SOUTH VALLEY ANIMAL HEALTH LABORATORY

Draft Initial Study and Proposed Mitigated Negative Declaration

The following Initial Study has been prepared in compliance with CEQA.

PREPARED BY:

OFFICE OF RESOURCE MANAGEMENT AND PLANNING

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May 2009

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Introduction

Initial Study

Pursuant to Section 15063 of the California Environmental Quality Act (CEQA) Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.), an Initial Study is a preliminary environmental analysis that is used by the lead agency as a basis for determining whether an EIR, a Mitigated Negative Declaration, or a Negative Declaration is required for a project. The CEQA Guidelines require that an Initial Study contain a project description, description of environmental setting, identification of environmental effects by checklist or other similar form, explanation of environmental effects, discussion of mitigation for significant environmental effects, evaluation of the project’s consistency with existing, applicable land use controls, and the name of persons who prepared the study.

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed project to determine what level of additional environmental review, if any, is appropriate. As shown in the Determination in Section IV of this document, and based on the analysis contained in this Initial Study, it has been determined that the proposed project would not result in any potentially significant impacts that cannot be mitigated to less-than-significant levels. The analysis contained in this Initial Study concludes that the proposed project would result in the following categories of impacts, depending on the environmental issue involved: no impact; less-than-significant impact; or less-than-significant impact with the implementation of project-specific mitigation measures. Therefore, preparation of a Mitigated Negative Declaration is appropriate (the Proposed Mitigated Negative Declaration is presented in Appendix A).

Public and Agency Review

This Draft Initial Study will be circulated for public and agency review from May 22, 2009 to June 22, 2009. Copies of this document are available for review at the following locations:

- UC Davis Office of Resource Management and Planning in 376 Mrak Hall on the UC Davis campus
- Reserves at Shields Library on the UC Davis campus
- Tulare Public Library at 113 N F Street, in Tulare
• Veterinary Medicine Teaching and Research Center at 18830 Road 112 in Tulare
• Online at http://www.ormp.ucdavis.edu/environreview/

Comments on this Draft Initial Study must be received by 5:00 PM on June 22, 2009 and can be e-mailed to environreview@ucdavis.edu or sent to:

John A. Meyer
Vice Chancellor - Resource Management and Planning
University of California
One Shields Avenue
376 Mrak Hall
Davis, CA 95616

**Project Approvals**

As a public agency principally responsible for approving or carrying out the proposed project, the University of California is the Lead Agency under CEQA and is responsible for reviewing and certifying the adequacy of the environmental document and approving the proposed project. Project approval could take place through consideration by The Regents of the University of California. Alternatively, pursuant to a delegation of authority from The Regents, the President of the University of California could approve the project.

The following permits could be required:

• San Joaquin Valley Air Pollution Control District – Authority to Construct and Permit to Operate (SJVAPCD Rule 2010)
• National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Associated with Construction Activity
• Tulare County Environmental Health Department

**Organization of the Initial Study**

This Initial Study is organized into the following sections:

**Section I – Project Information:** provides summary background information about the proposed project, including project location, lead agency, and contact information.
Section II – Project Location and Description: includes a description of the proposed project, including the need for the project, the project’s objectives, and the elements included in the project.

Section III – Environmental Factors Potentially Affected: identifies which environmental factors, if any, involve at least one significant or potentially significant impact that cannot be reduced to a less-than-significant level.

Section IV – Determination: indicates whether impacts associated with the proposed project are significant, and what, if any, additional environmental documentation is required.

Section V – Evaluation of Environmental Impacts: contains the Environmental Checklist form for each resource area. The checklist is used to assist in evaluating the potential environmental impacts of the proposed project. This section also presents an explanation of all checklist answers.

Section VI – Supporting Information Sources: lists references used in the preparation of this document.

Section VII – Initial Study Preparers: lists the names of individuals involved in the preparation of this document.

Appendix A – Proposed Mitigated Negative Declaration: presents the Proposed Mitigated Negative Declaration for the project.

Appendix B - Special-status Species in the Site Vicinity: presents special-status species with a potential to occur in project vicinity.
I. PROJECT INFORMATION

1. Project title:

South Valley Animal Health Laboratory

2. Lead agency name and address:

Office of Resource Management and Planning
University of California
One Shields Avenue
376 Mrak Hall
Davis, CA 95616-8678

3. Contact person and phone number:

A. Sidney England, Assistant Vice Chancellor for Environmental Stewardship and Sustainability, 530-752-2432

4. Project location:

University of California, Davis
Veterinary Medicine Teaching and Research Center
18830 Road 112
Tulare, CA 93274

5. Project sponsor’s name and address: (See #2 & #3)

See lead agency.

6. Custodian of the administrative record for this project (if different from response to item 3 above.):

Same as Item 3 above.

7. Identification of previous EIRs relied upon for tiering purposes (including all
applicable LRDP and project EIRs) and address where a copy is available for inspection.)

None.
II. PROJECT LOCATION AND DESCRIPTION

1. Project Overview:

UC Davis proposes to construct the South Valley Animal Health Laboratory (SVAHL), a new laboratory and office building of approximately 53,000 gross square feet. The building would provide space for a new veterinary diagnostic testing laboratory adjacent to the existing veterinary medicine research laboratory approximately one-quarter mile east of State Route 99 in Tulare County south of the City of Tulare. In addition to laboratory and office space, the project would include a cremator for animal parts and other biohazardous waste, a back-up generator, an on-site water supply well, a stormwater retention pond, and a new septic system for the disposal of wastewater.

The California Animal Health & Food Safety (CAHFS) Laboratory System is the backbone of California’s warning system that helps to protect the health of California’s livestock and poultry. CAHFS serves the people of California by safeguarding public health with rapid and reliable diagnosis of animal diseases common to animals and humans, as well as foodborne pathogens. CAHFS operates in partnership with the California Department of Food and Agriculture (CDFA), UC Davis, veterinarians, and livestock and poultry producers.

The proposed SVAHL would consolidate functions currently performed at three separate CAHFS laboratories under the direction of the CDFA. Testing responsibilities of CDFA would be transferred from the current facilities in Tulare and Fresno. CAHFS has been on the forefront of diagnosis of animal diseases and pathogens since its inception. The main purpose of this facility is to provide diagnostic sample analysis to the dairy, cattle, and poultry farming industries in the central valley. The proposed SVAHL would operate with approximately 37 employees, about 26 employees would transfer to the site and the remainder (11) would be employees already working at the site.

This facility will create new preparation laboratories, diagnostic laboratories, large and small animal necropsy laboratories, and all necessary laboratory support, storage, and administrative support functions. The proposed facility would accept avian and livestock sample submissions for complex diagnostic procedures to support on-going food production, food safety, and animal welfare programs overseen by the CDFA. Sample testing would involve primarily blood and tissue samples sent from throughout the region for testing and would also involve
receipt of dead or dying animals delivered to the SVAHL for testing. The SVAHL would provide routine testing for on-going screening programs and would also provide testing and diagnostic services for animals with suspected disease symptoms.

This Initial Study evaluates the potential environmental effects of the proposed project as required by CEQA. The Initial Study identifies potentially significant environmental effects and proposes mitigation measures to reduce the potential impacts to a less-than-significant level. After consideration of any comments received, the University may elect to approve the design of the proposed project and adopt the proposed Mitigated Negative Declaration. Construction on the project could begin in the spring of 2010 and operation of the completed building would be take place in toward the end of 2011.

2. Description of the Project:

    **Location:** The proposed project site is located on a University-owned parcel on Road 112, south of the existing UC Davis Veterinary Medicine Teaching and Research Center (VMTRC) in unincorporated Tulare County (see **Figure 1, Project Location**). The site is approximately 3 miles south of the City of Tulare and about one mile south of the Tulare Municipal Airport. State Route 99 (SR-99) roughly parallels Road 112 approximately 1000 feet west of the site. The parcel is bounded on the north by the VMTRC access road and parking area, by Road 112 on the west, by an unpaved road providing access to a nearby aqueduct and agricultural fields to the south, and by an unpaved road and dry lot for cattle feeding to the east. The parcel on which the SVAHL project would be located is approximately 9 acres in area; the project would occupy about 5 acres of this area. The adjacent VMTRC parcel has an area of approximately 6 acres; the proposed project would affect about 2.5 acres of this area.

The site is currently developed with a modular laboratory and office building, a housing complex consisting of three modular units, and a cremator for animal-related waste. The modular housing units provide housing for approximately 12 students and researchers during veterinary program residencies at the VMTRC. The area around the modular buildings is landscaped with shrubs and mature trees, including several California redwood (*Sequoia sempervirens*). The majority of the site consists of open land vegetated with non-native grasses. The site is relatively flat with little or no noticeable slope. A septic system leach field that serves the existing site uses and the adjacent VMTRC is located east of the buildings.
Project Features and Operations: The proposed SVAHL project would construct a new veterinary diagnostic testing laboratory adjacent to an existing veterinary medicine research laboratory on an existing developed site in a generally undeveloped area south of Tulare, California. The proposed project would include (1) diagnostic testing and research laboratory areas, with some areas categorized as biosafety level 2 (BSL-2) space, (2) a cremator for animals, animal parts and other biohazardous waste, (3) a back-up generator, (4) an on-site water supply well, (5) a stormwater retention pond, and (6) a new septic system for the disposal of wastewater. Figure 2, Proposed Site Plan, shows the proposed location of these features.

The proposed SVAHL would consolidate functions currently performed at three separate California Animal Health and Food Safety (CAHFS) laboratories under the direction of the California Department of Food and Agriculture (CDFA). Testing responsibilities of CDFA would be transferred from the current facilities in Tulare and Fresno. The proposed facility would accept avian and livestock sample submissions for complex diagnostic procedures.

The proposed project would include construction of a new laboratory and office building with an area of approximately 53,000 gross square feet. The building would be approximately 46 feet high at the rooftop, with a single story of occupiable space on the ground level. The building would have a partial basement with mechanical space below grade and a mechanical space in the attic level. Some interior spaces would have high ceilings to allow space for laboratory equipment and operations. A material handling lift would provide access to the attic and basement levels. Figure 3, Conceptual Building Elevations, shows the conceptual building design.

A dual entry/exit loading dock for animal/sample receiving and waste removal would be located at the southeast corner of the building. A separate “clean” receiving area for package reception would be located on the west side of the building. A cremator for disposal of animal and other biohazardous waste would be located in the building basement. The cremator exhaust would be located on the southeast side of the building to take advantage of the prevailing wind direction, which is predominantly from the northwest; the stack would project above the roofline. A small detached storage building would be located near the northeast corner of the laboratory building.

The building would have metal and concrete framing, steel frame structure,
concrete masonry exterior walls, and insulated, aluminum-framed windows. The roof would be of metal decking.

The existing modular housing units would be moved to a location on the adjacent VMTRC parcel east of the existing barn (see Figure 2), in an area that is presently unvegetated, open land. The modular buildings would be connected to the existing utilities on the VMTRC parcel. The remaining modular laboratory and office building would be demolished. The existing cremator would continue to be used.

**Laboratory Safety Features:** Biosafety ratings range from Level 1 to Level 4 and indicate the varying degrees of building containment and laboratory precautions that must be followed while conducting research with particular organisms. The proposed project would provide research space to meet current BSL-2 standards set by NIH/CDC in the current edition of the publication Biosafety in Microbiological and Biomedical Laboratories (BMBL). This publication defines four biosafety levels that apply to biohazardous materials operations, depending on the risk posed by the organism used. Although these biosafety levels were originally intended to protect human health, the CDC Guidelines are widely used to prevent release of animal pathogens from laboratories. BSL-2 is appropriate for use with biohazardous materials that are considered to be of ordinary (not special) potential hazard and may produce varying degrees of disease through accidental autoinoculation, ingestion, and skin or mucous membrane exposure. For example, certain hospital diagnostic labs are considered BSL-2 facilities.

The SVAHL building would include laboratory space designed to federal and University of California BSL-2 safety standards, with office areas isolated from laboratory and animal/sample holding areas and decontamination facilities. Laboratory areas would be organized based on intended functions and assumed hazard level, with individual spaces located within a layout that would provide multiple layers of safety measures to prevent cross-contamination or accidental exposure and to limit access to authorized personnel only. Internal security features such as individual door locks and keypad access would be used to limit access to laboratory areas.

Laboratory areas would be separated from areas open to the public and from other laboratory personnel who do not work within a particular zone by controlled access zones and decontamination areas. All procedures in which infectious aerosols or spills could be created would be conducted in biosafety cabinets or other forms of primary containment. All waste from the laboratories
would be autoclaved or otherwise decontaminated prior to leaving the facility.

Each lab would have single-pass (non-recirculated) air, with negative pressurization relative to the surrounding spaces (i.e., air would flow into the lab space from outside and not out of the lab into other building spaces). Consistent with federal guidelines, all windows would be sealed, breakage resistant, and inoperable in order to preserve the air flow balance. The layout of the laboratories would allow potential hazards to be divided into zones based on degree of hazard, with directional air flow moving from less hazardous to more hazardous zones within a space. For example, desk areas for computer use where supply air would enter the space would be considered a less hazardous zone, while a chemical fume hood where the air would be exhausted from the space would be considered more hazardous.

Labs designated as BSL-2E spaces would meet all BSL-2 requirements and include HEPA-filtered room exhaust and shower-out capabilities in addition to baseline BSL-2 guidelines.

**Utilities and Infrastructure:** The proposed project includes a new well and septic system to meet all on-site needs for water supply and sewage disposal. This document describes the possibility that the City of Tulare may evaluate and construct potential future water and wastewater extensions that would bring these municipal services to the road right-of-way immediately west of the project site. If the City of Tulare proceeds with these utility extensions, the VMTRC and SVAHL facilities may elect to connect to one or both of these utilities and this Initial Study includes evaluation of the potential environmental effects of these alternative service connections. This document does not evaluate the physical impacts of system extensions and capacity considerations that the City of Tulare would consider when contemplating the infrastructure expansion projects. Such conditions would need to be evaluated by the City in a future environmental document. However, for informational purposes, this Initial Study includes a discussion of the availability of City water supply and sewage treatment capacity in subsection V.16, Utilities and Service Systems, below.

The proposed project would require the following improvements to utilities and infrastructure:

- **Domestic Water:** Two existing water wells currently serve the site; Well Number 1 is located adjacent to Road 122 on the VMTRC site and Well Number 2 is located at the southeast corner of the site parcel (see Figure 2).
Both wells have levels of contaminants such as arsenic and nitrates above the standards for drinking water, and are used only for non-potable purposes, including the on-site fire hydrants. Bottled water is presently used for drinking at the VMTRC.

The proposed SVAHL is projected to use 35,000 to 50,000 gallons of water per day (approximately 39 to 56 acre-feet per year). As part of the proposed project, a new water well that can provide potable water would be constructed on site. The new well would provide water from the deep aquifer that would meet all water quality requirements. The SVAHL lab facility and associated fire suppression and landscaping water system would be supplied by the new well. The existing wells would remain in service and would be used for irrigation of surrounding lands for alfalfa production. The existing well would not be used for non-potable applications (such as landscaping and exterior washdown) in the developed portion of the project site because such uses would require extensive and costly duplication of water supply pipes. The proposed new well and the water storage tank would be located in the southwest portion of the project site.

A 250,000-gallon water storage tank would be located on site. The precise location of the tank has not been determined; as shown on Figure 2, it may be located either east or southeast of the proposed building. The tank would be filled from the new well and potable water would be drawn from the tank for daily use. The tank would be maintained at or near full capacity in order to provide adequate water supply and pressure for fire suppression, if needed.

Alternatively, the facility may be connected to the City of Tulare municipal water supply. This would require the future extension of municipal supply lines along Road 112 by the City of Tulare. The nearest existing supply line is located approximately two miles to the north. The service extension lines would be installed entirely within the disturbed area of the Road 112 right of way.

- **Sanitary Sewer:** Wastewater from the existing site uses and the VMTRC currently flows to a septic tank and leach field located on the east side of the project site. This septic tank and leach field would be retained under the proposed project. In addition, a new on-site 3,500-gallon septic tank and leach field would be located adjacent to the existing leach field to handle wastewater from the proposed facility.

Alternatively, the facility may be connected to the City of Tulare municipal
sanitary sewer system. This would require the City of Tulare to extend the municipal sewer lines approximately two miles along Road 112 to the project site. As with the potential water supply lines, the sanitary sewer lines would be installed entirely within the disturbed area of the Road 112 right of way. An effluent decontamination system that would treat biohazardous waste water before discharge to the sanitary sewer system is not required for BSL-2. However, a decontamination system will be part of this project to provide an additional degree of safety and allow for flexibility in future lab uses.

- **Storm Drainage:** A stormwater retention basin would be constructed in the southern portion of the project site, across the access road from the site entrance. Three stormwater retention basins would be located in the eastern portion of the VMTRC site to the north of the SVAHL site, in an area that is presently unvegetated, open land. All site drainage from pavements, roofs, and other impervious surfaces would be routed to these basins, which would be sized to accommodate the 100-year, 24-hour duration storm event.

- **Electricity:** Electricity service is provided to the site by Southern California Edison. Existing buildings are fed from overhead power lines along Road 112. The proposed facility would be served from these lines, with a new service connection routed to a new pad-mounted transformer. A 500-kilowatt emergency generator would be located outside the loading dock area. The generator would be powered by natural gas and would serve all life safety systems such as the fire alarm system, facility interior lighting, security systems, supply and exhaust air systems, pumps to support building heating and cooling systems, HVAC controls, biosafety cabinets, environmental rooms, and sample refrigerators and freezers in laboratory areas. The facility would also have an uninterruptible power supply unit for electronic equipment.

- **Natural Gas:** A gas line from Road 112 serves the site, feeding the existing cremator and water heater, which would remain in use on the site. A new gas line would be installed to supply the cremator in the proposed facility.

- **Hot Water:** Hot water would be generated by a gas-fired boiler with a 1,000-gallon insulated storage tank. Domestic potable hot water would be supplied through a master tempering valve station and circulated at 120 degrees F. A high-temperature hot water system would be circulated at 180 degrees F to glass washers and laundry areas.

- **Chilled Water:** Chilled water would be provided by two electric chillers
located in the building basement. Chilled water would be piped throughout the building.

- **Steam:** Steam would be supplied by two natural-gas-powered boilers located in the building basement, with a common vent stack. Steam at 80 pounds per square inch (psi) would be piped to several locations in the building for autoclaving, equipment decontamination, water heating, and humidification.

**Parking and Roadways:** Staff, visitors, service trucks, and emergency vehicles would gain access to the project site via Road 112. The existing roads within the VMTRC are in poor condition and would be repaved to accommodate both passenger and heavy service vehicle traffic. A new road surface would also be provided at the shared access road along the southern property boundary to accommodate vehicle traffic including delivery trucks; this roadway would be shared with infrequent traffic accessing an aqueduct located about 1,500 feet to the east of the project site. An entry/exit driveway would be located at the northwest corner of the project site off the existing VMTRC access driveway, and an entry-only driveway would be located at the southeast corner of the site off the access road along the southern boundary of the site. The north and south entrances would be connected via a loop road around the site that would serve as a fire lane. Both entrances would have security gates.

The north entry/exit would provide vehicle access to the diagnostic facility and the “clean” receiving area for staff, visitors, and service vehicles, and would also provide access to the VMTRC. The parking for both staff (approximately 45 parking spaces) and visitors (35 parking spaces) would be adjacent to this entry and would provide access to the administrative wing of the SVAHL building. Visitor parking would also serve as overflow parking for the adjacent VMTRC and the Consumer Education Pavilion. Animal receiving and waste removal service vehicles would exit only at this location.

The south entry would serve heavy service vehicles going to the animal receiving and waste removal loading dock. A truck wash-down area for service vehicles would be located on the path of travel to the north entry/exit, and the one-way path of travel for such vehicles would ensure that they could be decontaminated before exiting the site.

**Landscaping:** Landscaping on the project site would consist primarily of drought-tolerant plants, including California native plants. To the extent possible, existing trees would be preserved or transplanted on site. Trees would also be planted in
the parking areas, along the Road 112 frontage, and adjacent to the proposed facility to provide screening. The hardscape would use light-colored or reflective surfaces where possible. Earth berms up to 6 feet high would be constructed along Road 112 and the access road along the south side of the project site to provide security and visual screening from the roadways. The perimeter of the site would be fenced.

**Sustainable Design Elements:** For the proposed SVAHL building, window openings would be limited on the south side of the building, which would be primarily laboratory space. Pervious pavement would be used in the parking lots and, where feasible, in the delivery zones of the facility. The proposed project would comply with the UC Policy on Sustainable Practices. The facility is intended to achieve Silver certification under the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Program.

Laboratory buildings typically have high energy consumption relative to other uses. Energy-saving measures that may be included in the project design include day-lighting controls, sensor-operated fixtures, and solar-powered plumbing fixtures where possible.

The site design includes landscaping to reduce heat gain, provide shading, and create effective storm water management.

**Construction Schedule:** Construction of the proposed project is anticipated to begin in spring 2010 and continue for approximately 18 months. The project would be built in a single phase. Construction staging and contractor parking associated with the proposed project would likely occur on the eastern portion of the parcel containing the project site.

**Population:** It is expected that the proposed SVAHL facility would operate with approximately 37 full time equivalent (FTE) employees, including administrative and maintenance support. About 26 of these would be positions transferred from the CDFA facility in Fresno and the remainder would be staff/student positions already located on site.

