneuverability	Stopped Delay/Vehicle		
				Signalized	Un-signalized	All-Way Stop
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	< 10.0	< 10.0	< 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10.0 and < 20.0	>10.0 and < 15.0	>10.0 and < 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20.0 and < 35.0	>15.0 and < 25.0	>15.0 and < 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35.0 and < 55.0	>25.0 and < 35.0	>25.0 and < 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55.0 and < 80.0	>35.0 and < 50.0	>35.0 and < 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0	> 50.0	> 50.0

References: 2010 Highway Capacity Manual



LEGEND:

xx - AM PEAK HOUR TRAFFIC VOLUMES
 (xx) - PM PEAK HOUR TRAFFIC VOLUMES



Trip Generation Analysis - SEC Avenue 328/Road 132

Figure 1

Existing Peak Hour Traffic Volumes



Intersection												
Intersection Delay, s/veh	19.1											
Intersection LOS	C											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	18	208	35	0	61	201	39	0	37	119	47
Future Vol, veh/h	0	18	208	35	0	61	201	39	0	37	119	47
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	23	263	44	0	77	254	49	0	47	151	59
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB				WB				NB			
Opposing Approach	WB				EB				SB			
Opposing Lanes	1				1				1			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	1				1				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	1				1				1			
HCM Control Delay	19.2				22.6				16.5			
HCM LOS	C				C				C			
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	18%	7%	20%	24%								
Vol Thru, %	59%	80%	67%	63%								
Vol Right, %	23%	13%	13%	13%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	203	261	301	196								
LT Vol	37	18	61	48								
Through Vol	119	208	201	123								
RT Vol	47	35	39	25								
Lane Flow Rate	257	330	381	248								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.49	0.602	0.685	0.479								
Departure Headway (Hd)	6.862	6.56	6.472	6.957								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	522	545	556	514								
Service Time	4.959	4.653	4.56	5.056								
HCM Lane V/C Ratio	0.492	0.606	0.685	0.482								
HCM Control Delay	16.5	19.2	22.6	16.4								
HCM Lane LOS	C	C	C	C								
HCM 95th-tile Q	2.7	4	5.2	2.6								

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	48	123	25
Future Vol, veh/h	0	48	123	25
Peak Hour Factor	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	4	4	4
Mvmt Flow	0	61	156	32
Number of Lanes	0	0	1	0

Approach

SB

Opposing Approach

NB

Opposing Lanes

1

Conflicting Approach Left

WB

Conflicting Lanes Left

1

Conflicting Approach Right

EB

Conflicting Lanes Right

1

HCM Control Delay

16.4

HCM LOS

C

Lane

Intersection												
Intersection Delay, s/veh	12.9											
Intersection LOS	B											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	17	204	50	0	78	193	27	0	28	103	69
Future Vol, veh/h	0	17	204	50	0	78	193	27	0	28	103	69
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	4	4	2	4	4	4	2	4	4	4
Mvmt Flow	0	18	215	53	0	82	203	28	0	29	108	73
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB				WB				NB			
Opposing Approach	WB				EB				SB			
Opposing Lanes	1				1				1			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	1				1				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	1				1				1			
HCM Control Delay	13.1				14.1				11.9			
HCM LOS	B				B				B			
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	14%	6%	26%	22%								
Vol Thru, %	52%	75%	65%	69%								
Vol Right, %	34%	18%	9%	9%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	200	271	298	175								
LT Vol	28	17	78	39								
Through Vol	103	204	193	121								
RT Vol	69	50	27	15								
Lane Flow Rate	211	285	314	184								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.341	0.444	0.491	0.31								
Departure Headway (Hd)	5.836	5.597	5.639	6.054								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	611	639	634	589								
Service Time	3.918	3.67	3.711	4.139								
HCM Lane V/C Ratio	0.345	0.446	0.495	0.312								
HCM Control Delay	11.9	13.1	14.1	11.9								
HCM Lane LOS	B	B	B	B								
HCM 95th-tile Q	1.5	2.3	2.7	1.3								

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	39	121	15
Future Vol, veh/h	0	39	121	15
Peak Hour Factor	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	4	15
Mvmt Flow	0	41	127	16
Number of Lanes	0	0	1	0