3. **Project Objectives:**

   The California Animal Health & Food Safety (CAHFS) Laboratory System is the backbone of California’s warning system that helps to protect the health of
California’s livestock and poultry. CAHFS serves the people of California by safeguarding public health with rapid and reliable diagnosis of animal diseases common to animals and humans, as well as foodborne pathogens. CAHFS operates in partnership with the California Department of Food and Agriculture (CDFA), UC Davis, veterinarians, livestock and poultry producers. In addition, food-based surveillance is provided throughout California by CAHFS for all foreign animal diseases not currently found in the United States. The two existing San Joaquin Valley laboratories (Fresno and Tulare) are hampered by severe space limitation, aged facilities, and urban encroachment. The proposed project would replace these laboratories with a new animal diagnostic laboratory facility. It would accept avian and livestock sample submissions for complex diagnostic procedures as a service to California’s mammalian and avian livestock industries.

Specific objectives for the proposed facility are to:

- Replace outdated and fragmented testing facilities with modern laboratory facilities and support functions that will maximize efficiencies while maintaining the safety requirements for facilities operating at BSL-2.
- Provide improved client access to a relatively underserved area.
- Increase animal disease surveillance capability.

4. Surrounding land uses and environmental setting:

The project site is located in Tulare County. The county covers an area of over 4,935 square miles and can be divided into three general topographical zones: a valley region in the west; a foothill region east of the valley area; and a mountain region east of the foothills. The project site is located in the western portion of the county, in an area primarily used for agriculture. These agricultural production operations generate significant quantities of airborne particulates. Small and medium-size manufacturing plants are also located in the western part of the county and are increasing in number. A proposed 272-acre Tulare Industrial Complex north of the site is currently in the planning stages.

5. Discretionary approval authority and other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

As a public agency principally responsible for approving or carrying out the proposed project, the University of California is the Lead Agency under CEQA
and is responsible for reviewing and certifying the adequacy of the environmental document and approving the proposed project. The permits required for the proposed project are listed under **Project Approvals** on page 2 of this document. This CEQA document is intended to support the UC decision-making process; other agencies may use this document to support further CEQA actions if necessary.
Proposed Site Plan

FIGURE 2

SOURCE: hok Engineering - February 2009

APPOROINATE SCALE IN FEET

Proposed SVAHL Leach Fields

Potential Water Storage Tank Locations

Existing Buildings and Facilities

Modular Housing Relocation Site

Storm Water Retention Pond

Storm Water Retention Pond

Storm Water Retention Pond

South Valley Animal Health Laboratory (SVAHL)

VMTRC Leach Field

Existing Well

Storm Water Retention Pond

 Existing Buildings and Facilities

SOURCE: hok Engineering - February 2009

992-003-05/09

Proposed Site Plan
III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

IV. DETERMINATION: (To be completed by lead agency)

On the basis of the initial evaluation that follows:

☐ I find that the proposed project WOULD 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 that will avoid or reduce any potential significant effects to a less than significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT will be prepared.

______________________________  ________________
Signature                  Date

John Meyer  ________________
Printed Name  For
V. EVALUATION OF ENVIRONMENTAL IMPACTS

During the completion of the environmental evaluation, the lead agency relied on the following categories of impact noted as column headings in the IS checklist:

A) “Potentially Significant Impact” is appropriate if there is substantial evidence that the project’s effect may be significant. If there are one or more “Potentially Significant Impacts” a Project EIR will be prepared.

B) “Less Than Significant With Mitigation Incorporated” applies where the incorporation of project specific mitigation measures will reduce an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” All mitigation measures must be described, including a brief explanation of how the measures reduce the effect to a less than significant level.

C) “Less Than Significant Impact” applies where the project will not result in any significant effects. The project impact is less than significant without the incorporation of mitigation.

D) “No Impact” applies where a project would not result in any impact in the category or the category does not apply. “No Impact” answers need to be adequately supported by the information sources cited, which show that the impact does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). 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).

Impact Questions and Responses

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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?

\[\begin{array}{cccc}
(A) & (B) & (C) & (D) \\
\hline
\text{Issues} & \text{Potentially Significant Impact} & \text{Less Than Significant Impact with Mitigation Incorporated} & \text{Less Than Significant Impact} & \text{No Impact} \\
\end{array}\]

\[\begin{array}{cccc}
\square & \square & \square & \square \\
\end{array}\]

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

\[\begin{array}{cccc}
(A) & (B) & (C) & (D) \\
\hline
\text{Issues} & \text{Potentially Significant Impact} & \text{Less Than Significant Impact with Mitigation Incorporated} & \text{Less Than Significant Impact} & \text{No Impact} \\
\end{array}\]

\[\begin{array}{cccc}
\square & \square & \square & \square \\
\end{array}\]

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

\[\begin{array}{cccc}
(A) & (B) & (C) & (D) \\
\hline
\text{Issues} & \text{Potentially Significant Impact} & \text{Less Than Significant Impact with Mitigation Incorporated} & \text{Less Than Significant Impact} & \text{No Impact} \\
\end{array}\]

\[\begin{array}{cccc}
\square & \square & \square & \square \\
\end{array}\]

**Relevant Elements of Project**

The proposed project would replace the existing one-story modular buildings on the project site with a new building approximately 46 feet high at its highest point. The project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. The project would also include removal of existing trees and installation of new roadways, a water storage tank, utilities, landscaping, and lighting. Landscaping would be designed to partially shield views of the project site from Road 112.

**Discussion of Potential Project Impacts**

a) A scenic vista is generally defined as an expansive view of highly valued landscape as observable from a publicly accessible vantage point. The project site is not part of a scenic vista as designated by any local plans or policies. The proposed project site is located in an area primarily used for agricultural production, with scattered residential, commercial, and industrial uses. The site vicinity is essentially flat. Typical views from publicly accessible vantage points such as roadways include broad, low-relief views of open fields, residences, and farm and commercial buildings, intermittently screened by orchards and other trees. A number of larger commercial food processing plants in the area include multi-story buildings and tall storage silos; one such facility is located approximately 1,200 feet west of the project site across SR-99. The current site uses are
mostly set well back from Road 112 and are screened from view from the road by the trees on site. The project site is visible from SR-99 as a low-profile cluster of trees; the buildings are barely visible or not visible from the highway. The proposed laboratory building would be noticeably taller than those currently on the site and the buildings at the adjacent VMTRC facility. It would be visible from SR-99 but, due to its distance from the highway, would not be prominent in broad views of the area available to passing motorists. The laboratory building would be similar in height and scale to other commercial buildings and farm structures (barns, awnings, and storage buildings) in the region, and would generally be consistent with the existing visual environment. Landscaping and trees would partially screen views of the site from both SR-99 and Road 112. The water storage tank would be approximately 25 feet high. Depending on its location on site, it would be screened from public views by either the proposed SVAHL building or by trees and landscaping along the site boundaries. The tank would be generally on the same scale in height and bulk as the existing and planned buildings. In addition, since the modular buildings on the site are included in existing views from SR-99 and Road 112, the new locations would be less visible from these viewpoints. Based on these factors, the project’s potential impacts to scenic vistas would be less than significant.

b) There are no other potential scenic resources on the project site and no state-designated scenic highways in the vicinity of the project site. The project would therefore not have a significant impact to such resources.

c) As discussed above, the proposed project would be similar in scale, density, and appearance to other developed land uses in the area. The proposed project would include removal of several mature trees, including five redwood trees and approximately 10 landscaping trees of various species. There are no oak trees on the site. The trees were planted as part of the original site landscaping; they would be replaced by landscaping including trees that would eventually grow to similar heights. The redwood trees may be relocated elsewhere on site as part of the new landscaping, if feasible. Therefore, the project would replace the present development on site with new development similar in visual character to that of the site vicinity. It would include landscaping to provide visual screening. The project therefore would not substantially degrade the existing visual character or quality of the site and its surroundings, and the impact would be less than significant.

d) The proposed project would create new sources of light, including building exterior and interior night lighting, parking lot and walkway lighting, and vehicle headlights entering and exiting the site. The building and parking areas on the site would be screened with vegetation and trees, providing some reduction in impacts. Daytime
glare would also increase above existing levels due to reflective building and hardscape surfaces, including concrete masonry exterior walls and aluminum-framed windows. However, the building would be a relatively small element within the visual environment and would not be visually prominent. Glare impacts would be less than significant. The introduction of new sources of light on the project site is considered a potentially significant impact prior to mitigation.

Mitigation Measures
MM AES-1: Hooded and down-directed lights shall be used for nighttime illumination in parking areas, shipping and receiving docks, and other areas of the site as applicable.

Significance Determination after All Mitigation
Implementation of Mitigation Measure AES-1 would reduce the potentially significant impact related to lighting to a less-than-significant level.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

2. AGRICULTURAL RESOURCES – Would the project:

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

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

c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use? □ □ ☒ ○
Relevant Elements of Project
The proposed project would replace the existing laboratory uses on the project site with similar but more intensified uses. In addition, the project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC.

Discussion of Potential Project Impacts
a) The project site is not currently used for agriculture, and the proposed project therefore would not convert the site from agricultural to non-agricultural use. It is not mapped as Farmland (Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) by the Farmland Mapping and Monitoring Program. Installation of new water and sewer piping, if it occurs, would be entirely within the Road 112 right of way. Based on these factors, the project’s potential impacts to Farmland would be less than significant.

b) There is no Williamson Act contract applicable to the project site. Campus lands are not eligible for Williamson Act agreements, nor are they subject to local zoning controls. Although the site is in an area zoned for agricultural use by Tulare County, it is not used for agriculture, and no subdivision or other land use conversion is proposed. The project would therefore have no significant impact related to a conflict with existing zoning for agricultural use or a Williamson Act contract.

c) The proposed uses on the site are similar to the existing uses, although they would be at a larger scale. The nature of proposed site activities would not conflict with surrounding agricultural uses, for example by introducing new residential populations nearby or providing new infrastructure that could encourage residential or commercial development of the area. The proposed project would serve the local and statewide agricultural industry. The project therefore would not involve other changes in the existing environment that could result in conversion of Farmland to non-agricultural use, and impacts would be less than significant.

Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.
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 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? □ □ □ □

f) Result in greenhouse gas emissions that would hinder or delay the campus’ ability to meet the UC climate change goals contained in the UC Policy on Sustainable Practices? □ □ □ □
Relevant Elements of Project
The proposed project is located in unincorporated Tulare County. There are sensitive receptors (occupants of the modular student housing) on site; these will be relocated on the adjacent VMTRC parcel. The off-site sensitive receptors nearest to the project site are scattered residential homes through the region, the closest of which is approximately 0.5 mile to the southeast on Avenue 184. In addition, the Palo Verde Elementary School is located approximately 2 miles to the west on Avenue 196.

The project is subject to air quality regulation programs under both the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both the federal and state statutes provide for ambient air quality standards to protect public health, timetables for progressing toward achieving and maintaining ambient standards, and the development of plans to guide the air quality improvement efforts of state and local agencies. Air quality is monitored, evaluated, and controlled by the US Environmental Protection Agency (US EPA), the California Air Resources Board (CARB), and local districts. The project is located in Tulare County, which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. The SJVAPCD has jurisdiction over most air quality matters within the San Joaquin Valley Air Basin (SJVAB), which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties and the valley portion of Kern County.

The US EPA has classified the entire SJVAB, which includes the project site, as a serious nonattainment area for ozone (O₃) and a nonattainment area for fine particulate matter (PM₂.₅). CARB has classified the SJVAB as a nonattainment area for O₃ and PM₂.₅. These designations mean that the SJVAB exceeds both the federal and state ambient air quality standards for O₃ and PM₂.₅. The SJVAPCD has requested that the US EPA reclassify the SJVAB from serious to extreme nonattainment for O₃, which would establish a later attainment deadline of 2024, per the requirements of the CAA. The US EPA approval of the voluntary bump-up is still pending.

The proposed project would generate air pollutant emissions, including ozone (O₃) precursors, as a result of construction activity and operations-related emissions. Construction equipment would generate emissions and fugitive dust during project construction. Vehicle trips from worker commutes associated with project construction would also generate emissions. Operation of the project would result in area and stationary sources of emissions as well as emissions from vehicular sources. The following discusses the project’s potential for local and regional air quality impacts.

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1 The SJVAPCD does not regulate air pollutants from motor vehicles, locomotives, aircraft, agriculture equipment, and marine vessels.
Discussion of Potential Project Impacts

a) The SJVAB is in nonattainment for the federal standards for ozone (8 hour) and PM$_{2.5}$. The SJVAB is also in nonattainment for the state standards of ozone (1 hour and 8 hour), and PM$_{2.5}$. Therefore, the SJVAPCD has prepared attainment plans for the SJVAB in order to demonstrate achievement of the state and federal ambient air quality standards. The attainment plans have been approved by CARB and have been incorporated into the State Implementation Plan (SIP). The air quality plans in effect are listed below:

- *Extremely Ozone Attainment Demonstration Plan; San Joaquin Valley Air Basin Plan Demonstrating Attainment of Federal 1-hour Ozone Standards (SJVAPCD 2004)*;

- *2007 Ozone Plan (SJVAPCD 2007a)*;

- *2007 PM$_{10}$ Maintenance Plan and Request for Redesignation (SJVAPCD 2007b)*; and

- *2008 PM$_{2.5}$ Plan (SJVAPCD 2008)*.

The SJVAPCD has published a *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)*, which is an advisory document that provides local jurisdictions with procedures for addressing air quality impacts in environmental documents. The guide includes methods for assessing air quality impacts, thresholds of significance, and recommended mitigation measures. The GAMAQI was written such that projects evaluated to have impacts less than the thresholds of significance would not have significant impacts to air quality and would not conflict with or obstruct implementation of the region’s air quality plans. Because the air quality plans account for growth, projects that are consistent with the thresholds and mitigation measures in the GAMAQI are consistent with the SJVAPCD’s adopted air quality plans.

In addition, air pollution sources associated with stationary sources are regulated through the permitting authority of the SJVAPCD under the “New Source” rule (SJVAPCD Rule 2201). Owners of any new or modified equipment that emits, reduces, or controls air contaminants, except those specifically exempted by the SJVAPCD, are required to apply for an Authority to Construct and Permit to Operate (SJVAPCD Rule 2010). Additionally, best available control technology is required on specific types of stationary equipment. Through this mechanism, the SJVAPCD ensures that all stationary sources within the project area would be subject to the standards of the SJVAPCD and that new developments do not result in net increases in stationary sources of criteria air pollutants. These requirements would apply to the stationary
sources associated with the project (e.g., cremator, boiler, and generator) unless specifically exempt from SJVAPCD Authority to Construct and Permit to Operate requirements under Rule 2020.

As discussed in the following section, the emissions from the construction and operation of the project would not exceed the emission thresholds established by the SJVAPCD. The project would also comply with the SJVAPCD’s permitting and best available control technology requirements. Therefore, for these reasons, the proposed project would not conflict with or obstruct implementation of the SJVAPCD’s adopted air quality plans and project implementation would have a less-than-significant impact with respect to this criterion.

b) The SJVAPCD’s GAMAQI contains significance thresholds to evaluate the air quality impacts of projects. The GAMAQI contains thresholds for reactive organic gases (ROG) and NOx. The SJVAPCD has also established a threshold for PM10 emissions; however, the GAMAQI has not been updated to include the PM10 threshold. The SJVAPCD has not established numerical mass-based emission thresholds for CO, SOx, and PM2.5. However, it should be noted that PM2.5 is a subset of PM10. Thus, PM2.5 is included in all PM10 emission calculations. The thresholds are applied to both construction and operational emissions. However, for construction impacts, the SJVAPCD has determined that compliance with Regulation VIII for all sites and implementation of all other control measures indicated in Tables 6-2 and 6-3 of the GAMAQI (as appropriate, depending on the size and location of the project site) would constitute sufficient mitigation to reduce construction PM10 impacts to a less than significant level regardless of any numerical estimation. Table 1, SJVAPCD Air Quality Significance Thresholds, lists the construction and operational emission thresholds.
Table 1
SJVAPCD Air Quality Significance Thresholds

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Mass Emissions Thresholds (Construction/Operation tons per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>10</td>
</tr>
<tr>
<td>ROG</td>
<td>10</td>
</tr>
<tr>
<td>PM10</td>
<td>15</td>
</tr>
</tbody>
</table>


The SJVAPCD’s approach to assessing construction air quality impacts is to require implementation of effective and comprehensive control measures rather than to require detailed quantification of emission concentrations for modeling of direct impacts. The SJVAPCD has determined that compliance with Regulation VIII for all sites and implementation of all other control measures indicated in Tables 6-2 and 6-3 of the GAMAQI (as appropriate, depending on the size and location of the project site) would constitute sufficient mitigation to reduce PM10 impacts to less than significant.

Construction of the project would require removal of existing modular structures with associated waste hauling; grading and excavation for subgrade construction; pavement and asphalt installation; building and hardscape construction; and architectural coating.

Construction emissions would occur either on site or off site. On-site emissions would principally consist of ROG, NOx, CO, SOx, PM10, and PM2.5 from heavy-duty construction equipment exhaust; PM10 and PM2.5 fugitive dust from demolition, grading, and excavation; and ROG from asphalt paving and architectural coating. Off-site emissions during the demolition and construction phases normally consist of exhaust emissions (primarily PM2.5) and entrained paved road dust (PM10 and PM2.5) from construction equipment delivery, demolition and construction waste hauling to separation and/or disposal facilities, material delivery, and construction worker commute trips. Emissions of SOx would be generated from fossil fuel combustion; however, emissions would be minimal. In 2006, the State of California reduced the maximum allowable sulfur content in diesel fuel from 500 parts per million (ppm) to 15 ppm for both on- and off-road diesel engines. This has substantially reduced emissions of SOx from transportation fuel combustion.

Emissions were quantified using the URBEMIS2007 (Version 9.2.4) Environmental Management Software. URBEMIS2007 was developed for CARB and is designed to estimate regional air emissions from new development projects in California. Emissions were estimated for each phase of construction and from project operation. Construction phases include demolition, grading and excavation, paving and asphalt installation, building construction, and architectural coating. Fugitive dust control measures
consistent with SJVAPCD Regulation VIII were applied during all grading operations. Vehicle trip rates used to calculate project operational emissions were based on Institute of Transportation Engineers (ITE) default rates.

The project would include the installation of larger scale stationary sources that are not included in the URBEMIS2007 calculations. These sources include an industrial boiler, a standby emergency generator, and a cremator. Emissions from these sources primarily result from the combustion of fossil fuels (diesel and natural gas) and were calculated using conservative emissions factors (i.e., likely to overestimate) from the US EPA Compilation of Air Pollutant Emission Factors (AP-42) and the SJVAPCD. Equipment specifications, such as size, rating, and capacity, were obtained from the project design team. Stationary equipment would be required to implement Best Available Control Technology (BACT) in accordance with Rule 2201. The emissions from the additional stationary equipment were added to the URBEMIS2007 area and mobile source emissions to obtain the project’s total operational emissions.

The project’s construction and operational emissions are presented below in Table 2, Estimated Unmitigated Construction Emissions and in Table 3, Estimated Unmitigated Operational Emissions. As indicated in Table 2 and Table 3, construction and operation of the project would not result in emissions that exceed the established significance thresholds.

<table>
<thead>
<tr>
<th>Construction Phase</th>
<th>Maximum Emissions in Tons Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Demolition</td>
<td>0.01</td>
</tr>
<tr>
<td>Grading/Excavation</td>
<td>0.07</td>
</tr>
<tr>
<td>Building Construction</td>
<td>0.28</td>
</tr>
<tr>
<td>Maximum tons per year:</td>
<td>0.36</td>
</tr>
<tr>
<td>SJVAPCD Threshold:</td>
<td>10</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>NO</td>
</tr>
</tbody>
</table>

<p>| 2011               |       |      |      |      |         |         |
| Building Construction | 0.41  | 2.13 | 2.09 | 0.00 | 0.14    | 0.13    |
| Architectural Coating | 0.72  | 0.00 | 0.01 | 0.00 | 0.00    | 0.00    |</p>
<table>
<thead>
<tr>
<th>Construction Phase</th>
<th>Maximum Emissions in Tons Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>Asphalt Paving</td>
<td>0.03</td>
</tr>
<tr>
<td>Maximum tons per year:</td>
<td>1.15</td>
</tr>
<tr>
<td>SJVAPCD Thresholds:</td>
<td>10</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>NO</td>
</tr>
</tbody>
</table>


Totals in the table may not appear to add exactly due to rounding in the computer model calculations.

### Table 3

**Estimated Unmitigated Operational Emissions**

<table>
<thead>
<tr>
<th>Emissions Source</th>
<th>Emissions in Tons Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>Annual Emissions</td>
<td></td>
</tr>
<tr>
<td>Operational (Mobile) Sources</td>
<td>0.77</td>
</tr>
<tr>
<td>Area Sources</td>
<td>0.09</td>
</tr>
<tr>
<td>Stationary Sources</td>
<td>0.09</td>
</tr>
<tr>
<td>Annual Emissions Total</td>
<td>0.95</td>
</tr>
<tr>
<td>SJVAPCD Threshold</td>
<td>10</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>NO</td>
</tr>
</tbody>
</table>


Totals in table may not appear to add exactly due to rounding in the computer model calculations.

In addition to the emission-based thresholds, the GAMAQI states that local carbon monoxide concentrations that exceed the state ambient air quality standards would be considered a significant air quality impact. Areas of vehicle congestion have the potential to create CO hotspots that exceed the state ambient air quality 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. The federal levels are less stringent than the state standards. Traffic congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO “hotspots”.

The SJVAB is in attainment of both the federal and state CO ambient air quality standards and has been for some time. Ambient concentrations of CO were last monitored in Tulare County in 2005 in the City of Visalia. The maximum concentrations of CO measures at the monitoring station was 3.8 parts per million (ppm) for a 1-hour
average and 2.6 ppm for an 8-hour average. These values are substantially less than the state and federal ambient air quality standards.

Based on URBEMIS2007 estimates, operation of the project is estimated to result in approximately 476 additional daily trips that would be associated with the existing and relocated population. Given that the project is located in a rural area with minimal traffic and that operation of the project would result in minimal daily trips, and that the existing CO concentrations are well under the thresholds, the project would not cause or contribute to the formation of CO hotspots.

Therefore, because construction and operation of the project would generate emissions less than the SJVAPCD significance thresholds and because the project would not cause or contribute to the formation of CO hotspots, project implementation would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and would have a less than significant impact with respect to this criterion.

c) According to the SJVAPCD’s GAMAQI, “Any proposed project that would individually have a significant air quality impact…would also be considered to have a significant cumulative air quality impact” (SJVAPCD 2002).

For cumulative ozone impacts, the GAMAQI recommends that lead agencies use the significance thresholds for ROG and NO\textsubscript{x}. For cumulative PM\textsubscript{10} impacts, the SJVAPCD recommends using the significance threshold for PM\textsubscript{10}. The GAMAQI recommends that lead agencies examine the potential exposure of nearby sensitive receptors to fugitive PM\textsubscript{10} emissions from project construction activities and those of any nearby projects that may be under construction at the same time as the project. If warranted, enhanced dust control measures listed in the GAMAQI should be used to reduce the cumulative PM\textsubscript{10} impact to less than significant.

Based on the above analysis, the project would not result in emissions that would exceed the established significance thresholds for ROG, NO\textsubscript{x}, or PM\textsubscript{10} during construction or operation. As listed in the GAMAQI, the project would employ mitigation measures during construction to limit off-site emissions of fugitive dust. The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Therefore, implementation of the project would have

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2 Because 11 of the expected 37 FTE staff at the SVAHL are already on site, the actual number of additional daily trips would likely be lower. However, the higher number was used in the air quality analysis in order to provide a more conservative assessment of potential project impacts.
a less-than-significant impact with respect to this criterion.

d) As stated previously, traffic due to the project would not cause or contribute to the formation of CO hotspots. Therefore, nearby sensitive receptors would not be exposed to substantial concentrations of CO.

The veterinary laboratory uses at the project site have the potential to release contaminants into the air. Potential contaminants include toxic air contaminants (TACs), which are defined by California Health and Safety Code, Section 39655(a) as:

“an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. Substances which have been identified by the United States Environmental Protection Agency as hazardous air pollutants (e.g., benzene, asbestos) shall be identified by the Board as toxic air contaminants.”

Sources of TACs could include laboratory chemicals, biogenic materials, and industrial-grade solvents, cleaners, and other evaporative compounds. The project also includes the installation of a cremator that would be used primarily to oxidize animal tissue, which could result in emissions of TACs. In addition, combustion of fossil fuels (e.g., gasoline, diesel, natural gas) from stationary equipment and motor vehicles results in emissions of TACs. The SJVAPCD has established significance thresholds for TACs. A project would be considered to have a less-than-significant impact if the project would not: (1) Exceed a 10 in one million probability of contracting cancer for the Maximally Exposed Individual (MEI) and (2) Exceed the ground-level concentrations of non-carcinogenic toxic air contaminants that would result in a Hazard Index greater than 1 for the MEI.

Construction of the project would result in on-site emissions of diesel particulate matter (DPM), which CARB has identified as a TAC. However, the construction emissions would only occur for a maximum of 18 months. The Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003) establishes a methodology for evaluating cancer risk. The method is based on long-term exposure to TACs (i.e., 70 years). The cancer risk from a short-term 18-month exposure to DPM emissions cannot be evaluated due to the inapplicability of the cancer risk factors. While short-term exposure to higher dose is not the same as long-term exposure to lower dose, exposure to DPM emissions during an 18-month period would not result in a carcinogenic risk that would exceed the significance thresholds of 10 in one million or a Hazard Index of 1.
Operation of the proposed laboratory land uses could result in releases of TACs. However, the level of emissions would be relatively small. The SJVAPCD requires facilities that generate substantial emissions of TACs obtain permits and that BACT be applied to reduce the potential emissions. As noted earlier, the facility would be required to comply with SJVAPCD Authority to Construct and Permit to Operate requirements. Many common TACs are also considered to be ROGs and particulate matter. As previously discussed, the project would result in emissions of ROG, NOx, and PM10 that are substantially less than the significance thresholds, which would imply even lower emissions of TACs. Since land buffers exist between the proposed project site and sensitive receptors, the project would not generate emissions of TACs that would lead to concentrations that exceed the significance thresholds identified above.

The CARB Air Quality and Land Use Handbook (CARB 2005) recommends that sensitive land uses be sited no less than 500 feet from freeways and heavily traveled roadways (100,000 vehicles per day for urban roads and 50,000 vehicles per day for rural roads) due to health risks from mobile source TACs. Since the project will not generate this level of motor vehicle traffic, mobile source TACs directly related to the project would not expose sensitive receptors to concentrations that would exceed the thresholds.

Based on the above analysis, construction and operation of the project would not exceed the SJVAPCD significance thresholds of a carcinogenic risk of 10 in one million or a Hazard Index of 1. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations and project implementation would be less than significant with respect to this criterion.

e) Construction of the project would require the use of diesel-fueled equipment, architectural coatings, and could use asphalt, all of which have an associated odor. However, these odors would be temporary and would not be pervasive enough to affect a substantial number of people or to be objectionable. Consequently, construction of the proposed project would not cause or be affected by odors.

Operation of the project would not result in substantial odorous emissions. While the project would handle animal tissue, it would be stored and disposed of in accordance with applicable rules and procedures for veterinary and laboratory facilities. The SJVAPCD has compiled a list of potential odor sources in the GAMAQI. The SJVAPCD recommends that these types of facilities be located a certain distance away from sensitive receptors in order to minimize odor impacts. Table 4, Screening Distance for Potential Odor Sources, lists potential sources of odors and recommended screening distances. The project site and adjacent VMTRC would not be located within the screening distances of these types of facilities. Therefore, relocation of the modular
housing would not cause sensitive receptors (residents of the modular housing) to be affected by odors on or off the site.

Table 4
SJVAPCD Screening Distance for Potential Odor Sources

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

Source: SJVAPCD 2002.

Consequently, because construction and operation of the project would not generate a significant source of odors and because the facility is not within the screening distances for potential odor sources described in Table 4 (above), the impacts under this significance criterion would be less than significant.

f) Construction and operation of the project would result in greenhouse gas (GHG) emissions. While no federal, state, or local agency has numerical significance thresholds for GHG emissions, the University of California has adopted a Policy for Sustainable Practices last updated in March 2007. The policy contains guidelines for green building design, clean energy standards, sustainable transportation practices, sustainable operations, recycling and waste management, and environmentally preferable purchasing practices.

The proposed project would comply with the applicable University policy guidelines. The building would be oriented on an east-west axis with the longer sides facing north.
and south, allowing for more efficient energy performance. Program areas with greater window area, such as administrative offices, would be located along the north face to reduce heat gains caused by direct sun exposure. Window openings would be limited on the south side of the building, which would be primarily laboratory space. Pervious pavement would be used in the parking lots and, where feasible, in the delivery zones of the facility. The proposed project would comply with the UC Policy on Sustainable Practices. The facility is also intended to meet LEED Silver criteria.

Laboratory buildings typically have high energy consumption relative to other uses. Energy-saving measures that may be included in the project design include day-lighting controls, sensor-operated fixtures, and solar-powered plumbing fixtures where possible. The site design includes landscaping to reduce heat gain, provide shading, and create effective storm water management.

While numerical thresholds have not been adopted for GHG emissions, CEQA documents are recommended to provide estimated emissions from all sources of GHGs based on the availability of emission factors and data. Table 5, Estimated Unmitigated Greenhouse Gas Emissions, lists the estimated GHG emissions from project construction and operation from sources for which reliable data are available. The emissions do not take into account reductions that would occur from LEED Silver certification and other “green” building measures. The conservatively estimated emissions are reported in units of metric tons of carbon dioxide equivalent (MTCO₂e) per year. Carbon dioxide equivalent incorporates impacts from other greenhouse gases, which are primarily nitrous oxide (N₂O) and methane (CH₄) for this project.

<table>
<thead>
<tr>
<th>GHG Emission Source</th>
<th>Emissions (Metric Tons CO₂e/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>272.13</td>
</tr>
<tr>
<td>2011</td>
<td>343.65</td>
</tr>
<tr>
<td>Total Construction</td>
<td>615.78</td>
</tr>
<tr>
<td>Annual</td>
<td></td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>620.55</td>
</tr>
<tr>
<td>Area Sources</td>
<td>160.68</td>
</tr>
<tr>
<td>GHG Emission Source</td>
<td>Emissions (Metric Tons CO₂e/year)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Stationary Sources</td>
<td>1,785.87</td>
</tr>
<tr>
<td>Electricity Demand</td>
<td>454.64</td>
</tr>
<tr>
<td>Solid Waste Generation</td>
<td>27.87</td>
</tr>
<tr>
<td>Total Annual</td>
<td>3,049.61</td>
</tr>
</tbody>
</table>


In August 2007 the legislature enacted SB 97 (Dutton), which directs the Governor’s Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of greenhouse gas emissions by July 1, 2009. The Resources Agency is directed to adopt the guidelines by January 1, 2010. OPR submitted the Proposed Draft CEQA Guideline Amendments for Greenhouse Gas Emissions to the Resources Agency on April 13, 2009. During development of the draft guidance, OPR had requested that CARB recommend a statewide method for setting thresholds of significance for greenhouse gas emissions, which a lead agency may adopt. On October 24, 2008, CARB staff released a draft and preliminary proposal for determining whether the emissions related to proposed new projects are significant impacts under CEQA. While the proposal is focused on helping lead agencies determine under which conditions a project may be found exempt from the preparation of an EIR, the proposal also provides a guide for establishing significance thresholds for projects for which EIRs would be prepared regardless of the project’s climate change impact. According to this proposal, the threshold for determining whether a project’s emissions are significant is not zero emissions, but must be a stringent performance-based threshold to meet the requirements of AB 32. If the project meets certain specific yet to be developed performance standards for several categories of emissions, including construction emissions, building energy use, water use, solid waste, and transportation and the project emits no more than a certain to be determined amount of metric tons of carbon equivalents per year, the project’s impact would not be significant. According to CARB, California Energy Commission Tier II building energy use standards are proposed to be used, which generally require a reduction in energy usage of 30 per cent beyond Title 24 building code requirements. CARB has also proposed a 7,000 metric ton carbon dioxide equivalent (MTCO2e) threshold for industrial projects, but has not yet proposed thresholds for residential and commercial projects. The annual threshold does not explicitly include emissions associated with construction- and transportation-related activities.
Based on the project’s consistency with the University of California Policy on Sustainable Practices and that the project would result in annual GHG emissions that are less than the proposed CARB threshold of 7,000 MTCO2e for industrial projects, project implementation would result in less than significant impacts to global climate change.

**Mitigation Measures**
Although the project would result in less than significant NOx, ROG, or PM10 impacts during relocation or demolition of the modular buildings and construction of the new facilities, the following mitigation measures are required to reduce PM10 emissions. As discussed previously, the project would be required to comply with SJVAPCD Authority to Construct and Permit to Operate requirements under Rule 2010 and BACT requirements under Rule 2201.

**MM AQ-1a:** All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

**MM AQ-1b:** All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.

**MM AQ-1c:** All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.

**MM AQ-1d:** With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.

**MM AQ-1e:** When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.

**MM AQ-1f:** All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)
**MM AQ-1g:** Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.

**MM AQ-1h:** Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

**MM AQ-1i:** Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

**Significance Determination after All Mitigation**

Implementation of Mitigation Measures AQ-1a through AQ-1i would reduce construction impacts to a less than significant level.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Project-level Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

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, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

   □       □       ☒       □

c) Have a substantial adverse effect on federally protected wetlands as defined by

   □       □       □       ☒
<table>
<thead>
<tr>
<th>Issues</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Project-level Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

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 applicable policies protecting biological resources?

□  □  □  □

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan?

□  □  □  □

Relevant Elements of Project
The majority of the site consists of open irrigated pasture vegetated with non-native grasses, and is largely disturbed. The existing area around the modular buildings is landscaped with shrubs and mature trees, including five California redwood (Sequoia sempervirens). The surrounding area is irrigated grazing land. The irrigated area is vegetated with non-native grasses and is grazed by cattle.
The proposed project would place new buildings, pavement, and infrastructure on a developed site. In addition, the project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. The project would include removal of several trees planted as part of existing site landscaping.

Discussion of Potential Project Impacts
a) The proposed project site and the adjacent VMTRC are in an area previously used for agriculture and have been disturbed by past agricultural uses, site development, and
ongoing site activities including mowing and discing to control weeds. Based on a review of the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Electronic Inventory, there are several special-status plant and animal species known to occur near the project site. Appendix B includes a listing of these species.

Special-Status Plants
The CNDDB and CNPS inventory review identified nine special-status plant species that are known to occur in the vicinity of the project site (see Appendix B). None is known to have been mapped on the project site. The project site has been heavily disturbed by past agricultural use and construction and by ongoing activities; such disturbance limits the suitability of habitat for the special-status plants of interest in the project vicinity. The conditions under which these species occur, as documented in the CNDDB and CNPS, do not exist on site. These species are thus considered to be unlikely to occur on the site. Therefore, the proposed project would not result in significant impacts to special-status plant species, including federally-listed endangered or threatened plant species.

Special-Status Wildlife Species
The California Department of Fish and Game (CDFG) identified the following several special-status wildlife species that occur near the project site: Tipton kangaroo rat, San Joaquin kit fox, blunt-nosed leopard lizard, black-shouldered kite, San Joaquin antelope squirrel, San Joaquin pocket mouse, burrowing owl, and Swainson’s hawk. Swainson’s hawk commonly forage in the site vicinity, but there is no suitable foraging habitat and no known nest near or on the project site.

A total of 19 special-status species of wildlife have been recorded in the vicinity of the project site (see Appendix B). In addition to special-status species, the vegetation on the site provides minimal foraging habitat for common wildlife species such as hawks and owls, as well as marginal forage and breeding habitat for small ground-dwelling reptiles and mammals. The project site’s value as raptor foraging habitat is limited by this marginal capacity to support the small animals that are common prey for raptors; however, it may provide some foraging opportunities for raptors, including Swainson’s hawk. A few non-special-status bird species may nest in the trees on site.

The three special-status species considered to have a moderate potential to occur on site or in the immediate project area are discussed below.

Tipton kangaroo rat (Dipodomys nitratoides nitratoides), Federally Endangered, California Endangered. Tipton kangaroo rats are limited to arid-land plant
communities occupying the Valley floor of the Tulare Basin in level or nearly level terrain that is not subject to flooding. They occupy alluvial fan and floodplain soils ranging from fine sands to clay-sized particles with high salinity. Tipton kangaroo rats occur in terrace grasslands with sparse-to-moderate shrub cover, but can also occur in such grasslands with no shrub cover. Burrow systems are typically located in open areas. Burrows of Tipton kangaroo rats are commonly located in slightly elevated mounds, the berms of roads (where placed above ground level), canal embankments, railroad beds, and bases of shrubs and fences where windblown soils accumulate above the level of surrounding terrain. The project site provides little or no suitable habitat under existing conditions because of ongoing human activity and site disturbance. The nearest mapped location of Tipton kangaroo rat is approximately 8 miles to the southeast. Based on these factors, potential impacts to kangaroo rat are considered less than significant.

**San Joaquin kit fox** (*Vulpes macrotis mutica*), Federally Endangered, California Threatened. The San Joaquin kit fox typically inhabits annual grasslands or grassy open stages with scattered shrubby vegetation. It needs loose-textured sandy soils for burrowing, and a suitable prey base. This species has been reported from many locations within the vicinity of the project site, of which the nearest was located approximately 2 miles southeast. According to the study titled Foxes in Farmland, Recovery of the Endangered San Joaquin Kit Fox on Private Lands in California, the San Joaquin kit fox is known to forage in croplands, but does not appear able to permanently occupy such lands. Due to high disturbance levels at the site and vicinity from development, agricultural land use, and human disturbance, it is unlikely that suitable denning habitat occurs on the site. Given the fact that this species would likely utilize the project site and vicinity only for foraging, direct impacts to individuals of this species have a low potential to occur. However, given historic occurrences in the project area, there is some potential that the loss of or harm to kit fox could result if kit foxes seek shelter within artificial structures such as stored pipes and exposed trenches during project construction. Therefore, impacts to kit fox would be potentially significant. **Mitigation Measure BIO-1** addresses potential impacts to kit fox.

**Swainson’s hawk** (*Buteo swainsoni*), California Threatened. Swainson’s hawks migrate annually from wintering areas as far as South America to breeding locations in northwestern Canada, the western United States, and Mexico. In California, the breeding distribution includes the Central Valley, the Klamath Basin, the northeastern plateau, Lassen County, and the Mojave Desert, and the California population winters in Mexico. Swainson’s hawks nest in the Central Valley in large trees in riparian corridors, oak savannah, and juniper-sage flats in open tree stands. This species is also typically found nesting adjacent to agricultural fields. Swainson’s hawks breed from
late March to late August, with peak activity from late May through July. In the Central Valley, Swainson’s hawks forage in large, open agricultural habitats, including alfalfa and hay fields. Their diet consists of small mammals, invertebrates, amphibians, reptiles, birds and, less frequently, fish. The SVAHL project site is within Swainson’s hawk’s breeding range and provides limited suitable foraging habitat for the species. The CNDDDB lists 12 extant occurrences for this species within the project region. Several nest sites are reported to occur within 5 to 10 miles of the project site (California Natural Diversity Database 2008).

The project site is highly disturbed open land that is not used for agricultural crops. The land surface consists of (1) small corrals for research animals, (2) bare, hard-packed earth, or (3) grassy areas that are routinely mowed and disked for weed control and fire prevention. Therefore, it is not considered suitable Swainson’s hawk foraging habitat. The potential project impacts to Swainson’s hawk are considered less than significant.

The remaining special-status wildlife species were considered to have low or no potential to occur in the project site, due to lack of suitable habitat.

b) The project site consists of developed land, landscaping, and open land covered with non-native grasses. There is no riparian habitat or other sensitive natural community on site or adjacent to the site. Impacts related to this criterion would be less than significant.

c) There are no wetlands on site. The project would have no impact with respect to this criterion.

d) The project site is not identified as an area where movement of migratory fish or wildlife species would occur. The site does not include or lie adjacent to waterways, riparian habitat, or wildland areas that are used as migratory corridors or provide native wildlife nursery sites, and the project would not create any physical barrier to migratory corridors. Impacts related to this criterion would be less than significant.

e) The proposed project would include removal of several mature trees that could provide nesting habitat for native bird species. Active nests of native bird species are protected by the Migratory Bird Treaty Act (16 U.S.C. 704) and the California Fish and Game Code (Section 3503). Disturbance of such nests during project construction could cause potentially significant impacts. Mitigation Measure BIO-3 addresses potential impacts to nesting birds and would reduce any potential impact to a less-than-significant level.
f) There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan for the project site. There would be no impact with respect to this criterion.

Mitigation Measures

MM BIO-1: The following actions shall be taken to avoid potential harm to San Joaquin kit fox during construction:

- Grading and construction activities, including demolition, after dusk shall be prohibited unless authorized by the CDFG.
- Prior to commencement of any site-disturbing and/or construction activities, all personnel associated with the project shall attend a worker education training program, conducted by a qualified biologist, to avoid or reduce impacts on sensitive biological resources (e.g., San Joaquin kit fox). At a minimum, as the program relates to the kit fox, the training shall include the kit fox’s life history, all measures specified by the qualified biological monitor for the project, and instructions to immediately cease construction activities and contact the USFWS if a kit fox is observed.
- A kit fox fact sheet shall be developed and distributed to all contractors, employers and other personnel involved with the construction of the project.
- All construction personnel shall be instructed on obeying speed limits of 25 mph (or lower) for all construction traffic to minimize the probability of road mortality of the San Joaquin kit fox.
- To prevent entrapment of the San Joaquin kit fox, all excavations, steep-walled holes, or trenches in excess of two feet in depth shall be covered at the close of the work day or provided with one or more escape ramps constructed of earth fill or wooden planks. The trenches shall be inspected for kit fox prior to covering, each morning prior to the onset of field activities, and prior to filling.
- Any pipes, culverts, or similar structures with a diameter of four inches or greater stored overnight at the project site shall be thoroughly inspected for trapped San Joaquin kit foxes before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. If during the construction phase a kit fox is discovered inside a pipe, that section of pipe will not be moved, or if necessary, be moved only once to remove it from the path of activity, until the kit fox has escaped.
- All food-related trash items such as wrappers, cans, bottles, and food scraps generated shall be disposed of in closed containers only and regularly removed
from the site. Food items may attract San Joaquin kit foxes onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

**MM BIO-2:** If activities associated with construction grading, or relocation or demolition of modular buildings are planned during the bird nesting/breeding season, generally January through March for early nesting birds (e.g., Cooper’s hawks or hummingbirds) and from mid-March through September for most bird species (including Swainson’s hawk), the University shall have a qualified biologist conduct surveys for active nests. Pre-construction nesting bird surveys must be conducted weekly, within 30 days prior to initiation of ground-disturbing activities to determine the presence/absence of active nests. The surveys shall continue on a weekly basis with the last survey being conducted no more than three days before the start of clearance/construction work. Surveys shall include examination of trees, shrubs, and the ground, within grasslands, for nesting birds, as several bird species known to the area are shrub or ground nesters, including mourning doves. Active bird nests that are found within the construction zone shall be protected by a buffer of 300 feet for most species or 500 feet for raptors, unless the buffer distance is modified by the CDFG, demarcated by construction fencing or other means that will allow avoidance of the nests until young birds have fledged, and no continued use of the nest is observed. If ground-disturbing activities are delayed, additional pre-construction surveys shall be conducted so that no more than three days will have elapsed between the survey and ground-disturbing activities.