Approach

SB

Opposing Approach

NB

Opposing Lanes

1

Conflicting Approach Left

WB

Conflicting Lanes Left

1

Conflicting Approach Right

EB

Conflicting Lanes Right

1

HCM Control Delay

11.9

HCM LOS

B

Lane

Intersection												
Intersection Delay, s/veh	19.3											
Intersection LOS	C											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	18	208	35	0	62	202	39	0	37	119	47
Future Vol, veh/h	0	18	208	35	0	62	202	39	0	37	119	47
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	23	263	44	0	78	256	49	0	47	151	59
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB				WB				NB			
Opposing Approach	WB				EB				SB			
Opposing Lanes	1				1				1			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	1				1				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	1				1				1			
HCM Control Delay	19.3				23				16.5			
HCM LOS	C				C				C			
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	18%	7%	20%	24%								
Vol Thru, %	59%	80%	67%	63%								
Vol Right, %	23%	13%	13%	13%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	203	261	303	196								
LT Vol	37	18	62	48								
Through Vol	119	208	202	123								
RT Vol	47	35	39	25								
Lane Flow Rate	257	330	384	248								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.491	0.603	0.69	0.487								
Departure Headway (Hd)	6.986	6.68	6.582	7.07								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	519	545	552	514								
Service Time	4.986	4.68	4.582	5.07								
HCM Lane V/C Ratio	0.495	0.606	0.696	0.482								
HCM Control Delay	16.5	19.3	23	16.6								
HCM Lane LOS	C	C	C	C								
HCM 95th-tile Q	2.7	4	5.3	2.6								

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	48	123	25
Future Vol, veh/h	0	48	123	25
Peak Hour Factor	0.79	0.79	0.79	0.79
Heavy Vehicles, %	4	4	4	4
Mvmt Flow	0	61	156	32
Number of Lanes	0	0	1	0

Approach

SB

Opposing Approach

NB

Opposing Lanes

1

Conflicting Approach Left

WB

Conflicting Lanes Left

1

Conflicting Approach Right

EB

Conflicting Lanes Right

1

HCM Control Delay

16.6

HCM LOS

C

Lane

Intersection												
Intersection Delay, s/veh	13											
Intersection LOS	B											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	17	205	50	0	78	193	27	0	28	103	70
Future Vol, veh/h	0	17	205	50	0	78	193	27	0	28	103	70
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	4	4	2	4	4	4	2	4	4	4
Mvmt Flow	0	18	216	53	0	82	203	28	0	29	108	74
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB				WB				NB			
Opposing Approach	WB				EB				SB			
Opposing Lanes	1				1				1			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	1				1				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	1				1				1			
HCM Control Delay	13.2				14.1				12			
HCM LOS	B				B				B			
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	14%	6%	26%	22%								
Vol Thru, %	51%	75%	65%	69%								
Vol Right, %	35%	18%	9%	9%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	201	272	298	175								
LT Vol	28	17	78	39								
Through Vol	103	205	193	121								
RT Vol	70	50	27	15								
Lane Flow Rate	212	286	314	184								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.343	0.446	0.492	0.31								
Departure Headway (Hd)	5.84	5.603	5.645	6.063								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	611	638	634	588								
Service Time	3.922	3.676	3.717	4.148								
HCM Lane V/C Ratio	0.347	0.448	0.495	0.313								
HCM Control Delay	12	13.2	14.1	11.9								
HCM Lane LOS	B	B	B	B								
HCM 95th-tile Q	1.5	2.3	2.7	1.3								

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	39	121	15
Future Vol, veh/h	0	39	121	15
Peak Hour Factor	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	4	15
Mvmt Flow	0	41	127	16
Number of Lanes	0	0	1	0

Approach

SB

Opposing Approach

NB

Opposing Lanes

1

Conflicting Approach Left

WB

Conflicting Lanes Left

1

Conflicting Approach Right

EB

Conflicting Lanes Right

1

HCM Control Delay

11.9

HCM LOS

B

Lane

ATTACHMENT “E”
Tribal Cultural Resources

TRIBAL CONSULTATION REQUESTS AND NOTIFICATIONS
Simon/Dutton/Qualls Project (GPA 16-005, PZC 16-007, and PPM 16-030)

	SB 18 / AB 52 Official Notice		Cover Letter		Notification Form		Correspondence / Meetings
	Certified Mail Date	Receipt Date	SLF Results	CHRIS Results	Project Description	Map	Date/ Correspondence Type / Topics of Discussion documents to remain confidential pursuant to 36 CFR 296.18 and California Public Records Act 6254(r)
Native American Tribe							
Kern Valley Indian Council Julie Turner, Secretary P.O. Box 1010 Lake Isabella, CA 93240	6/2/17	6/5/17	X	X	X	X	No response received.
Kern Valley Indian Council Robert Robinson, Chairperson P.O. Box 401 Weldon, CA 93283	6/2/17	6/6/17	X	X	X	X	
Santa Rosa Rancheria Tachi Yokut Tribe Rueben Barrios Sr., Chairperson P. O. Box 8 Lemoore, CA 93245	6/2/17	6/7/17	X	X	X	X	No response received
Santa Rosa Rancheria Tachi Yokut Tribe Hector Franco, Cultural Director P. O. Box 8 Lemoore, CA 93245	6/2/17	6/7/17	X	X	X	X	
Santa Rosa Rancheria Tachi Yokut Tribe Shana Powers, Cultural Specialist P. O. Box 8 Lemoore, CA 93245	6/2/17	6/7/17	X	X	X	X	
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P. O. Box 226 Lake Isabella, CA 93240	6/2/17	6/15/17	X	X	X	X	No response received
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258	6/2/17	6/12/17	X	X	X	X	No response received
Tule River Indian Tribe Joey Garfield, Council Member P.O. Box 589 Porterville, CA 93258	6/2/17	6/12/17	X	X	X	X	