**Significance Determination after All Mitigation**
Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce the potentially significant impacts to a less-than-significant level.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Project-level Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

5. **CULTURAL RESOURCES -- Would the project:**

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?

[ ☐ ] [ ☒ ] [ ☐ ] [ ☐ ] [ ☐ ]

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?

[ ☐ ] [ ☐ ] [ ☒ ] [ ☐ ] [ ☐ ]

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

[ ☐ ] [ ☒ ] [ ☐ ] [ ☐ ] [ ☐ ]

Relevant Elements of Project
The proposed project would include relocation of existing modular buildings, construction of a new building and water storage tank, site grading, excavation of a basement level, and installation of new utility infrastructure, including a septic system leach field.

Discussion of Potential Project Impacts
a) The existing buildings on the proposed project site are modular structures of recent origin and do not meet the definition of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines. There are no other features on the site that could be considered historic resources, and there would be no impact with respect to this issue.

b) A records search for the project site from California Historical Resources Information System (CHRIS) was conducted through the Southern San Joaquin Valley Information Center at California State University, Bakersfield. The search found no historic resources or archaeological resources within a one-half mile radius of the proposed project area. The project region was inhabited in the past by Native American peoples and lies within the ethnographic territory of the Yokuts tribal group. Numerous archaeological sites associated with the presence of these cultures have been found throughout Tulare County. The site, including the proposed modular building relocation site, has been disturbed by past agricultural activities and development and is not located in an area with features associated with past occupation by Native
Americans, such as watercourses and oak tree groves. However, there remains a low possibility that previously undocumented cultural resources may be encountered during construction activities. Disturbance or destruction of such resources would be a potentially significant impact but can be reduced to a less-than-significant level through implementation of **Mitigation Measure CUL-1**, described below.

c) There are no known paleontological resources or geologic features on site. The project site consists entirely of lowland alluvial deposits. Such materials are considered to have a very low likelihood of containing significant geologic or paleontological features. Impacts related to this issue would be less than significant.

d) See the response to 4(b) above. Because the site is not located in an area with identified archaeological resources, it is unlikely that any human remains are present in the areas that would be affected by excavation. However, should such remains be discovered during project construction, impacts would be potentially significant. Implementation of **Mitigation Measures CUL-1** and **CUL-2** will reduce this potential impact to a less-than-significant level.

**Mitigation Measures**

**MM CUL-1:** Prior to the start of any ground-disturbing activities, contractor crews shall be required to attend an informal training session, regarding how to recognize archaeological sites and artifacts. Contractors shall be notified that they are required to watch for such sites and artifacts and to notify the campus if any are found. If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The campus shall contact a qualified archaeologist to evaluate any uncovered materials and to provide direction for handling of the find, and shall implement a plan for survey, subsurface investigation as needed at the direction of the archaeologist to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. A written report of the results of investigations will be prepared by a qualified archaeologist and filed with the appropriate Information Center of the California Historical Resources Information System.

**MM CUL-2:** In the event of a discovery on site of human bone, suspected human bone, or a burial, all excavation in the vicinity will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the campus will notify the County Coroner of the find before additional disturbance occurs. Consistent with California Health and Safety
Code § 7050.5(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures, the campus will ensure that the remains and vicinity of the find are protected against further disturbance. If it is determined that the find is of Native American origin, the campus will comply with the provisions of PRC § 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).

If human remains cannot be left in place, the campus shall ensure that the qualified archaeologist and the MLD are provided opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out prior to reinterment. The campus shall provide results of all such studies to the local Native American community, and shall provide an opportunity of local Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects are repatriated to the appropriate local tribal group if requested.

Significance Determination after All Mitigation
Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce potentially significant impacts to a less-than-significant level.
6. GEOLOGY AND 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 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 systems where sewers are not available for the disposal of waste water?

   □ ☒ □ ☐

Relevant Elements of Project
The project site is located in the Central Valley within California’s Great Valley geomorphic province. The project site is topographically flat. Local soils generally contain a moderate amount of silt and clay, and as a result, are moderately to slowly permeable and have slow runoff rates, minimal erosion hazards, and moderate shrink-swell potential (the potential for soil volume to change with a loss or gain in moisture).

The proposed project would include the construction of new buildings, utilities, and infrastructure, and would increase the typical daily population of the site. In addition, the project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. Site occupants and structures could be at risk from seismic-related hazards.

Discussion of Potential Project Impacts
a)(i) The project site is not located within an Alquist-Priolo Fault Zone as defined in the Alquist-Priolo Earthquake Fault Zoning Act, which is designed to prohibit the construction of structures for human occupancy across active faults. The project would have no impact related to this criterion.

a)(ii) The project site is located in a seismically active area that could experience ground shaking. According to the California Geological Survey’s Probabilistic Seismic Hazard Assessment for the State of California, the peak ground acceleration with a 10 percent probability of being exceeded in 50 years is 0.1 to 0.2g in the site vicinity (CDOC 1996).
By comparison, in most parts of the San Francisco Bay Area, the peak ground acceleration is 0.5g or greater. Likely effects of ground shaking during a probable maximum intensity earthquake for the area could include structural damage to stucco, masonry walls, and chimneys, which could expose people to risks associated with falling objects and potential building collapse.

The University minimizes hazards associated with damage or destruction to buildings and other structures by reviewing and approving all draft building plans for compliance with the California Building Code (CBC), which includes specific structural seismic safety provisions. The campus also adheres to the University of California Seismic Safety Policy, which requires anchorage for seismic resistance of nonstructural building elements such as furnishings, fixtures, material storage facilities, and utilities that could create a hazard if dislodged during an earthquake. Campus EH&S provides guidance for preparing department-level Illness and Injury Prevention Plans that emphasize methods for minimizing seismic hazards in laboratories, for example, by properly securing chemical containers and gas cylinders. The proposed project would have a Safety Coordinator with the responsibility for developing and maintaining a departmental emergency response plan. The departmental emergency response plans must be submitted to the Emergency Preparedness Policy Group for annual review to assure consistency with the campus Emergency Operations Plan, which includes seismic safety and building evacuation procedures. The emergency procedures incorporated into the departmental emergency response plans further reduce the hazards from seismic shaking by preparing faculty, staff, and students for emergencies. Therefore, the project-level impact associated with risks due to seismic ground shaking would be less than significant.

a)(iii) 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. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits (Tulare County 2007). Projected ground acceleration in the project area is less than 0.3g. In addition, soil types in the project area are not conducive to liquefaction because they are either too coarse or too high in clay content. The impact related to liquefaction hazard at the project site is therefore considered less than significant.
a)(iv) The project site and the surrounding area are characterized by flat topography and therefore would not be subject to landslides. No impact would occur.

b) Site soils consist of moderately well-drained loam and sandy loam of the Crosscreek-Kai association. These soils are considered to have a low potential for erosion. Because the project would disturb more than one acre, coverage under the state NPDES General Permit for Discharges of Storm Water Associated with Construction Activity would be required prior to construction and the campus would be required to file a notice of intent (NOI) with the State Water Resources Control Board. The campus or the project’s civil engineer would be required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) to prevent erosion and sedimentation of runoff water and to keep construction pollutants from coming into contact with storm water. Implementation of the required SWPPP and BMPs would reduce potential erosion impacts to a less than significant level.

c) See the discussion under 6(a)(ii) through (iv) above. Impacts related to unstable soils or geologic units would be less than significant.

d) Expansive soils contain mixed-layer clay minerals that increase and decrease in volume upon wetting and drying, respectively. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during construction. Soils in the project vicinity generally have moderate expansion potential. However, proper fill selection, moisture control, and compaction during construction can prevent these soils from causing significant damage. Properly designed foundations (i.e., those designed in accordance with the California Building Code requirements for expansive soils) can withstand the additional force created by the expanding and contracting soil. The proposed project would be subject to California Building Code requirements. Relocation of the modular buildings would also be subject to these Code requirements, including the requirements for new utility connections. Therefore, impacts from expansive soils are expected to be less than significant.

According to the Tulare County Soil Survey, soils types found on the site have limited suitability for septic systems because of their low permeability and the presence of a hard pan layer at relatively shallow depths. Water moves slowly in such soils, increasing the potential that absorption fields will fail. However, the limitations can be overcome by increasing the size of the absorption field or by using coarser backfill material. Furthermore, the Soil Survey data available for the site extends only to a depth of 6 feet; placing the leach lines in deeper, more permeable strata may also be possible.
Currently, when septic tank disposal systems are installed at University facilities, the Office of Environmental Health and Safety reviews percolation tests or soil textures from test holes. Septic systems designs would typically be designed to comply with the Tulare County zoning ordinance for on-site sewage disposal systems and the Uniform Plumbing Code. Installation of a septic system in soils that would not support proper operation would be a potentially significant impact, but implementation of **Mitigation Measure GEO-1** would ensure the impact remains less than significant.

**Mitigation Measures**

**MM GEO-1:** A site-specific percolation testing or test borings shall be performed as part of the design-level site analysis process to determine the final size and design of the proposed septic leach field. The project shall follow guidelines for septic system design provided in the Uniform Plumbing Code.

**Significance Determination after All Mitigation**

Less than significant.

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7. **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?

□ □ □ □
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<td>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
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<td>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?</td>
<td>☐</td>
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<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?</td>
<td>☐</td>
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<tr>
<td>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?</td>
<td>☐</td>
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<td>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
<td>☐</td>
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<tr>
<td>h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</td>
<td>☐</td>
<td>☐</td>
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Relevant Elements of Project
A variety of hazardous materials would be used at the proposed SVAHL facility during the course of construction, building relocation, and daily operations. Hazardous chemicals could include: chemical solvents, reagents, corrosives, and aromatic hydrocarbons that are used in laboratory analysis; compressed gases; pesticides, fungicides, and herbicides used for landscape maintenance; oils and lubricants, antifreeze, cleaning solvents, and corrosives used for equipment maintenance; and paints, paint thinners, and freon refrigerants used in building and equipment maintenance. In addition, biohazardous materials and animals would be used in testing activities. No radioactive materials would be used. The use of hazardous materials on site would generate hazardous byproducts that must eventually be handled and disposed of as hazardous wastes.

Generation, transportation, and disposal of hazardous wastes are regulated by various agencies. The lead federal regulatory agency is the Environmental Protection Agency. The State Department of Toxic Substances Control (DTSC) has primary state regulatory responsibility but can delegate enforcement authority to local jurisdictions that enter into agreements with the state agency, as it has done with the Tulare County Department of Environmental Health Services (TCDEHS) under the Certified Unified Program Agency (CUPA) program.

The UC Davis campus Office of Environmental Health and Safety (EH&S) coordinates most local, state, and federal regulatory compliance functions related to health, safety, and environmental issues for UC Davis operations. EH&S performs safety education and training, regulatory interpretation and applicability, approval of potentially hazardous procedures, resolution of safety problems, surveillance, and monitoring. In addition, EH&S provides guidance for several campus safety programs, including: the Chemical Inventory System, which tracks inventory and use of hazardous materials at campus facilities; development of laboratory-specific Chemical Hygiene Plans; the Radiation and X-Ray Safety Programs; and the Biological Safety Administrative Advisory Committee. These programs and guidance are applicable to current site operations and would be applicable to future site operations at the proposed SVAHL facility. EH&S is also a working partner in such campus administrative advisory groups as the Chemical Safety Committee, the Animal Use and Care Committee, and the Biological Safety Committee. External administrative and benchmarking reviews of the EH&S programs are conducted periodically to identify means of further improving the programs. Benchmarking performed by the Campus Safety, Health, and Environmental Management Association (CSHEMA) in 2000 honored the UC Davis EH&S with a “Unique or Innovative Program Award” for its daily on-call program.
Laboratory Safety Features: Biosafety ratings range from Level 1 to Level 4 and indicate the varying degrees of building containment and laboratory precautions that must be followed while conducting research with particular organisms. The proposed project would provide research space to meet current BSL-2 standards set by NIH/CDC in the current edition of the publication Biosafety in Microbiological and Biomedical Laboratories (BMBL). This publication defines four biosafety levels that apply to biohazardous materials operations, depending on the risk posed by the organism used. Although these biosafety levels were originally intended to protect human health, the CDC Guidelines are widely used to prevent release of animal pathogens from laboratories. BSL-2 is appropriate for use with biohazardous materials that are considered to be of ordinary (not special) potential hazard and may produce varying degrees of disease through accidental autoinoculation, ingestion, and skin or mucous membrane exposure. For example, certain hospital diagnostic labs are considered BSL-2 facilities.

Discussion of Potential Project Impacts
a) Operations at the proposed SVAHL would increase the routine transport, use, and disposal of hazardous materials at the project site, but would not create a significant hazard to the public or the environment through such use or disposal. The proposed SVAHL facility would implement the University’s safety plans, programs, practices, and procedures related to the use, storage, and disposal of hazardous chemical materials, including the Business Plan, Hazardous Materials Communication Program, Chemical Inventory System, Injury and Illness Prevention Program, Chemical Hygiene Plans, Medical Surveillance Program, Chemical Safety Advisory Committee, Chemical Carcinogen Safety Program, and EH&S audits and safety training. Illness and Injury Prevention Plans for UC Davis facilities also include an element specifically focused on minimizing skin penetration incidents and other exposure to biohazardous materials.

The facility would be required to comply with all hazardous materials standards for UC Davis operations. To minimize exposure to chemicals in the air, researchers and other workers would take standard procedural precautions, such as working under fume hoods, when using chemicals likely to present exposure hazards. Fume hoods and other engineering controls would be required to meet Cal-OSHA requirements and fume hood ventilation rates are checked annually by Facilities Services. Proper use of the fume hoods and other engineering controls would keep indoor laboratory air toxics concentrations below the suggested guidelines of the American Conference of Governmental Industrial Hygienist Threshold Limit Values and the legal limits of the OSHA Permissible Exposure Levels.
To prevent exposure through skin contact, EH&S policies and procedures require that protective clothing, such as laboratory coats, gloves, and safety glasses, be worn while handling hazardous materials and wastes. Proper washing after handling chemicals is also required. Also, in accordance with state laws and University policy, eating, drinking, applying cosmetics, and chewing gum or tobacco are not allowed in laboratories using carcinogenic, or biohazardous materials; these restrictions are imposed to prevent the potential ingestion of chemicals.

UC Davis has prepared guidelines for proper disposal of hazardous wastes based on regulations established by the U.S. Environmental Protection Agency and the DTSC. To facilitate safe management, hazardous wastes are subcategorized into groups with similar or closely related properties. Before waste can be removed for disposal, it must be packaged and labeled properly, which includes placing it in appropriate sealed containers, segregating incompatible materials, and identifying all components with approximate concentrations.

The proposed project would include construction of a new natural-gas-powered package cremator capable of handling 1,250 pounds per hour for disposal of animal parts and tissue samples. In addition, operation of the existing cremator would continue under the proposed project, and the intensity of its use would not change under the proposed project. Such wastes would routinely be incinerated as they are produced. The resulting residual ash would not be considered hazardous waste and would be removed as part of regular waste collection. Biohazardous wastes (contaminated laboratory clothing and materials) would be autoclaved or otherwise decontaminated before being removed for disposal as non-hazardous waste. All other hazardous wastes, flammable wastes (mostly solvents), corrosives (acids and bases), oils, poisons, heavy metals, and oxidizers would be shipped off site for recycling, treatment, or disposal.

The SVAHL building would include laboratory space designed to federal and University of California BSL-2 safety standards, with office areas isolated from laboratory and animal/sample holding areas and decontamination facilities. Laboratory areas would be organized based on intended functions and assumed hazard level, with individual spaces located within a layout that would provide multiple layers of safety measures to prevent cross-contamination or accidental exposure and to limit access to authorized personnel only. Internal security features such as individual door locks and keypad access would be used to limit access to laboratory areas.

Laboratory areas would be separated from areas open to the public and from other laboratory personnel who do not work within a particular zone by controlled access zones and decontamination areas. All procedures in which infectious aerosols or spills
could be created would be conducted in biosafety cabinets or other forms of primary containment. All waste from the laboratories would be autoclaved or otherwise decontaminated prior to leaving the facility.

Each lab would have single-pass (non-recirculated) air, with negative pressurization relative to the surrounding spaces (i.e., air would flow into the lab space from outside and not out of the lab into other building spaces). Consistent with federal guidelines, all windows would be sealed, breakage resistant, and inoperable in order to preserve the air flow balance. The layout of the laboratories would allow potential hazards to be divided into zones based on degree of hazard, with directional air flow moving from less hazardous to more hazardous zones within a space. For example, desk areas for computer use where supply air would enter the space would be considered a less hazardous zone, while a chemical fume hood where the air would be exhausted from the space would be considered more hazardous. Some laboratory areas would also include HEPA-filtered room exhaust and shower-out capabilities in addition to baseline BSL-2 guidelines.

Compliance with hazardous waste storage and transportation regulations, and continuation of the programs and controls currently in place to manage hazardous wastes and to detect inadvertent releases of hazardous materials, would minimize the hazards to workers, the public, and the environment. Treatment, storage, and disposal facilities are currently available with the capacity to accept and safely manage the facility’s chemical waste.

Implementation of these programs would reduce potential impacts related to hazardous materials use and hazardous waste generation to a less than significant level.

b) See the discussion under 7(a) above. With adherence to hazardous materials and waste transport regulations and UC Davis policies, impacts related to potential upset and accident would be less than significant.

c) The project site is not within one-quarter mile of a school, and there would be no impacts with regard to this criterion.

d) The proposed project site is not included on a list of hazardous materials sites subject to corrective action compiled pursuant to Government Code Section 65962.5. A government database review compiled by EDR, Inc. showed that the VMRTC site is listed as storing small quantities of hazardous materials and generating small quantities of hazardous wastes. No other sites with known or potential contamination, hazardous materials use, hazardous waste generation, or other hazardous-materials-related
conditions were identified within one mile. There are no known site contamination conditions that would create a significant hazard to the public or the environment. There would be no impact with respect to this issue.

e) The project site is located less than 2 miles south of Mefford Field (the Tulare Municipal Airport), a general aviation airport. The proposed project would not place persons within an airport hazard zone, nor would it include multistory buildings, antennae, or other structures or lighting that could interfere with aviation safety. The impact would be less than significant.

f) The project site is not located in the vicinity of a private airstrip, and there would be no impact with regard to this criterion.

g) The proposed project would maintain similar, although somewhat intensified, uses on the project site. It would not create physical barriers to site access or access to other areas. The proposed site layout includes a fire lane and new paving of nearby roadways that would improve site access for emergency vehicles and site egress in the event of an evacuation. There would be no adverse impact with regard to this criterion.

h) The project site is located in an area used primarily for agriculture that consists mainly of irrigated and non-irrigated crops production fields and pasturage. It is not located in a wildland area, and there would be no hazards associated with wildland fires. There would be no impact with regard to this criterion.

Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.

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8. 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 of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

□ □ □ ☒

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

□ □ ☒ □

f) Otherwise substantially degrade water quality?

□ □ ☒ □

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate

□ □ □ ☒
Map or other flood hazard delineation map?

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

  □  □  □  ☒

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

  □  □  □  ☒

j) Inundation by seiche, tsunami, or mudflow?

  □  □  □  ☒

Relevant Elements of Project

The proposed project would develop an approximately 5-acre site with buildings, hardscape and landscaping. A storm water retention basin, sized to accommodate the 100-year, 24-hour duration storm event, would be constructed in the southwest corner of the project site. All site drainage from pavements, roofs, and other impervious surfaces would be routed to this basin. In addition, the project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC.

The proposed project includes a new well and septic system to meet all on-site needs for water supply and sewage disposal. In addition, this document describes the possibility that the City of Tulare may evaluate and construct potential future water and wastewater extensions that would bring these municipal services to the road right-of-way immediately west of the project site. If the City of Tulare proceeds with these utility extensions, the VMTRC and SVAHL facilities may elect to connect to one or both of these utilities and this Initial Study includes evaluation of the potential environmental effects of these alternative service connections. This document does not evaluate the physical impacts of system extensions and capacity considerations that the City of Tulare would consider when contemplating the infrastructure expansion projects. Such conditions would need to be evaluated by the City in a future environmental document. However, for informational purposes, this subsection includes a discussion of the availability of City water supply.
Discussion of Potential Project Impacts

a) Development of the proposed project would increase impervious surfaces on the site, thereby increasing runoff and potentially increasing loads of pollutants in storm water, which could affect water quality. However, as noted above all stormwater runoff would be retained for infiltration on site, and there would be no discharge to surface waters. As a result, there would be no impact to surface waters from project site runoff. Due to the slow rate of permeability of the soil underlying the site, it is not anticipated that urban contaminants from site runoff would significantly infiltrate into groundwater and affect its quality. Water would have a long residence time in the soil before percolating into the groundwater. This would allow for potential contaminants to be filtered out before they could adversely affect groundwater quality.

During construction, there is a potential for erosion, sedimentation, and discharge of polluted runoff from the site. However, as described in Geology and Soils, response 5(b), above, the construction contractor would be required to implement an SWPPP including erosion control measures and measures to avoid the entrainment of pollutants in site runoff. Implementation of the BMPS included in the SWPPP would reduce potential impacts to water quality to a less than significant level.

A new septic tank and leach field are planned as part of the proposed project. The existing septic tank and leach field, would continue to serve the VMTRC, including the relocated modular housing. All wastewater flows from the SVAHL would be directed to this system. The septic system would be required to conform to septic systems designs that comply with the Tulare County zoning ordinance for on-site sewage disposal systems and the Uniform Plumbing Code. Implementation of Mitigation Measure GEO-1 would reduce any related impacts to a less than significant level.

Should the project be connected to a future extension of the City of Tulare municipal sewer system, it would be required to comply with the requirements of the City’s wastewater treatment plant for industrial wastewater flows. A proposal to connect to the City’s wastewater treatment plant would be subject to additional CEQA review and approval by the City.

b) The existing uses on site use approximately 25,000 gallons of water per day (gpd) pumped from the existing wells on and near the site. The proposed SVAHL is projected to use 35,000 to 50,000 gpd (approximately 39 to 56 acre-feet per year). The proposed project’s water supply for new uses on the site would be obtained from a new well to be installed as part of the project. The existing wells can produce adequate supplies from the shallow aquifer to serve the project; however, the water does not meet drinking
water standards. In order to address this problem, a new well would be completed in the deeper aquifer (approximately 1,000 feet) to supply potable water. The VMTRC and the proposed SVAHL facility would use water from this new well for drinking water, process and laboratory operations, fire suppression, and landscaping. Completion of the well into the deeper aquifer would not affect the existing nearby wells, which draw from the shallow aquifer (less than 300 feet). The existing on-site well would continue to be used for irrigation on the undeveloped portion of the project site.

The project site is located within the Kaweah Subbasin of the larger San Joaquin Valley Groundwater Basin. According to the 2005 City of Tulare Draft Urban Water Management Plan (UWMP), the subbasin has a storage capacity of 15,400,000 acre-feet to a depth of 300 feet, and 107,000,000 acre-feet to the base of the fresh-water aquifer. The groundwater basin is un adjudicated and there are no legal constraints on groundwater pumping within the basin. The Kaweah subbasin is currently in a state of overdraft (City of Tulare 2007). However, the City of Tulare and the Tulare Irrigation District have programs in place to increase groundwater recharge and reduce the overdraft condition; these include expansion of recharge basins, substitution of surface water supplies for groundwater when possible, and distribution of surplus surface water to recharge facilities during wet years. The UWMP projects that these programs will eliminate the overdraft condition by the end of the planning period in 2030.

The projected water use of the proposed new well would be negligible compared to the total capacity of the subbasin. In addition, the stormwater retention basin and the new septic tank and leach field planned as part of the proposed project would contribute to recharge of the shallow groundwater aquifer through infiltration, and the project also includes the use of permeable paving in the parking area to increase stormwater infiltration. Infiltration could also contribute to long-term recharge of the deep aquifer through water transfer between hydrologic units. Therefore, based on these factors, the project is not expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge, and impacts related to on-site groundwater use and recharge would be less than significant.

Alternatively, the project may be connected to a future extension of the City of Tulare municipal water supply. The City’s water supply comes from a series of deep wells that are distributed throughout the community and pump directly into an interconnected water system to provide evenly balanced water supply. Should this option be implemented, the proposed project would be included in the City’s water demand planning under its UWMP. The City obtains its water from San Joaquin Valley Groundwater Basin and more specifically, Kaweah Subbasin. The City has implemented overdraft mitigation measures that require new development fees to be
assessed and used to purchase surface water, create artificial recharge facilities, or create storm drainage basins that will retain stormwater for groundwater recharge. User fees are also collected through monthly water bills and used to purchase surface water, when available, to fill recharge basins. As noted above, the groundwater basin from which the City pumps its water has not been adjudicated, and the State is not authorized by the Water Code to manage groundwater. California landowners have a correlative right to extract groundwater for beneficial use. As a municipal water supplier, the City acts on behalf of the overlying landowners, who rescind their water rights to the City when the landowner develops the land. These provisions would apply to the proposed project should it be supplied with City water.

Although the subbasin from which the City obtains its water is considered to be in overdraft, the Tulare 2007 UWMP reliability analysis determined that, based on the projected buildout population, the City’s water supply is projected to adequately support projected usage for all municipal users projected through the year 2030. Tulare Public Works Department staff confirmed that the projected water demand of the proposed SVAHL would be very small compared to total demand, and that the City would have ample capacity to supply water to the project. Based on this information, City water supply projections, and the size of the proposed project, impacts to groundwater supplies would be less than significant under this option. As described above, connection to City water supplies would be subject to additional CEQA review and approval by the City.

c) The proposed project would not substantially alter the drainage pattern of the site and surroundings. The proposed project would include a stormwater retention basin sized to hold all site runoff from the 100-year, 240-hour design storm. All site runoff would be directed into the on-site drainage system and then into this basin. The project is not located near a stream or river and would have no effect on such resources. There would be no impacts with regard to this criterion.

d) As described above, the proposed project would not substantially alter the drainage pattern of the site and surroundings. The site is not within the mapped 100-year flood zone, and all site runoff would be retained and infiltrated on site. The modular building relocation site and the VMTRC parcel are also not within the flood zone. The project would not contribute to flooding, and there would be no impacts with regard to this criterion.

e) The storm water drainage and retention system would remove potential pollutants through gravity settling of particulates and soil filtration. During construction, the construction contractor would be required to implement a SWPPP, including erosion
control measures (see the discussion under Geology and Soils, response 5(b), above). With the implementation of these design features and control measures, impacts related to storm water runoff would be less than significant.

f) See responses 8(a) through (d) above. No other potential project impacts to water quality were identified.

g) The proposed project site is not within the mapped 100-year flood zone, and would not add housing. There would be no impacts with regard to this criterion.

h) The proposed project site is not within the mapped 100-year flood zone, and would not place structures within an area at risk of flood flows. There would be no impacts with regard to this criterion.

i) See response 8(h) above. The project site is not within an area protected by levees and is not in an area that could be affected by dam failure. There would be no impacts with regard to this criterion.

j) Seiches are waves in an enclosed body of water. The site is not near any large enclosed bodies of water. The site is in an inland area and is essentially flat. It would therefore not be subject to tsunami or mudflow, and no impacts would occur.

**Mitigation Measures**

Implement **Mitigation Measure GEO-1**.

**Significance Determination after All Mitigation**

Less than significant.
9. 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 LRDP, 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? □ □ □ □ ☑

d) Create other land use impacts? □ □ □ □ ☑

Relevant Elements of Project
The proposed project would develop new laboratory uses and associated infrastructure on a developed site adjacent to agricultural and other agriculture-related institutional and commercial uses. In addition, the project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC.

Discussion of Potential Project Impacts
a) The proposed project site is located in a rural area with scattered residences and commercial development, much of which is related to the local agricultural industry. There is no established community surrounding or adjacent to the site, and the project thus would not divide an established community. There would be no impacts with regard to this criterion.
b) The proposed SVAHL facility would be operated by the University of California and conducting work within the University’s mission on land that is owned by The Regents of the University of California. As such, the project is generally exempted by state constitution from compliance with local land use regulations, including general plans and zoning. However, the University generally seeks to cooperate with local jurisdictions to reduce any physical consequences of potential land use conflicts to the extent feasible. The project site is designated for agricultural uses in the County General Plan, which allows for some residential development but does not allow development of uses that conflict with surrounding or existing agricultural uses. The site is already developed with modular buildings that involve uses similar to the uses proposed under the SVAHL project. The proposed development of a permanent diagnostic laboratory on the project site and relocation of the modular housing to the VMTRC parcel is therefore consistent with the existing uses on the VMTRC and proposed SVAHL parcels and would not substantially conflict with the agricultural land use designation. Therefore, the project is consistent local agency plans, including the Tulare County General Plan and zoning ordinance. Impacts with regard to this criterion would be less than significant.

c) There is no habitat conservation plan or natural community conservation plan applicable to the project site, and there would be no impacts related to this criterion.

d) No other land use impacts were identified.

Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.

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<td>10. MINERAL RESOURCES – Would the project:</td>
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<td>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?</td>
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<td>Issues</td>
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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? □ □ □ □

**Relevant Elements of Project**
The proposed project would replace the existing laboratory uses on the project site with similar but more intensified uses.

**Discussion of Potential Project Impacts**
a, b) No known or potential mineral resource has been identified on the project site, and it is not in an area used for mineral extraction (for example, sand and gravel). Therefore, development of the project would not impede extraction or result in the loss of availability of a known mineral resource. No impact to mineral resources would occur.

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11. NOISE -- Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies? □ □ □ □

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? □ □ □ □
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

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<th>Issues</th>
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d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?

|                                                                        |                               |                                                               |                             | □         |
|                                                                        |                               |                                                               |                             | □         |
|                                                                        |                               |                                                               |                             | ☒         |
|                                                                        |                               |                                                               |                             | □         |

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?

|                                                                        |                               |                                                               |                             | □         |
|                                                                        |                               |                                                               |                             | □         |
|                                                                        |                               |                                                               |                             | □         |
|                                                                        |                               |                                                               |                             | ☒         |

Relevant Elements of Project
The proposed project would include new sources of noise, including construction noise, building mechanical equipment, and new vehicle trips on nearby roadways.

Discussion of Potential Project Impacts
a) The proposed project includes new sources of noise listed above. The existing sensitive receptors on the site would include the residents at the modular housing. These would be relocated to the VMTRC, approximately 300 feet from the proposed building. In addition, the project would bring new occupants to the site who could be exposed to noise from on-site noise sources. Noise-generating equipment such as air handling units and the emergency generator would generally be placed in interior mechanical spaces and would be acoustically shielded from building occupants. The types of equipment used on site would not be expected to produce significant increases
in ambient noise levels. Impacts would be less than significant with regard to this criterion.

b) Equipment installed as part of the proposed project would not typically produce groundborne vibration or groundborne noise. Pile-driving that can result in groundborne vibration would not be required for project construction. Impacts would be less than significant with regard to this criterion.

c) As described in response 8(a) above, the types of equipment that would be installed at the project site would not be expected to produce significant increases in ambient noise levels. The project would generate a relatively small number of new daily vehicle trips that would contribute a minor increase in noise along nearby roadways. The project is located along a rural road with no sensitive receptors present nearby other than the existing short-term residents in the modular housing units. Impacts related to increases in ambient noise levels off site would be less than significant.

d) See responses 11(a) and (c) above. Construction of the proposed project would cause a temporary and intermittent increase in noise levels on site. However, there are no sensitive receptors nearby that would be affected by such noise, and impacts would therefore be less than significant. Resident students and researchers may remain in residence at the VMTRC during project construction. However, persons in residence at the VMTRC typically leave the site early in the morning (before 6 AM), and would normally be off site during construction hours. Construction noise mitigation and hours limitations would not be needed.

e) The proposed project is located approximately 1.3 miles from the Tulare Municipal Airport. This airport is used for general aviation and is not a significant source of noise at the project site. Impacts to site occupants from airport noise would be less than significant.

f) The proposed project is not located in the vicinity of a private airstrip, and there would be no impacts with regard to this criterion.

Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.
12. 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? □ □ ☒ □

Relevant Elements of Project
The proposed project would bring a small number of new employees to the project site that are relocated from existing facilities located in Fresno. The project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. However, the residential population at the VMTRC would not increase as a result of the building relocation.

Discussion of Potential Project Impacts
a) The proposed project would employ approximately 37 FTE employees. Approximately 26 of these would be staff positions transferred from the existing CDFA facility in Fresno, while the remainder would be positions associated with the existing site operations. Employees transferring from Fresno (or other locations) would also likely bring families and could slightly increase the number of households in the region. This increase in population would be small in comparison to the population of the Tulare County region as a whole, and would not constitute a substantial growth in regional population. The number of potential new households would be very small
compared to the existing housing stock in the county, and could therefore be accommodated within the existing housing stock.

The proposed project could include the extension of new infrastructure, including municipal water and sewer service. This infrastructure would be sized and located to serve the proposed project and would not provide service to off-site areas not presently served. In addition, the surrounding area is zoned for agriculture and much of it is protected by Williamson Act contracts that generally preclude large-scale development of new homes and businesses. Direct and indirect impacts related to population growth would therefore be less than significant.

b, c) The project site currently includes three modular housing units that provide housing for approximately 12 students and research staff during veterinary program residencies at the VMTRC. These modular units will be relocated to the adjacent VMTRC site as part of the project. Based on the small number of units and residents affected, the project would not displace substantial numbers of housing or people, and the impacts would be less than significant.

Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.
13. 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? □ □ ☒ □
f) Create other public service impacts? □ □ ☒ □

Relevant Elements of Project
The proposed project would include the construction of a new laboratory and office building. The project would also bring up to 26 new FTE employees and associated families into the area. The project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. However, the residential population at the VMTRC would not increase as a result of the building relocation.
Discussion of Potential Project Impacts

a, b) Fire protection service to the existing site uses is provided by the Tulare County Fire Department (TCFD). The nearest station is located at 2082 East Foster Drive in Tulare, about 5 miles north of the project site. In the event of an emergency at the project site, the TCFD would respond from the Tulare station or the Tipton station about 6 miles south of the project site. Police service to the existing site uses is provided by the Tulare County Sheriff’s Department (TCFD). Site uses under the proposed project would be similar to those under existing conditions, although at greater intensity; however, the relatively small increase in site population and activity is not expected to noticeably increase the demand for fire or police protection in a manner that could require the construction of new facilities.

c) New employees brought into the region by the project could bring a small number of school-age dependents who may enroll in local public schools. These new residents would likely be distributed among local communities, and the increased enrollment in any given school or district would be minimal. The relatively small number of new school-age children could be accommodated by existing schools, and the project would have a less than significant impact with regard to this criterion.

d) See the discussion under Recreation below.

e, f) New employees brought into the region by the project could make use of other public facilities and services such as libraries and local government services. The relatively small number of new residents could be accommodated by existing facilities and services, and it is considered unlikely that governmental facilities would need to be expanded to serve this additional population. The project would have a less than significant impact with regard to these criteria.

Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.
14. 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? □ □ □ □

Relevant Elements of Project
The proposed project would bring up to 26 new FTE employees and associated families into the area. The project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. However, the residential population at the VMTRC would not increase as a result of the building relocation.

Discussion of Potential Project Impacts
a) The project would bring new employees and associated families into the area who could make use of local recreational facilities. The small number of new residents that would be added to the area would not be likely to cause substantial physical deterioration to existing facilities, and the impact would be less than significant.

b) The proposed project does not include recreational facilities. The small number of new residents that would be added to the area would be able to use existing recreational facilities and would not require the construction of new facilities. The impact would be less than significant.

Mitigation Measures
None required.
Significance Determination after All Mitigation
Less than significant.

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15. TRANSPORTATION/TRAFFIC -- Would the project:

a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

   ☐ ☐ ☒ ☐

b) Exceed, either individually or cumulatively, a level of service standard 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?

   ☐ ☐ ☒ ☐
Issues | Potentially Significant Impact | Less Than Significant with Project-level Mitigation Incorporated | Less Than Significant Impact | No Impact
---|---|---|---|---
f) Result in inadequate parking capacity? | □ | □ | □ | ☒
g) Conflict with applicable policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | □ | □ | ☒ | □

Relevant Elements of Project
The proposed project would increase intensity of uses and the on-site population by about 26 new FTE employees. The project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. However, the residential population at the VMTRC would not increase as a result of the building relocation.

Discussion of Potential Project Impacts
a) Local access to the project site is provided by SR-99, Road 112, and Octol Avenue. Road 112 and Octol Avenue are lightly-traveled, two-lane rural roadways. The proposed project would generate new vehicle trips on these roadways due to the increase in daily site population, visitors, and the increase in traffic bringing samples, supplies, and other deliveries to the proposed laboratory. Because of the relatively low site population (approximately 37 total FTE employees), the increase in daily vehicle trips would be relatively minor. It is anticipated that there would typically be approximately 15 to 20 deliveries per day to the project site. Approximately 500 visitors come to the site each year under existing conditions; such visits typically occur one to two times a month and include groups of 20 to 80 people. The number of visitors would be incrementally higher with implementation of the project. The site is located on a rural road that is very lightly traveled. The small increase in vehicle traffic would not significantly affect the volume to capacity ratio on nearby roadways or result in congestion at intersections, and impacts would be less than significant.

Construction traffic from the proposed project would be routed by way of Road 112 to Octol Avenue and then to SR-99. Road 112 and Octol Avenue pass through agricultural areas and provide access for farm vehicles as well as trucks and other commercial and private vehicles. There are no residents along these roadways in the immediate project vicinity. The project would cause an increase in construction-related truck traffic during
project construction, especially during site excavation and off-haul phases. This increase would be on the order of a few additional vehicles per hour and would be spread throughout the work day. Because of the limited number of additional construction trips and the temporary nature of construction activities, impacts related to construction traffic are considered less than significant.

b) Nearby roadways operate at acceptable levels of service during peak hours. The relatively small increase in traffic due to the proposed project would not cause a decrease in levels of service on these roadways, and impacts would be less than significant.

c) The project would have no effect on air traffic patterns, and there would be no impact with regard to this criterion.

d) The proposed project site is located on a fairly straight stretch of a rural road with good visibility at the proposed entry/exit driveways along Road 112. The project would include repaving and improvement of the access roads and driveways. Traffic along Road 112 is light and would not be significantly affected by project traffic, as described in responses 15(a) and (b) above. Road 112 and other local roadways are used by farm vehicles as well as standard vehicle traffic. However, because there is little local traffic and the proposed project would not generate a substantial number of additional vehicles on these roadways, impacts are expected to be less than significant.

e) The proposed project would include two paved entry/exit driveways linked by a fire road. These would provide adequate emergency access to the site, and the proposed project would improve access to both the project site and adjacent areas by improving and repaving the access roads along the north and south project boundaries. There would be no significant adverse impacts with regard to emergency access.

f) The proposed project would include 80 parking spaces for staff, visitor, and delivery use, including approximately 45 spaces for staff and 35 spaces for visitors and delivery vehicles. This is considered adequate to serve the projected site population of 37 FTE employees and the expected number of visitors and delivery vehicles, and no impacts related to parking capacity would result.

 g) The proposed project is in an area not served by public transportation, but would not conflict with any plans or policies promoting alternative transportation. Because of the project site’s distant location relative to the nearest communities, the potential for bicycle commuting to the site is limited, and bike racks have not been included in the project for this reason.
Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.

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<th>No Impact</th>
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16. 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 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? □ □ □ □
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<tr>
<td>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?</td>
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<td>f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?</td>
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<td>g) Comply with applicable federal, state, and local statutes and regulations related to solid waste?</td>
<td>✅</td>
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<td>h) Create other utility and service system impacts?</td>
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**Relevant Elements of Project**

The proposed project includes a new water well that can provide potable water and a 250,000-gallon storage tank. Wastewater from the project would be disposed off in a new on-site 3,500-gallon septic tank and leach field. Storm water retention basins would be constructed in the southern portion of the SVAHL project site and in the eastern portion of the VMTRC site. Electricity service is provided to the site by Southern California Edison. A new gas line would be installed to supply the cremator in the proposed facility. The project would include relocation of existing modular residential buildings to a location adjacent to the northeast corner of the developed portion of the VMTRC. However, the residential population at the VMTRC would not increase as a result of the building relocation.

The proposed project includes a new well and septic system to meet all on-site needs for water supply and sewage disposal. As noted above, the City of Tulare may evaluate and construct potential future water and wastewater extensions that would bring these
municipal services to the road right-of-way immediately west of the project site. This document does not evaluate the physical impacts of system extensions and capacity considerations that the City of Tulare would consider when contemplating the infrastructure expansion projects, and such conditions would need to be evaluated by the City in a future environmental document. However, for informational purposes, this Initial Study includes a discussion of the availability of City water supply and sewage treatment capacity in subsection V.8, Hydrology and Water Quality.

Discussion of Potential Project Impacts
a) The proposed project would include on-site wastewater disposal through a septic tank and leach field, and would not discharge wastewater. Alternatively, the project may be connected to a future extension of the sewer mains that serve the City of Tulare municipal water treatment plant. See Hydrology and Water Quality, response 8(a), above.

b) The proposed project would be served by either a new on-site water well or a future extension of the City of Tulare municipal water system, and would not require new or expanded water facilities. See Hydrology and Water Quality, response 8(b), above.

The proposed project would also include on-site wastewater disposal through a septic tank and leach field, and would not require a connection to a wastewater treatment provider. Alternatively, the project may be connected to the City of Tulare municipal water treatment plant. Such a connection would not occur unless the water treatment plant indicates that there is sufficient capacity to serve the proposed project, and the City of Tulare completes additional CEQA review of potential impacts. The project would not require the construction of new wastewater treatment facilities, and impacts would be less than significant.

c) The proposed project would include new on-site stormwater facilities. See Hydrology and Water Quality, response 8(b), above. Impacts related to new or expanded stormwater facilities would be less than significant.

d) The proposed project would be served by either a new on-site water well or the City of Tulare municipal water utility, and would not require new or expanded entitlements. See Hydrology and Water Quality, response 8(b), above.

e) See response 16(b) above.

f) Under existing conditions, solid waste services for the site and the VMTRC are provided by a contractor that also operates the City of Tulare municipal waste
management system. This system would continue under the proposed project. Tulare County does not provide collection services. Waste removed from the site is taken to one of three landfills or solid waste disposal sites operated by Tulare County. These three facilities include the Visalia Landfill, located north of Tulare; the Woodville Landfill, located south of Tulare; and the Teapot Dome Landfill, located south of Porterville. The Woodville Landfill has a total of 525 acres, of which 153 acres are available for solid waste disposal. The remaining acres are used as a buffer for adjacent land uses, runoff, etc. The Tulare Landfill maximum capacity is estimated at 16,521,501 cubic yards. According to California’s Integrated Waste Management Board (CIWMB) solid waste database, it has a remaining capacity of almost 7 million cubic yards, which is believed to be sufficient to accommodate solid waste disposal demands through the year 2040.