TRIBAL CONSULTATION REQUESTS AND NOTIFICATIONS
Simon/Dutton/Qualls Project (GPA 16-005, PZC 16-007, and PPM 16-030)

	SB 18 / AB 52 Official Notice		Cover Letter		Notification Form		Correspondence / Meetings
	Certified Mail Date	Receipt Date	SLF Results	CHRIS Results	Project Description	Map	Date/ Correspondence Type / Topics of Discussion documents to remain confidential pursuant to 36 CFR 296.18 and California Public Records Act 6254(r)
Native American Tribe							
Tule River Indian Tribe Environmental Department Kerri Vera, Director P. O. Box 589 Porterville, CA 93258	6/2/17	6/12/17	X	X	X	X	
Tule River Indian Tribe Tribal Archeology Department Felix Chrisman, Tribal Archeologist P.O. Box 589 Porterville, CA 93258	6/2/17	6/12/17	X	X	X	X	
Wuksachi Indian Tribe/Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906	6/2/17	6/3/17	X	X	X	X	No response received.

ATTACHMENT “F”

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING PROGRAM

SIMON/DUTTON/QUALLS PROJECT (GPA 16-005, PZC 16-007, AND PPM 16-030)

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
BIOLOGICAL RESOURCES: SAN JOAQUIN KIT FOX							
BIO-1	(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 on each of the four separate parcels. These surveys will be conducted in accordance with the USFWS <i>Standardized Recommendations</i> . The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.	Prior to start of construction related activities	Retention of professional biologist Submittal of survey result and/or Report of Findings	County of Tulare Planning Department			
BIO-2	(Avoidance). Should a kit fox be found using the site during preconstruction surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.	Prior to start of construction related activities	Retention of professional biologist Submittal of survey result and/or Report of Findings	County of Tulare Planning Department			
BIO-3	(Minimization). Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of	Prior to start and during construction related activities	Retention of/verification by a professional biologist Ongoing monitoring / Submittal of Report of Findings, if applicable /	County of Tulare Planning Department			

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	rodenticide and herbicide use; and proper disposal of food items and trash.		Verification of take permit, if applicable				
BIO-4	(Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.	Prior to start of and during construction related activities	Retention of/verification by a professional biologist Ongoing monitoring / Submittal of Report of Findings, if applicable / Verification of take permit, if applicable	County of Tulare Planning Department			
BIOLOGICAL RESOURCES: NESTING RAPTORS AND MIGRATORY BIRDS							
BIO-5	(Preconstruction Surveys). If ground disturbance must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. Should a 30-day window of no activity occur on any given parcel (within the breeding season), the surveys should be redone. The surveys will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save the Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.	Prior to start of construction related activities	Retention of professional biologist Submittal of survey result and/or Report of Findings	County of Tulare Planning Department			
BIO-6	(Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other	Prior to start of construction related activities	Retention of professional biologist Ongoing monitoring / Submittal of	County of Tulare Planning Department			

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	easily visible means, and will be maintained until the biologist has determined that the young have fledged.		Report of Findings, if applicable / Verification of take permit, if applicable				
BIOLOGICAL RESOURCES: ROOSTING BATS							
BIO-7	(Temporal Avoidance). Tree removal (if necessary) should occur after September 30, and before April 1, outside the maternal roosting season.	Prior to start of construction related activities	Retention of professional biologist Submittal of survey result and/or Report of Findings	County of Tulare Planning Department			
BIO-8	(Preconstruction Surveys). If removal of trees must occur between April 1 and September 30 (general maternity bat roost season), a qualified biologist will survey affected trees for the presence of bats within 30 days prior to these activities. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.	Prior to start of construction related activities	Retention of professional biologist Submittal of survey result and/or Report of Findings	County of Tulare Planning Department			
BIO-9	(Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees prior to full removal under the direction of a qualified biologist to ensure that no adverse impact to any bats occurs as a result of construction activities.	Prior to start of construction related activities	Retention of professional biologist Ongoing monitoring / Submittal of Report of Findings, if applicable / Verification of take permit, if applicable	County of Tulare Planning Department			
BIO-10	(Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free	Prior to start of construction	Retention of professional	County of Tulare			

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	buffer will be established around the colony and remain in place until a qualified biologist determines that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.	related activities	biologist Submittal of survey result and/or Report of Findings	Planning Department			
BIO-11	<i>(Consultation if Maternity Roosts Cannot be Avoided).</i> If maternal roosts are determined to be present and must be removed, the bats will be excluded from the roosting site before the roost is removed. An exclusion plan, addressing exclusion methods, and roost removal procedures will be developed by a qualified biologist before implementation. Exclusion methods may include use of one-way doors at roost entrances or sealing roost entrances when a site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g. during hibernation or while females in maternity colonies are nursing young).	Prior to start of construction related activities	Retention of professional biologist Ongoing monitoring / Submittal of Report of Findings, if applicable / Verification of take permit, if applicable	County of Tulare Planning Department			