Hazardous waste from the proposed project would be taken to the Kettleman Hills Landfill located in Kettleman City. The Kettleman Hills Landfill has a total acreage of 1,600 with disposal acreage of 499 acres. The maximum permitted throughput is 8,000 tons per day and a maximum capacity of 10,700,000 cubic yards. According to the CIWMB solid waste database, the Kettleman Hills Landfill has a remaining capacity of 6 million cubic yards. Based on this information and the relatively small size of the proposed project, impacts related to landfill capacity would be less than significant.

g) As described in Hazards, response 7(a), above, the proposed project would comply with all federal, state, and local regulations related to waste disposal. Impact would be less than significant with regard to this criterion.

h) No other utility or service system impacts were identified.

Mitigation Measures
None required.

Significance Determination after All Mitigation
Less than significant.
### MANDATORY FINDINGS OF SIGNIFICANCE

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<td>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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
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<td>b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?</td>
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<td>□</td>
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<td>□</td>
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<td>c) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?</td>
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<td>✗</td>
<td>□</td>
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<tr>
<td>d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>□</td>
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Relevant Elements of Project
The proposed project would replace the existing laboratory uses on the project site with similar but more intensified uses, including new buildings, landscaping, paving, and infrastructure. The project would involve relocation of modular housing units to the adjacent VMRTC parcel.

Discussion of Potential Project Impacts
a) The proposed project would not significantly affect fish or wildlife habitat, nor would it eliminate examples of California history or prehistory. See the responses under Biological Resources, 4(a) through (f), and Cultural Resources, 5(a) through (d), above. Mitigation identified in this Initial Study would reduce impacts to a less than significant level.

b) The proposed project would not interfere with the achievement of long-term environmental goals, as it would have no significant unavoidable impacts. Mitigation identified in this Initial Study would reduce potentially significant impacts to a less than significant level.

c) Mitigation measures to reduce potentially significant project-level impacts to less-than-significant levels have been adopted as part of the project through this Initial Study and proposed Mitigated Negative Declaration. For most areas in which potentially significant impacts were identified (aesthetics, cultural resources, geology, and noise), the impacts identified are site-specific to the proposed project and therefore would not contribute to regional or cumulative effects. Mitigation identified in this Initial Study and incorporated into the project would reduce potential project-level impacts to a less than significant level and would reduce the project’s contribution to cumulative impacts to a level that is less than cumulatively considerable. The following is a summary of cumulative impacts by topic.

Aesthetics: The proposed project would add facilities to an existing developed site and thereby increase the intensity of development at the site. As explained in subsection V.1, this change would however be less than significant as the area is not considered part of a valued viewshed. Furthermore, there are no other projects proposed in the immediate vicinity of the project which would add structures and thereby result in a cumulative change in views. There is therefore no potential for cumulative impacts to visual resources.

Agricultural Resources: With respect to cumulative impact on important farmland, although the Tulare County General Plan found that future growth in the county would result in a significant cumulative impact on important farmland from conversion to
would cumulate. Landslide impacts include geological and soil conditions at the project site. Most of the geologic impacts such as those related to risk from faults, liquefaction potential, slope stability, landslide potential, expansive and compressible soils are site specific and do not cumulate. Therefore, the proposed project and other development in Tulare County would not result in a significant cumulative impact related to geologic risks. The one area where the impacts of the Proposed Action may cumulate with those of other projects is related to soil erosion and discharge of sediment into receiving waters during construction. However, the proposed project includes adequate mitigation to minimize

**Air Quality:** The analysis in subsection V.3 presents the direct and indirect impacts of the proposed project on air quality, including impacts from construction and operational emissions and odors. A project’s impacts on air quality are essentially cumulative in nature. Consequently, the analysis of impacts in subsection V.3 reflects an analysis of the proposed project’s contribution to a cumulative condition. As that analysis shows, the project’s contribution to cumulative air quality impacts would be cumulatively not considerable, i.e., less than significant.

**Biological Resources:** Cumulative development, including the proposed project, would result in significant impacts on biological resources. However, the project includes mitigation measures that would reduce its impacts to less than significant level. These mitigation measures would also render the project’s contribution to any cumulative impact to be cumulatively not considerable, i.e., less than significant.

**Cultural Resources:** With respect to cultural resources, all past, present and reasonably foreseeable projects requiring discretionary approvals are required to comply with CEQA. Compliance with environmental review process would ensure that known resources are adequately evaluated and protected and that appropriate mitigation measures are incorporated into the projects for the protection of previously unknown cultural resources. However, some loss of unique or historic cultural resources could still occur. This potential future loss when combined with loss of cultural resources that have occurred in the past would result in a significant cumulative impact on cultural resources. However, the proposed project’s contribution to the significant cumulative impact would not be cumulatively considerable because adequate mitigation is included in the proposed project to avoid, minimize, and mitigate for the project’s effect. The impact would be less than significant.

**Geology and Soils:** Subsection V.6, Geology and Soils, presents the proposed project’s impacts related to geologic and soil conditions at the project site. Most of the geologic impacts such as those related to risk from faults, liquefaction potential, slope stability, landslide potential, expansive and compressible soils are site specific and do not cumulate. Therefore, the proposed project and other development in Tulare County would not result in a significant cumulative impact related to geologic risks. The one area where the impacts of the Proposed Action may cumulate with those of other projects is related to soil erosion and discharge of sediment into receiving waters during construction. However, the proposed project includes adequate mitigation to minimize
erosion and sedimentation. Furthermore, no projects are proposed in the immediate vicinity of the project for the impacts to cumulate. There would be no cumulative impact.

**Hazards and Hazardous Materials:** Subsection V.7, Hazards and Hazardous Materials, presents the proposed project’s impacts related to hazardous materials and public safety, including impacts related to routine transport, use and disposal of hazardous materials, impacts under accident conditions. The study area for potential cumulative impacts related to hazardous materials is limited to the project site and its immediate vicinity as this would be the area that would be affected in the event of simultaneous accidental releases of hazardous materials. As the analysis in subsection V.7 shows, the on-site hazardous materials use would not result in any hazardous materials impacts due to the small quantities of hazardous materials that would be used on site. The potential impact from exposure to existing on-site contamination would be site-specific and would not cumulate with other impacts. The analysis in subsection V.7 found the impact related to risk from aircraft operations would be less than significant as there are no public or private airports near the project site.

**Hydrology and Water Quality:** Project-level impacts related to drainage, erosion, flooding, and water quality would be less than significant and would be limited to the project site, and would therefore not contribute to cumulative or regional impacts in these areas. As discussed in subsection V.8, the Tulare County UWMP projects adequate groundwater supply to serve cumulative regional demands, and the project’s relatively small contribution to this regional demand for groundwater would not be cumulatively considerable, i.e., less than significant.

**Land Use and Planning:** The proposed project would have no project-level impacts; and would therefore not contribute to a cumulative land use impact.

**Mineral Resources:** The proposed project would have no project-level impacts, and would therefore not contribute to a cumulative impact to mineral resources.

**Noise:** With respect to cumulative construction noise and vibration impacts, those would occur only if the projects proposed by others were to be under construction the same time as the proposed project and if these concurrent projects would be in close proximity of the same sensitive receptor. At this time, there are no other projects proposed that would be under construction the same time as the proposed project. Noise impacts from stationary sources are specific to the project site and therefore would not contribute to regional or cumulative effects. The project’s minimal increase in traffic noise would be less than significant at a project level and limited to a few
lightly-travelled local roadways with few nearby sensitive receptors, and therefore would not contribute to regional or cumulative traffic noise effects.

**Population and Housing:** As discussed in subsection V.12, the project would add a small number of new persons to the regional population and the project-level impact would be less than significant. Due to the small increase involved, the project’s contribution to a regional population growth related cumulative impact would not be considerable.

**Public Services:** As discussed in subsection V.13, the project’s impact on public services would be less than significant. Due to the small increase in demand for public services due to the project, its contribution to any cumulative impact would not be cumulatively considerable.

**Recreation:** As discussed in subsection V.14, the project’s impact on recreation facilities would be less than significant. Due to the small increase in demand for public services due to the project, its contribution to any cumulative impact would not be cumulatively considerable.

**Transportation/Traffic:** As discussed in subsection V.15, the project’s cumulative contribution to local roadway levels of service would be less than significant. The Tulare County General Plan EIR did not identify significant cumulative traffic impacts to nearby roadways and the small increase in traffic due to the project would be insignificant relative to roadway capacity.

**Utilities and Service Systems:** As discussed in subsection V.16, the project would be served by on-site water, wastewater, and stormwater facilities, and therefore it would not make a contribution to regional demand for local water and sanitary sewer utilities. As discussed in subsection V.16, there is adequate solid waste landfill capacity to serve the project region and the project would make a minimal contribution to demand for such capacity.

d) The proposed project would include safety features that would avoid adverse effects on human beings, either directly or indirectly. See the responses under Hazards, 7(a) through (h), above.
Fish and Game Determination

Based on consultation with the California Dept. of Fish and Game, there is no evidence that the project has a potential for a change that would adversely affect wildlife resources or the habitat upon which the wildlife depends.

___ Yes (No Effect)

_X_ No (Pay fee)

VI. SUPPORTING INFORMATION SOURCES

Boggs, Dan, City of Tulare Public Works Department, personal communication with Impact Sciences, January 26, 2009
California Historical Resources Information System, Tulare Diagnostic Facility, letter report, January 20, 2009
California Natural Diversity Database, accessed January 12, 2009
Tulare County General Plan Update EIR, 2008
City of Tulare General Plan Update EIR, 2008
UC Davis LRDP EIR, 2003

VII. INITIAL STUDY PREPARERS

UC Davis:

A. Sidney England, Assistant Vice Chancellor for Environmental Stewardship and Sustainability
Matthew Dulcich, Associate Planner
Joseph Dickson, UC Davis Architects and Engineers

Impact Sciences, Inc.:

Shabnam Barati, Managing Principal
Daryl Koutnik, Managing Principal, Biological Services
Elizabeth Purl, Senior Project Manager
Alan Sako, Air Quality Analyst
Sara Morton, Project Planner
Lisa Cuoco, Publications Coordinator
Thomas Brauer, Graphics Coordinator
PROPOSED MITIGATED NEGATIVE DECLARATION

Lead Agency: University of California

Project Proponent: University of California, Davis

Project Location: Unincorporated Tulare County, approximately 3 miles south of the City of Tulare and about one mile south of the Tulare Municipal Airport.

Project Description: The proposed South Valley Animal Health Laboratory (SVAHL) project would construct a new veterinary diagnostic testing laboratory adjacent to an existing veterinary medicine research laboratory in a generally undeveloped area south of Tulare, California. The proposed project would include (1) diagnostic testing and research laboratory areas, with some areas categorized as biosafety level 2 (BSL-2) space, (2) a cremator for animals, animal parts and other biohazardous waste, (3) a back-up generator, (4) an on-site water supply well, (5) a stormwater retention pond, and (6) a new septic system for the disposal of wastewater.

Mitigation Measures: MM AES-1: Hooded and down-directed lights shall be used for nighttime illumination in parking areas, shipping and receiving docks, and other areas of the site as applicable.

MM AQ-1a: All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

MM AQ-1b: All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.

MM AQ-1c: All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition
activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by pre-soaking.

**MM AQ-1d:** With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.

**MM AQ-1e:** When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.

**MM AQ-1f:** All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)

**MM AQ-1g:** Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.

**MM AQ-1h:** Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.

**MM AQ-1i:** Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

**MM BIO-1:** The following actions shall be taken to avoid potential harm to San Joaquin kit fox during construction:

- Grading and construction activities, including demolition, after dusk shall be prohibited unless authorized by the CDFG.
• Prior to commencement of any site-disturbing and/or construction activities, all personnel associated with the project shall attend a worker education training program, conducted by a qualified biologist, to avoid or reduce impacts on sensitive biological resources (e.g., San Joaquin kit fox). At a minimum, as the program relates to the kit fox, the training shall include the kit fox’s life history, all measures specified by the qualified biological monitor for the project, and instructions to immediately cease construction activities and contact the USFWS if a kit fox is observed.

• A kit fox fact sheet shall be developed and distributed to all contractors, employers and other personnel involved with the construction of the project.

• All construction personnel shall be instructed on obeying speed limits of 25 mph (or lower) for all construction traffic to minimize the probability of road mortality of the San Joaquin kit fox.

• To prevent entrapment of the San Joaquin kit fox, all excavations, steep-walled holes, or trenches in excess of two feet in depth shall be covered at the close of the work day or provided with one or more escape ramps constructed of earth fill or wooden planks. The trenches shall be inspected for kit fox prior to covering, each morning prior to the onset of field activities, and prior to filling.

• Any pipes, culverts, or similar structures with a diameter of four inches or greater stored overnight at the project site shall be thoroughly inspected for trapped San Joaquin kit foxes before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. If during the construction phase a kit fox is discovered inside a pipe, that section of pipe will not be moved, or if necessary, be moved only once to remove it from the path of activity, until the kit fox has escaped.

• All food-related trash items such as wrappers, cans, bottles, and food scraps generated shall be disposed of in closed containers only and regularly removed.
from the site. Food items may attract San Joaquin kit foxes onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

**MM BIO-2:** If activities associated with construction or grading are planned during the bird nesting/breeding season, generally January through March for early nesting birds (e.g., Cooper’s hawks or hummingbirds) and from mid-March through September for most bird species (including Swainson’s hawk), the University shall have a qualified biologist conduct surveys for active nests. Pre-construction nesting bird surveys must be conducted weekly, within 30 days prior to initiation of ground-disturbing activities to determine the presence/absence of active nests. The surveys shall continue on a weekly basis with the last survey being conducted no more than three days before the start of clearance/construction work. Surveys shall include examination of trees, shrubs, and the ground, within grasslands, for nesting birds, as several bird species known to the area are shrub or ground nesters, including mourning doves. Active bird nests that are found within the construction zone shall be protected by a buffer of 300 feet for most species or 500 feet for raptors, unless the buffer distance is modified by the CDFG, demarcated by construction fencing or other means that will allow avoidance of the nests until young birds have fledged, and no continued use of the nest is observed. If ground-disturbing activities are delayed, additional pre-construction surveys shall be conducted so that no more than three days will have elapsed between the survey and ground-disturbing activities.

**MM CUL-1:** Prior to the start of any ground-disturbing activities, contractor crews shall be required to attend an informal training session, regarding how to recognize archaeological sites and artifacts. Contractors shall be notified that they are required to watch for such sites and artifacts and to notify the campus if any are found. If a resource is discovered during construction (whether or not
an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The campus shall contact a qualified archaeologist to evaluate any uncovered materials and to provide direction for handling of the find, and shall implement a plan for survey, subsurface investigation as needed at the direction of the archaeologist to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. A written report of the results of investigations will be prepared by a qualified archaeologist and filed with the appropriate Information Center of the California Historical Resources Information System.

**MM CUL-2:** In the event of a discovery on site of human bone, suspected human bone, or a burial, all excavation in the vicinity will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the campus will notify the County Coroner of the find before additional disturbance occurs. Consistent with California Health and Safety Code § 7050.5(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures, the campus will ensure that the remains and vicinity of the find are protected against further disturbance. If it is determined that the find is of Native American origin, the campus will comply with the provisions of PRC § 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).

If human remains cannot be left in place, the campus shall ensure that the qualified archaeologist and the MLD are provided opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out prior to reinterment. The campus shall provide results of all such studies to the local Native American community, and shall
provide an opportunity of local Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects are repatriated to the appropriate local tribal group if requested.

**MM GEO-1:** A site-specific percolation testing or test borings shall be performed as part of the design-level site analysis process to determine the final size and design of the proposed septic leach field. The project shall follow guidelines for septic system design provided in the Uniform Plumbing Code.

**Reference:** This Proposed Mitigated Negative Declaration incorporates by reference in their entirety the text of the Initial Study prepared for the project.

**Determination:** In accordance with CEQA, a Draft Initial Study has been prepared by UC Davis that evaluates the environmental effects of the proposed project. On the basis of the project’s Draft Initial Study the campus found 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 that will avoid or reduce any potential significant effects to a less than significant level. A Mitigated Negative Declaration will be prepared.

**Public Review:** In accordance with Section 15073 of the CEQA Guidelines, the Draft Initial Study for the project was circulated for public and agency review from May 22, 2009 to June 22, 2009.
**Actinemys marmorata**
western pond turtle

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**Habitat Associations**
- General: A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS & IRRIGATION DITCHES WITH AQUATIC VEGETATION.
- Micro: NEED BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT FOR EGG-LAYING.

**Occurrence No. 19**
- Map Index: 24419
- EO Index: 8143
- Dates Last Seen: Element: 1879-XX-XX
  Site: 1879-XX-XX
- Record Last Updated: 1996-02-22

**Quad Summary:** Visalia (3611933/334D)
- County Summary: Tulare

**Location:** VISALIA.
- Location Detail:
  - Ecological: 
  - Threat:
    - General: HISTORICAL RECORD. OBSERVATION BY LOCKINGTON IN 1879.
    - Owner/Manager: CITY OF VISALIA, PVT

**Lat/Long:** 36.33377° / -119.29640°
- UTM: Zone-11 N4023417 E293889
- Mapping Precision: NON-SPECIFIC
- Symbol Type: POINT
- Radius: 1 mile
- Township: 18S
- Range: 25E
- Section: 29
- Qtr: XX
- Meridian: M
- Elevation: 325 ft
### Agelaius tricolor

**tricolored blackbird**

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#### Habitat Associations

**General:** HIGHLY COLONIAL SPECIES, MOST NUMBEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

**Micro:** REQUIRE OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

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#### Occurrence Details

| Lat/Long: 36.00664° / -119.48094° | Township: 22S |
| UTC: Zone-11 N3987532 E276395 | Range: 23E |
| Mapping Precision: NON-SPECIFIC | Section: 22 |
| Symbol Type: POINT | Qtr: NW |
| Radius: 1/10 mile | Meridian: M |
| Elevation: 205 ft | |

**Location:** JUST SOUTH OF HESSE AVENUE 0.5 MI EAST OF HWY 43.

**Location Detail:** LOCATION GIVEN AS "AVE 120 COLONY 2"

**Ecological:** SUBSTRATE OF SILAGE

**Threat:**

**General:** 8K BIRDS OBSERVED IN BREEDING COLONY. ONE OF THE 10 LARGEST COLONIES IN 2001 SURVEY.

**Owner/Manager:** UNKNOWN
**Agelaius tricolor**  
tricolored blackbird

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**Habitat Associations**

**General:** HIGHLY COLONIAL SPECIES, MOST NUMBEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

**Micro:** REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

**Occurrence No.** 379  
**Map Index:** 52458  
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**Quad Summary:** Taylor Weir (3611914/311C), Alpaugh (3511984/288B)

**County Summary:** Tulare

- **Lat/Long:** 35.99942⁰ / -119.47345⁰
- **UTM:** Zone-11 N3986714 E277050
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 1/10 mile

- **Township:** 22S
- **Range:** 23E
- **Section:** 22
- **Meridian:** M
- **Elevation:** 205 ft

- **Location:** 1.1 MILES SE OF THE INTERSECTION OF HWY 43 AND HESSE AVENUE AND 0.7 MI NNE OF ANGIOLA.

- **Location Detail:** LOCATION GIVEN AS "AVE 120 COLONY 3"  
  **Ecological:** SUBSTRATE OF SILAGE.

- **Owner/Manager:** UNKNOWN

- **General:** 15K BIRDS OBSERVED IN BREEDING COLONY. ONE OF THE 10 LARGEST COLONIES IN 2001 SURVEY.
### Agelaius tricolor

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**Habitat Associations**

**General:** HIGHLY COLONIAL SPECIES, MOST NUMBEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

**Micro:** REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

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**Quad Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

**Location:** ABOUT 0.75 MI WNW OF THE INTERSECTION OF ELK BAYOU AVE & POPLAR AVE.

**Location Detail:** SITE IDENTIFIED AS "TOLEDO PIT". SITE IS IDENTIFIED AS A PRIORITY SITE DUE TO ITS IMPORTANCE AS A COLONY SITE AND THE POTENTIAL TO IMPROVE THE SITE THROUGH COOPERATION WITH LANDOWNER.

**Ecological:** NESTING SUBSTRATE IS CATTAIL/BULRUSH. ASSOCIATED FORAGING HABITAT IS ALFALFA ON PRIVATE LANDS. A WELL HAS BEEN PUT IN TO SUPPLY WATER. SITE WAS BURNED MAR-APR 2002 AS AN EXPERIMENT TO IMPROVE TCBB HABITAT.

**Threat:**


**Owner/Manager:** UNKNOWN
**Agelaius tricolor**

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**Habitat Associations**

**General:** HIGHLY COLONIAL SPECIES, MOST NUMBEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

**Micro:** REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

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**Quad Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

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<td>230 ft</td>
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**Location:** JUST SE OF RD56/AVE168, JUST NORTH OF TULE RIVER. 4 MILES NW OF TOLEDO PIT, 6 MILES EAST OF CORCORAN

**Location Detail:** LOCATION GIVEN AS "TEVELEDE"

**Ecological:** HABITAT CONSISTS OF TRITICALE. 25-50 ACRES OCCUPIED BY NESTS.

**Threat:**

**General:** 20 APR 2000: DEHAVEN ESTIMATED POPULATION OF 3,500 AND HAMILTON ESTIMATED POPULATION OF 14,500.

**Owner/Manager:** UNKNOWN
**Andrena macswaini**

An andrenid bee

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**Habitat Associations**

**General:** This bee is oligolectic on morning-opening, yellow-flowered spp of *Camissonia*.

**Micro:** Nests in deep, sandy soil; the only species in the subgenus *Diandrena* with aggregated nests associated with depressions.

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**Occurrence No. 5**

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**Quadrant Summary:** Tipton (3611913/311D)

**County Summary:** Tulare

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<td>Meridian: M</td>
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<tr>
<td>Elevation: 280 ft</td>
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</tr>
</tbody>
</table>

**Location:** 2 MILES SOUTH OF TIPTON.

**Location Detail:** MAPPED ALONG HWY 99.

**Ecological:** This bee is oligolectic on morning-opening, yellow-flowered spp of *Camissonia* & shows a preference for deep, sandy soil for its burrows. It is the only known sp. in subgenus *Diandrena* with nests aggregated & associated with depressions.

**Threat:**

**General:** NO ADDITIONAL COLLECTING INFORMATION GIVEN.

**Owner/Manager:** UNKNOWN
**Andrena macswaini**

An andrenid bee

**Element Code:** I1HYM35040

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</table>

**Habitat Associations**

**General:** THIS BEE IS OLIGOLECTIC ON MORNING-OPENING, YELLOW-FLOWERED SPP OF CAMISSONIA.

**Micro:** NESTS IN DEEP, SANDY SOIL; THE ONLY SPECIES IN THE SUBGENUS DIANDRENA WITH AGGREGATED NESTS ASSOCIATED WITH DEPRESSIONS.

<table>
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<tr>
<th>Occurrence No.</th>
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**Occurrence Details:**

- **Origin:** Natural/Native occurrence
- **Presence:** Presumed Extant
- **Trend:** Unknown
- **Element:** 19XX-XX-XX
- **Site:** 19XX-XX-XX
- **Record Last Updated:** 2005-03-21

**Quad Summary:** Tipton (3611913/311D)

**County Summary:** Tulare

**Location:** 2.4 MILES SOUTH OF TIPTON.

**Ecological:** THIS BEE IS OLIGOLECTIC ON MORNING-OPENING, YELLOW-FLOWERED SPP OF CAMISSONIA & SHOWS A PREFERENCE FOR DEEP, SANDY SOIL FOR ITS BURROWS. IT IS THE ONLY KNOWN SP. IN SUBGENUS DIANDRENA WITH NESTS AGGREGATED & ASSOCIATED WITH DEPRESSIONS.

**Threat:**

**General:** NO ADDITIONAL COLLECTING DATA GIVEN.

**Owner/Manager:** UNKNOWN
**Andrena macswaini**

An andrenid bee

<table>
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**Habitat Associations**

**General:** This bee is oligolectic on morning-opening, yellow-flowered spp. of Camissonia. Nests in deep, sandy soil; the only species in the subgenus Diandrena with aggregated nests associated with depressions.

**Occurrence No. 7**

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<th>Trend</th>
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**Quad Summary:** Tulare (3611923/311A)

**County Summary:** Tulare

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<tr>
<td>Radius: 2/5 mile</td>
<td>Meridian: M</td>
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<tr>
<td>Elevation: 270 ft</td>
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</table>

**Location:** TULARE AIRPARK.

**Location Detail:** MAPPED AT TULARE MUNICIPAL AIRPORT.

**Ecological:** This bee is oligolectic on morning-opening, yellow-flowered spp. of Camissonia & shows a preference for deep, sandy soil for its burrows. It is the only known sp. in the subgenus Diandrena with nests aggregated & assoc. with depressions.

**Threat:**

**General:** No additional collecting information given.

**Owner/Manager:** UNKNOWN
Antrozous pallidus
pallid bat

Element Code: AMACC10010

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<td>State: S3</td>
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Habitat Associations

**General:** DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS & FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.

**Micro:** ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Occurrence No. 322  
Map Index: 68317  
EO Index: 68476  
Dates Last Seen: 2004-08-10

- **Occ Rank:** Excellent  
- **Origin:** Natural/Native occurrence
- **Presence:** Presumed Extant
- **Trend:** Unknown

- **Dates Last Seen:**
  - Element: 2004-08-10
  - Site: 2004-08-10
  - Record Last Updated: 2007-03-05

Quad Summary: Exeter (3611932/333C)
County Summary: Tulare

- **Lat/Long:** 36.35364º / -119.21612º
- **UTM:** Zone-11 N4025454 E301146
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 1/10 mile
- **Township:** 18S
- **Range:** 25E
- **Section:** 24
- **Quadrant:** N
- **Meridian:** M
- **Elevation:** 368 ft

Location: ABOUT 2.4M SOUTH OF IVANHOE, AT BRIDGE CROSSING OVER ST. JOHN'S RIVER.

Location Detail: THIS IS A NEW BRIDGE THAT INCLUDED MITIGATION ROOST HABITAT FOR BATS USING THE OLD BRIDGE. THIS IS A SUCCESSFUL BRIDGE MITIGATION ROOSE DESIGN AND IMPLEMENTATION.

Ecological: RIPARIAN CORRIDOR, SURROUNDED BY AGRICULTURAL.

Threat: VANDALISM.


Owner/Manager: CALTRANS
**Athene cunicularia**  
burrowing owl  

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**Habitat Associations**

**General:** OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

**Micro:** SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

---

**Occurrence No.** 987  
**Map Index:** 70032  
**EO Index:** 70884  
--- **Dates Last Seen** ---

**Occ Rank:** Fair  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown  
**Element:** 2007-08-24  
**Site:** 2007-08-24  
**Record Last Updated:** 2007-09-26

**Quad Summary:** Taylor Weir (3611914/311C)  
**County Summary:** Tulare

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<td>Symbol Type: POINT</td>
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<td>Radius: 80 meters</td>
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<td>Elevation: 220 ft</td>
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</table>

**Location:** 0.7 MILE SOUTH OF AVENUE 144 AND 0.75 MILE WEST OF ROAD 56, 6 MILES SE OF CORCORAN.

**Location Detail:** SITE IS LOCATED OUTSIDE OF A CORRAL, ADJACENT TO A FENCE AND AN EAST-WEST ROAD RUNNING THROUGH THE DAIRY.

**Ecological:** BURROW SITE IS LOCATED IN SANDY SOILS AT THE BASE OF A CORRAL FENCE FOUNDATION, AT A SLIGHTLY HIGHER ELEVATION THAN THE SURROUNDING AREA. TWO ADJACENT BURROWS ARE OCCUPIED BY GROUND SQUIRRELS.

**Threat:**

**General:** 1 ADULT AND 2 JUVENILES OBSERVED AT THE BURROW ON 24 AUG 2007.

**Owner/Manager:** PVT
**Atriplex cordulata**

**heartscale**

### Status
- **Federal:** None
- **State:** None

### NDDB Element Ranks
- **Global:** G2?
- **State:** S2.2?

### Other Lists
- **CNPS List:** 1B.2

### Habitat Associations
- **General:** CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, MEADOWS.
- **Micro:** ALKALINE FLATS AND SCALDS IN THE CENTRAL VALLEY, SANDY SOILS. 1-150(600)M.

### Occurrence No. 30
- **Map Index:** 25124
- **EO Index:** 3244
- **Dates Last Seen**
  - **Element:** 1938-09-05
  - **Site:** 1938-05-09
- **Record Last Updated:** 1994-02-15

### Quad Summary: Goshen (3611934/334C)

### County Summary: Tulare

#### Location:
- **Lat/Long:** 36.34893º / -119.42124º
- **UTM:** Zone-11 N4025373 E282725
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 1 mile

#### Township: 18S
- **Range:** 23E
- **Section:** 24
- **Qtr:** XX
- **Meridian:** M
- **Elevation:** 285 ft

### Location Detail:
- **Near Goshen.**

### Ecological:
- **Threat:** RESIDENTIAL AND COMMERCIAL DEVELOPMENT SURROUNDS; MAY NOT BE SUITABLE HABITAT REMAINING (SEE ATRIPLEX SUBTILIS EO 8).

### General:
- ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1938 COLLECTION BY EASTWOOD AND HOWELL. AREA SHOULD BE FIELD CHECKED FOR THE PRESENCE OF SUITABLE HABITAT.

### Owner/Manager:
- UNKNOWN
**Atriplex erecticaulis**

Earlimart orache

<table>
<thead>
<tr>
<th>Status</th>
<th>NDDB Element Ranks</th>
<th>Other Lists</th>
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</table>

**Habitat Associations**

- **General:** VALLEY AND FOOTHILL GRASSLAND.
- **Micro:** 40-100M.

---

**Occurrence No.** 20  **Map Index:** 56674  **EO Index:** 66427  **Dates Last Seen:**

- **Occ Rank:** Unknown
- **Origin:** Natural/Native occurrence
- **Presence:** Presumed Extant
- **Trend:** Unknown

**Dates Last Seen:**

- **Element:** 1999-08-17
- **Site:** 1999-08-17

**Record Last Updated:** 2006-11-14

**Quad Summary:** Cairns Corner (3611922/310B)

**County Summary:** Tulare

**Lat/Long:** 36.14902º / -119.23658º

**UTM:** Zone-11 N4002795 E298786

**Mapping Precision:** SPECIFIC

**Symbol Type:** POLYGON

**Area:** 215.1 acres

**Township:** 20S

**Range:** 25E

**Section:** 35  **Qtr:** NW

**Meridian:** M  **Elevation:** 305 ft

**Location:** TULARE COUNTY LANDFILL PROPERTY.

**Location Detail:**

- **Ecological:** IN SWALES AND MARGINS OF SLICKSPOTS IN ANNUAL GRASSLAND, WITH SUAEDA MOQUINII AND HEMIZONIA PUNGENS. OTHER RARE SPECIES INCLUDE A. SUBTILIS AND A. MINISCULA.

- **Threat:** PROPOSED LANDFILL EXPANSION.

- **General:** UNKNOWN NUMBER OF PLANTS OBSERVED IN 1999 DURING SURVEY FOR A. SUBTILIS.

**Owner/Manager:** TUL COUNTY
**Atriplex minuscula**

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**Habitat Associations**

- **General:** CHENOPOD SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.
- **Micro:** IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 20-100M.

**Occurrence No.**: 11

| Map Index: 24419 | EO Index: 56693 | Dates Last Seen: 1881-10-01
|------------------|-----------------|---------------------|

| Origin: Natural/Native occurrence |
| Presence: Presumed Extant          |
| Trend: Unknown                     |

**Location**: VISALIA.

**Location Detail**:

**Ecological**:

**Threat**:

- **General:** ORIGINAL LABEL ON SPECIMEN WAS A. DEPRESSA; SORTED TO A. MINUSCULA BY D. TAYLOR AND R. PRESTON.

**Owner/Manager**: CITY OF VISALIA, PVT
**Atriplex minuscula**

**lesser saltscale**

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**Habitat Associations**

**General:** CHENOPOD SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.

**Micro:** IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 20-100M.

### Occurrence

- **Occurrence No.:** 14
- **Map Index:** 56415
- **EO Index:** 56431
- **Dates Last Seen:** 2002-09-12
- **Element:** 2002-09-12
- **Site:** 2002-09-12
- **Record Last Updated:** 2006-11-17

**Occ Rank:** Fair

**Origin:** Natural/Native occurrence

**Presence:** Presumed Extant

**Trend:** Unknown

**Location:** GOSHEN, IN FIELD ON NORTH SIDE OF AVE 308, 0.4 MILE WEST OF ROAD 76.

**Location Detail:** MAPPED WITHIN THE SW 1/4 OF THE NE 1/4 OF SECTION 19.

**Ecological:** ALKALI GRASSLAND, WITH CENTROMADIA PUNGENS, SUAEDA MOQUINII, BASSIA HYSSOPIFOLIA, CUSCUTA CALIFORNICA, AND ANNUAL GRASSES.

**Threat:** FIELD DISKED SOME TIME IN PREVIOUS YEAR. NEW HOUSING DEVELOPMENT ADJACENT TO SITE.

**General:** 25 PLANTS SEEN IN 2002. COLLECTION BY EASTWOOD & HOWELL IN 1938 "NEAR JOSHEN" (ASSUMED TO BE GOSHEN) ALSO ATTRIBUTED TO THIS OCCURRENCE.

**Owner/Manager:** UNKNOWN
### Atriplex minuscula

**lesser saltscale**

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** Habitat Associations **

**General:** CHENOPOD SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.  
Micro: IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 20-100M.

---

### Occurrence Details

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<tr>
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<td>1999-08-17</td>
<td>2004-09-08</td>
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**Occ Rank:** Excellent  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown

**Quad Summary:** Cairns Corner (3611922/310B)  
**County Summary:** Tulare

- **Lat/Long:** 36.14902° / -119.23658°  
- **UTM:** Zone-11 N4002795 E298786  
- **Mapping Precision:** SPECIFIC  
- **Symbol Type:** POLYGON  
- **Area:** 215.1 acres

**Location:** TULARE COUNTY LANDFILL PROPERTY, BOTH SIDES OF BLISS ROAD ABOUT 0.5 TO 1 MILE NORTH OF STRATHMORE ROAD.

**Location Detail:** MAPPED WITHIN THE NW 1/4 AND THE SW 1/4 OF THE NE 1/4 OF SECTION 35.

**Ecological:** IN SWALES AND MARGINS OF SLICKSPOTS IN ANNUAL GRASSLAND, WITH SUAEDA MOSQUINII AND HEMIZONIA PUNGENS.

**Threat:** PROPOSED LANDFILL EXPANSION.

**General:** INTERMIXED WITH THE RARE ATRIPLEX SUBTILIS AND A. ERECTICAULIS IN 1999. UNKNOWN NUMBER OF PLANTS SEEN.

**Owner/Manager:** TUL COUNTY
### Atriplex minuscula

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#### Habitat Associations

**General:** CHENOPOD SCRUB, PLAYAS, VALLEY AND Foothill GRASSLAND.

**Micro:** IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 20-100M.

#### Occurrence Details

- **Occurrence No.:** 33
- **Map Index:** 67126
- **EO Index:** 67275
- **Dates Last Seen:** 1998-05-11
- **Element:** 1998-05-11
- **Site:** 1998-05-11
- **Record Last Updated:** 2006-11-17

#### Location

- **Lat/Long:** 36.10074º / -119.24595º
- **UTM:** Zone-11 N3997458 E297819
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 1 mile

#### Location Details

- **Quad Summary:** Woodville (3611912/310C), Tipton (3611913/311D)
- **County Summary:** Tulare

#### Dates Last Seen

- **1998-05-11**

#### Dates Last Seen

- **1998-05-11**

#### Location

- **5.7 MI. SE OF TULARE MUNICIPAL AIRPORT.**

#### Location Detail

- **EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB SOUTH OF THE SOUTH BRANCH OF THE TULE RIVER, EAST OF LOWE'S CORNER.**

#### Ecological

- **MARGINS OF ALKALI RAIN POOLS.**

#### Threat

- **GENERAL:** ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS 1998 COLLECTION BY PRESTON. NEEDS FIELDWORK.

#### Owner/Manager

- **UNKNOWN**
### Atriplex subtilis

**subtle orache**

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#### Habitat Associations

**General:** VALLEY AND FOOTHILL GRASSLAND.

**Micro:** LITTLE INFO AVAILABLE. MADRONO VOL. 44 NO.2 ONLY SOURCE CURRENTLY. 40-100M.

---

<table>
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<tr>
<th>Occurrence No.</th>
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<th>EO Index</th>
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#### Quad Summary

Goshen (3611934/334C)

#### County Summary

Tulare

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<th>Township</th>
<th>UTM</th>
<th>Range</th>
<th>Section</th>
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<td>23E</td>
<td>24</td>
<td>XX</td>
<td>M</td>
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**Location:** GOSHEN; ABOUT RAILROAD STATION.

**Ecological:**

**Threat:** SURROUNDING LAND USE RESIDENTIAL OR COMMERCIAL. LITTLE SUITABLE HABITAT REMAINS HERE.

**General:** ORIGINAL LABEL BY BRANDEGEE WAS ATRIPLEX _________, THEN TO A. DEPRESSA BY PCS AND A. PARISHII BY HMA (?), THEN SORTED TO A. MINUSCULA BY D.TAYLOR. LISTED AS A. SUBTILIS BY STUTZ AND CHU (IN MADRONO - STU97A01). PLANTS NOT SEEN IN 2002.

**Owner/Manager:** UNKNOWN
### Atriplex subtilis

**subtle orache**

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**Habitat Associations**

**General:** VALLEY AND FOOTHILL MADRONO.

**Micro:** LITTLE INFO AVAILABLE. MADRONO VOL. 44 NO.2 ONLY SOURCE CURRENTLY. 40-100M.

---

**Occurrence No.: 25**

**Map Index:** 56674  **EO Index:** 56690

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**Dates Last Seen**

**Record Last Updated:** 2004-09-08

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**Quad Summary:** Cairns Corner (3611922/310B)

**County Summary:** Tulare

**Lat/Long:** 36.14902º / -119.23658º

**UTM:** Zone-11 N4002795 E298786

**Mapping Precision:** SPECIFIC

**Symbol Type:** POLYGON

**Area:** 215.1 acres

**Township:** 20S

**Range:** 25E

**Section:** 35

**Qtr:** NW

**Meridian:** M

**Elevation:** 305 ft

**Location:** TULARE COUNTY LANDFILL PROPERTY, BOTH SIDES OF BLISS ROAD ABOUT 0.5 TO 1 MILE NORTH OF STRATHMORE ROAD.

**Location Detail:** MAPPED WITHIN THE NW 1/4 AND THE SW 1/4 OF THE NE 1/4 OF SECTION 35.

**Ecological:** IN SWALES AND MARGINS OF SLICKSPOTS IN ANNUAL GRASSLAND, WITH SUAEDA MOSQUINII AND HEMIZONIA PUNGENS.

**Threat:** PROPOSED LANDFILL EXPANSION.

**General:** 1000'S OF INDIVIDUALS OBSERVED IN 1999. INTERMIXED WITH THE RARE ATRIPLEX MINUSCULA AND A. ERECTICAULIS.

**Owner/Manager:** TUL COUNTY
**Branchinecta lynchi**

**vernalis pool fairy shrimp**

**Element Code:** ICBRA03030

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<th>Status</th>
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<td>State: None</td>
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**Habitat Associations**

**General:** endemic to the grasslands of the Central Valley, Central Coast MTNS, and South Coast MTNS, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.

**Micro:**

**Branchinecta lynchi**

**Threatened**

**None**

**G3**

**S2S3**

**State:**

**Federal:**

**Habitat Associations**

**CDFG Status:**

**Presence:**

Natural/Native occurrence

**Trend:**

Unknown

**General:**

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.

**Micro:** INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

**Occurrence No.** 111

**Map Index:** 32737

**EO Index:** 17096

--- Dates Last Seen ---

**Element:** 1992-02-22

**Site:** 1992-02-22

**Record Last Updated:** 1996-01-30

**Quad Summary:** Goshen (3611934/334C)

**County Summary:** Tulare

**Location:** ESE OF GOSHEN; 0.6 KM NW OF ROAD J32 X ROAD J19; DIRECTLY NORTH OF EAGLE SNACKS SITE.

**Location Detail:** JACUZZI PROPERTY.

**Ecological:** NATIVE TOPOGRAPHY IN VACANT LOT; POOL IS 9 INCHES DEEP; PH=6; FENCeline OF LOT WAS DISKED; SURVEY MARKERS PRESENT.

**Threat:** PROPOSED LAND CONVERSION; HISTORIC GRAZING.

**General:** 1 MALE OBSERVED BY R. HANSEN AND K. KIRKPATRICK.

**Owner/Manager:** PVT
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**Branchinecta lynchi**

**vernal pool fairy shrimp**

**Element Code:** ICBRA03030

**Status**

- **Federal:** Threatened
- **State:** None

**NDDB Element Ranks**

- **Global:** G3
- **State:** S2S3

**Habitat Associations**

**General:** ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.

**Micro:** INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

**Occurrence No.** 119  
**Map Index:** 32760  
**EO Index:** 646  
**Dates Last Seen:** 1993-02-04

**Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

**Lat/Long:** 36.08766° / -119.48509°

**Cnty:** Tulare  
**UTM:** Zone-11 N3996530 E276251  
**Mapping Precision:** SPECIFIC

**Symbol Type:** POLYGON

**Area:** 24.2 acres

**Location:** NORTH OF TAYLOR WEIR; 1.5 KM NORTHEAST OF DEEP CREEK X LAKELAND CANAL.

**Location Detail:** DIAZ PROPERTY, ALONG EASTERN FENCING; 3 POOL COMPLEX, BUT ONLY 2 YIELDED B. LYNCHI.

**Ecological:** POOL A: 4-5 INCHES DEEP, 54 DEGREES FAHRENHEIT, PH 7.3, VERY TURBID; POOL B: 5-7 INCHES DEEP, 57 DEGREES FAHRENHEIT, SLIGHTLY TURBID.

**Threat:** CATTLE GRAZING & LAND CONVERSION.

**General:** 1/16/1993-B.LYNCHI AND B. LINDAHLI OBSERVED IN POOLS A AND B; MALE SPECIMENS FROM POOL B HAD SOME B. LINDAHLI CHARACTERISTICS; 2/4/1993-SITE REVISITED, ONLY B. LYNCHI COLLECTED FROM POOLS.

**Owner/Manager:** PVT
**Branchinecta lynchi**  
vernial pool fairy shrimp

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**Habitat Associations**
- **General:** ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.
- **Micro:** INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

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**Occurrence Details**
- **Origin:** Natural/Native occurrence
- **Presence:** Presumed Extant
- **Trend:** Unknown
- **Record Last Updated:** 1996-01-04

**Quad Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

**Location:** NORTH OF TAYLOR WEIR; 1.5 KM EAST OF DEEP CREEK X LAKELAND CANAL.

**Location Detail:** BANK OF AMERICA PROPERTY; POOL IS A BULLDOZED SWATH 6 METERS NORTH OF SOUTHERN FENCeline.

**Ecological:** POOL MEASURED 4 X 20 METERS, 4-5 INCHES DEEP WITH SLIGHT TURBIDITY, 64 DEGREES FAHRENHEIT, TEA-COLORED WATER.

**Threat:** CATTLE GRAZING & LAND CONVERSION.

**General:** B. LYNCHI OBSERVED BY G. & K. KIRKPATRICK & R. HANSEN.

**Owner/Manager:** PVT-BANK OF AMERICA
**Buteo swainsoni**

Swainson's hawk

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**Habitat Associations**

**General:** BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

**Micro:** REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

---

**Occurrence No. 440**

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**Occ Rank:** Unknown  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown  
**Record Last Updated:** 1999-12-01

**Quad Summary:** Paige (3611924/311B)

**County Summary:** Tulare

**Lat/Long:** 36.18939° / -119.49256°

**UTM:** Zone-11 N4007834 E275868  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 1/5 mile

**Township:** 20S  
**Range:** 23E  
**Section:** 16  
**Qtr:** NW  
**Meridian:** M  
**Elevation:** 240 ft

**Location:** EAST SIDE OF HWY 137, 0.6 MILE NORTH OF PAIGE ROAD, 3 MILES NE OF WAUKENA

**Location Detail:** NEST TREE IS LOCATED JUST NORTH OF THE DRIVEWAY TO THE SOUSA DAIRY. SWHA'S OBSERVED (INCLUDING ONE DEAD ADULT) SOUTH OF THIS NEST SITE IN 1999, BUT NO NESTING WAS OBSERVED.

**Ecological:** NEST TREE IS ONE OF TWO EUCALYPTUS TREES JUST EAST OF THE ROADWAY; SURROUNDING HABITAT CONSISTS ALMOST ENTIRELY OF ROW CROPS AND DAIRIES.

**Threat:**

**General:** BIRDS NESTED HERE ANNUALLY FROM 1982-1990; NESTING SUCCESS UNKNOWN.

**Owner/Manager:** PVT

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Commercial Version -- Dated June 01, 2008 -- Biogeographic Data Branch
Report Printed on Monday, January 12, 2009

Information Expired 12/01/2008
Buteo swainsoni
Swainson's hawk

Element Code: ABNKC19070

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Habitat Associations

General: BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 441
Map Index: 22666
EO Index: 13763

- Dates Last Seen -
Element: 1991-XX-XX
Site: 1991-XX-XX
Record Last Updated: 1992-12-02

Quad Summary: Taylor Weir (3611914/311C)
County Summary: Tulare

Lat/Long: 36.06956° / -119.46541°
UTM: Zone-11 N3994477 E277972
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile
Elevation: 220 ft

Location: CREIGHTON RANCH PRESERVE, ALONG THE TULE RIVER, SE OF CORCORAN.

Ecological: NEST TREE IS A LARGE OAK WITHIN A GROVE OF OAKS WITHIN RIPARIAN HABITAT; SURROUNDING HABITAT CONSISTS OF NATIVE MARSH AND UPLAND AND AGRICULTURE, MAINLY ROW CROPS AND DAIRIES.

Owner/Manager: TNC-CREIGHTON RANCH PRESERVE

Threat:

**Buteo swainsoni**
Swainson’s hawk

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**Habitat Associations**

**General:** BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

**Micro:** REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

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**Quad Summary:** Tulare (3611923/311A)

**County Summary:** Tulare

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<td>Meridian: M</td>
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**Location:** ELK BAYOU, JUST NORTH OF HOSFIELD ROAD, 0.5 MILE EAST OF TULARE MUNICIPAL AIRPORT.

**Location Detail:** BIRDS FORAGE IN ALFALFA FIELDS AND ROOST IN THE VICINITY OF THIS PRESUMED NEST SITE.

**Ecological:** HABITAT CONSISTS OF VALLEY OAK RIPARIAN FOREST, DOMINATED BY FREMONT COTTONWOOD.

**Threat:** THREATS INCLUDE LIMITED RURAL DEVELOPMENT AND AGRICULTURE (CONVERSION).

**General:** PAIR OBSERVED ON 31 JUL 1998 AND PRESUMED NESTING.

**Owner/Manager:** TUL COUNTY, PVT
**Buteo swainsoni**

Swainson's hawk

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**Habitat Associations**

General: BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

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**Occurrence No. 708**

**Map Index:** 40131  
**EO Index:** 35133  
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**Dates Last Seen**

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**Quadrant Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

**Location Details:**

**Ecological:** HABITAT CONSISTS OF DEGRADED VALLEY OAK RIPARIAN WOODLAND, DOMINATED BY QUERCUS LOBATA, POPULUS FREMONTII, AND SALIX SPP.

**Threat:** SLOUGH CHANNEL IS KEPT CLEAR OF RIPARIAN VEGETATION FOR IRRIGATION PROJECT USE.

**General:** 2 ACTIVE NEST SITES AND A ROOST SITE UTILIZED BY MOSTLY JUVENILES WAS OBSERVED IN JUNE 1994.

**Owner/Manager:** TNC-CREIGHTON RANCH PRESERVE
### General:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

### Habitat Associations

- **General:** BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH
- **Micro:** REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

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### Occurrence No. 774

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### Location:

- **Location:** SOUTH SIDE OF SOUTH BRANCH TULE RIVER (CANAL), 0.1 MILE EAST OF THE FRONTAGE ROAD, 2 MILES NORTH OF TIPTON.

### Location Detail:

- **Ecological:** NEST TREE IS THE SECOND LARGE TREE EAST OF THE FRONTAGE ROAD.
- **Threat:**

### Owner/Manager:

UNKNOWN
**Buteo swainsoni**  
Swainson's hawk  

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**Habitat Associations**

**General:** BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

**Micro:** REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

---

**Occurrence No.** 777  
**Map Index:** 41944  
**EO Index:** 41944  
**Dates Last Seen**

|---------------|----------------------------------|--------------------------|---------------|-------------------------------|

**Quad Summary:** Cairns Corner (3611922/310B)  
**County Summary:** Tulare

**Location:** ALONG OUTSIDE CREEK, 0.5 MILE WNW OF THE INTERSECTION OF FARMERSVILLE ROAD AND HIGHWAY 137, 12 MILES SOUTH OF VISALIA.

**Location Detail:** NEST WAS LOCATED IN THE NE SIDE OF AN OAK, ON THE NORTH SIDE OF OUTSIDE CREEK/CANAL.

**Ecological:** NEST TREE IS AN OAK; SURROUNDED BY GRAINFIELDS IN ALL DIRECTIONS, WITH SOME AG FURTHER NORTH AND ORCHARDS FURTHER SOUTH.

**Threat:**

**General:** 1 LIGHT/1 DARK ADULT OBSERVED NESTING ON 22 APR 1999. 1 LIGHT/1 DARK ADULT AND 2 NESTLINGS OBSERVED IN THE NEST ON 21 MAY 2000.

**Owner/Manager:** UNKNOWN
### Buteo swainsoni

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#### Habitat Associations

**General:** BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

**Micro:** REQUIRE ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

### Occurrence Data

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- **Element:** 1999-05-26
- **Site:** 2003-07-XX
- **Record Last Updated:** 2003-07-07

#### Quad Summary:

- **Alpaugh (3511984/288B), Taylor Weir (3611914/311C)**
- **Tulare**

#### County Summary:

- **Tulare**

#### Location:

- **EAST SIDE OF HIGHWAY 43, 0.6 MILE NORTH OF AVENUE 112, NORTH OF ANGIOLA**

#### Location Detail:

- **NEST TREE IS LOCATED ALONG THE WEST EDGE OF A DRAINAGE POND/BASIN, AT THE EDGE OF AN AG FIELD, JUST EAST OF HIGHWAY 43. NEST IS RELATIVELY LOW - ABOUT 15 FEET.**
- **ECOLOGICAL:** NEST TREE/BUSH IS IN POOR CONDITION; SURROUNDED BY AGRICULTURE/DAIRY.
- **THREAT:** POSSIBLE THREAT FROM PROXIMITY OF NEST TREE TO THE MEDIAN OF HIGHWAY 43.
- **GENERAL:** 1 BIRD OBSERVED, 20 APR 1999; 2 BIRDS OBSERVED NESTING ON 26 MAY 1999. NEST BLOWN OUT, FALL/WINTER 1999; SITE INACTIVE, 2000. NEST TREE HAD FALLEN BY JUL 2003; BUSHES STILL FOUND AROUND THE BASIN, AND SITE SURROUNDED BY ALFALFA FIELDS.

#### Owner/Manager:

- **UNKNOWN**
**Buteo swainsoni**  
Swainson's hawk

### General
BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

### Habitat Associations

<table>
<thead>
<tr>
<th>Status</th>
<th>NDDB Element Ranks</th>
<th>Other Lists</th>
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<tbody>
<tr>
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### Global: G5  
State: S2  

### CDFG Status:

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<th>Element</th>
<th>Site</th>
<th>Record Last Updated</th>
</tr>
</thead>
</table>

### Quad Summary:
Paige (3611924/311B)

### County Summary:
Tulare

### Location Details:
0.5 MILE WEST OF COUNTY ROAD 60 (BUENA VISTA AVENUE) AND SOUTH OF PAIGE ROAD, 5 MILES SW OF TULARE

### Location Detail:
NEST TREE IS LOCATED BEHIND SOME RANCH BUILDINGS.

### Ecological:
NEST TREE IS A LARGE EUCALYPTUS.

### General:
DFG SWHA #TU006. 2 ADULTS OBSERVED AT THE NEST ON 27 JUN 1994.

### Owner/Manager:
PVT
Buteo swainsoni
Swainson's hawk

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Habitat Associations

General: BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 793
Map Index: 42285
EO Index: 42285
Dates Last Seen: 2000-06-20

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Quad Summary: Paige (3611924/311B)
County Summary: Tulare

Lat/Long: 36.15634º / -119.49261º
UTM: Zone-11 N4004168 E275769
Mapping Precision: SPECIFIC
Symbol Type: POINT
Radius: 80 meters

Location: EAST SIDE OF HIGHWAY 137, 1.75 MILES SOUTH OF PAIGE AVENUE, 8 MILES SW OF TULARE.
Ecological: NEST TREE IS A EUCALYPTUS; SURROUNDED BY DAIRIES AND AGRICULTURE.

Threat:
General: DFG SWHA #TU008. 2 ADULTS/2 JUVENILES OBSERVED AT THE NEST ON 14 JUL 1994. 2 ADULTS (NO NEST) OBSERVED IN 1999. 2 ADULTS (1 DARK/1 LIGHT), 1 SOARING/1 STANDING IN NEST, OBSERVED, 22 MAY 2000. 2 ADULTS/1 NESTLING OBSERVED, 20 JUN 2000.

Owner/Manager: PVT
### Buteo swainsoni

**Swainson's hawk**  

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#### Habitat Associations

**General:** BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

**Micro:** REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

### Occurrence

- **Occurrence No.:** 794  
- **Map Index:** 42286  
- **EO Index:** 42286  
- **Dates Last Seen:**
  - **Element:** 1994-06-21  
  - **Site:** 1994-06-21  

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#### Quad Summary:

- **Tulare (3611923/311A)**

#### County Summary:

- **Tulare**

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<th>Lat/Long</th>
<th>Township</th>
<th>Range</th>
<th>Section</th>
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<th>Elevation</th>
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<td>36.16829° / -119.34239°</td>
<td>20S</td>
<td>24E</td>
<td>23</td>
<td>SW</td>
<td>270 ft</td>
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</table>

#### Location:

- **West of I Street, 1 mile south of Paige Avenue, 2 miles south of Tulare.**

#### Location Detail:

- **Nest tree is located 50M south of Bates Slough.**

#### Ecological:

- **Nest tree is a large valley oak.**

#### Threat:

- **General:** DFG SWHA #TU005. 2 adults and 1 juvenile observed at the nest on 21 Jun 1994.

#### Owner/Manager:

- **PVT**
**Buteo swainsoni**

**Swainson's hawk**

<table>
<thead>
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**Habitat Associations**

**General:** BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

**Micro:** REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

<table>
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<th>EO Index</th>
<th>Dates Last Seen</th>
<th>Element</th>
<th>Site</th>
<th>Record Last Updated</th>
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</thead>
</table>

**Quad Summary:** Paige (3611924/311B)

**County Summary:** Tulare

- **Lat/Long:** 36.12685° / -119.46025°
- **UTM:** Zone-11 N4000821 E278598
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 1/10 mile

**Location:** ALONG BATES SLOUGH, 0.3 MILE NORTH OF ROAD 184 (OCTOL AVENUE), 7 MILES SW OF TULARE.

**Location Detail:**

- **Ecological:** NEST TREE IS A MEDIUM-SIZED VALLEY OAK.
- **Threat:**
  - **General:** DFG SWHA #TU007. 2 ADULTS AND 1 JUVENILE OBSERVED AT THE NEST ON 13 JUN 1994.

**Owner/Manager:** PVT
**Buteo swainsoni**  
Swainson's hawk

<table>
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**Habitat Associations**

**General:** BREEDS IN GRASSLANDS WITH WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH

**Micro:** REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

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<table>
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**Occ Rank:** Good  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown

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<th>County Summary</th>
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<tbody>
<tr>
<td>Goshen (361134/334C)</td>
<td>Tulare</td>
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</table>

**Location:** SOUTH SIDE OF STATE ROUTE 198, 0.2 MILE WEST OF ROAD 56, 8 MILES WEST OF VISALIA.

**Location Detail:** NEST TREE IS LOCATED WITHIN THE CALTRANS RIGHT-OF-WAY FOR STATE ROUTE 198.

**Ecological:** NEST TREE IS A BLACK WALNUT; SURROUNDED BY AGRICULTURAL FIELDS PLANTED WITH ALFALFA, BARLEY, AND WALNUT TREES.

**Threat:**

**General:** ON 13 JUL 2007, 2 JUVENILES WERE OBSERVED ON AND NEAR THE NEST TREE, WHILE THE TWO ADULTS SOARED OVERHEAD.

Owner/Manager: CALTRANS
### Caulanthus californicus

**California jewel-flower**

<table>
<thead>
<tr>
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<th>Other Lists</th>
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#### Habitat Associations

- **General:** CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, PINYON-JUNIPER WOODLAND.
- **Micro:** HISTORICAL FROM VARIOUS VALLEY HABITATS IN BOTH THE CENTRAL VALLEY AND CARRIZO PLAIN. 65-900M.

#### Occurrence Details

<table>
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- **Occ Rank:** None
- **Origin:** Natural/Native occurrence
- **Presence:** Extirpated
- **Trend:** Unknown

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<td>2005-11-09</td>
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#### Location:

- **TULARE.**

#### Ecological:

- **Threat:** EXTIRPATED BY INTENSIVE AGRICULTURE AND URBAN GROWTH.
- **General:** THIS WAS TYPE LOCALITY BASED ON COLLECTION OF A.E. BUSH FROM AROUND 1880. SEARCHED IN 1986 BY TAYLOR; SPECIES NOT FOUND. EXTIRPATED. GENERAL AREA NO LONGER SUPPORTS HABITAT FOR THE SPECIES DUE TO INTENSIVE AGRICULTURE, URBAN GROWTH.

#### Owner/Manager:

- PVT
### Caulanthus californicus

**California jewel-flower**

<table>
<thead>
<tr>
<th>Status</th>
<th>NDDB Element Ranks</th>
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**Habitat Associations**

- General: CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, PINYON-JUNIPER WOODLAND.
- Micro: HISTORICAL FROM VARIOUS VALLEY HABITATS IN BOTH THE CENTRAL VALLEY AND CARRIZO PLAIN. 65-900M.

**Occurrence No.**: 3

**Map Index**: 15654

**EO Index**: 20311

**Dates Last Seen**

- Element: 1971-03-21
- Site: 1986-XX-XX
- Record Last Updated: 1997-03-17

**Quad Summary**: Sausalito School (3511982/287B), Woodville (3611912/310C)

**County Summary**: Tulare

**Lat/Long**: 36.00883º / -119.21566º

**UTM**: Zone-11 N3987198 E300314

**Mapping Precision**: NON-SPECIFIC

**Symbol Type**: POINT

**Radius**: 1 mile

**Elevation**: 315 ft

**Location**: 4.5 MI NE OF PIXLEY.

**Location Detail**:

- Ecological: ANNUAL GRASSLAND ON SANDY SOILS AND VERNAL POOL HABITATS.
- Threat: SMALL SIZE OF THE PRESERVE MAY NOT BE ADEQUATE TO SUSTAIN A POP. OF C. CALIFORNICUS. ALSO COMPETITION W/EXOTIC GRASSES.
- General: AREA SEARCHED IN 1986; HABITAT MODIFIED. THIS POP. RESULTED FROM THE INTRODUCTION OF SEED (SOURCE FROM OCC 40). FORMER TNC PRESERVE; TRANSFERRED TO CNLM IN 1997.

**Owner/Manager**: CENTER FOR NATURAL LANDS MGMT
### Charadrius montanus

#### mountain plover

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**Habitat Associations**

**General:** SHORT GRASSLANDS, FRESHLY PLOWED FIELDS, NEWLY SPROUTING GRAIN FIELDS, & SOMETIMES SOD FARMS

**Micro:** SHORT VEGETATION, BARE GROUND & FLAT TOPOGRAPHY. PREFERS GRAZED AREAS & AREAS WITH BURROWING RODENTS.

---

**Occurrence No.** 6  
**Map Index:** 40908  
**EO Index:** 40908  
**Dates Last Seen**  
**Element:** 1987-XX-XX  
**Site:** 1987-XX-XX  
**Record Last Updated:** 1999-02-25

**Quad Summary:** Taylor Weir (3611914/311C)  
**County Summary:** Tulare

- **Lat/Long:** 36.07210° / -119.47859°  
- **UTM:** Zone-11 N3994789 E276792  
- **Mapping Precision:** NON-SPECIFIC  
- **Symbol Type:** POLYGON  
- **Area:**

**Location:** CREIGHTON RANCH PRESERVE, 5 MILES SE OF CORCORAN.

**Location Detail:** ALL NON-MARSHY AREAS OF THE PRESERVE ARE INCLUDED IN THE POLYGON. EXACT LOCATION OF THE BIRDS ON THE PRESERVE WAS NOT GIVEN.

**Ecological:**


**Owner/Manager:** TNC-CREIGHTON RANCH PRESERVE
### Delphinium recurvatum

**Recurred larkspur**

**Element Code:** PDRAN0B1J0

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**Habitat Associations**

**General:** CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, CIS-MONTANE WOODLAND.

**Micro:** ON ALKALINE SOILS; OFTEN IN VALLEY SALTBUSH OR VALLEY CHENOPOD SCRUB. 3-685M.

---

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**Occurrence Details:**

- **Origin:** Natural/Native occurrence
- **Presence:** Presumed Extant
- **Trend:** Unknown

**Location:** BESIDE HIGHWAY 99, 4 MILES NORTH OF PIXLEY.

**Location Detail:** GROWING IN FIELD.

**Ecological:**

**General:** ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1947 COLLECTION BY WIGGINS.

**Owner/Manager:** UNKNOWN
**Delphinium recurvatum**

recurved larkspur  

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**Habitat Associations**

**General:** CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

**Micro:** ON ALKALINE SOILS; OFTEN IN VALLEY SALTBUSH OR VALLEY CHENOPOD SCRUB. 3-685M.

---

**Occurrence No.** 82  
**Map Index:** 56674  
**EO Index:** 58418  
**Dates Last Seen**

- **Element:** 1998-03-25  
- **Site:** 1998-03-25

**Occurrences:**

- **Origin:** Natural/Native occurrence  
- **Presence:** Presumed Extant  
- **Trend:** Unknown

**Record Last Updated:** 2004-12-09

**Quad Summary:** Cairns Corner (3611922/310B)  
**County Summary:** Tulare

**Location:** TULARE COUNTY LANDFILL PROPERTY, BOTH SIDES OF BLISS ROAD ABOUT 0.5 TO 1 MILE NORTH OF STRATHMORE ROAD.

**Location Detail:** MAPPED WITHIN THE NW 1/4 OF SEC 35 AND THE SW 1/4 OF THE NE 1/4 OF SEC 35.

**Ecological:** IN SWALES AND MARGINS OF SLICKSPOTS IN ANNUAL GRASSLAND, WITH SUAEDA MOSQUINII AND HEMIZONIA PUNGENS.

**Threat:** SITE IS APPROVED FOR LANDFILL EXPANSION

**General:** 500+ PLANTS SEEN IN 1998.

**Owner/Manager:** TUL COUNTY

---

**Natural Diversity Database**  
California Department of Fish and Game  
Full Report for Selected Elements - UC Davis, Tulare
**Desmocerus californicus dimorphus**
valley elderberry longhorn beetle

<table>
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**Habitat Associations**

**General:** OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).

**Micro:** PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

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<table>
<thead>
<tr>
<th>Occurrence No.</th>
<th>Map Index</th>
<th>EO Index</th>
<th>Dates Last Seen</th>
<th>Element</th>
<th>Site</th>
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**Occ Rank:** Fair
**Origin:** Natural/Native occurrence
**Presence:** Presumed Extant
**Trend:** Unknown
**Record Last Updated:** 1998-08-11

**Quad Summary:** Exeter (3611932/333C)
**County Summary:** Tulare

**Location:** LANE SLOUGH (NORTH BANK), TRIBUTARY TO KAWEAH RIVER, JUST EAST OF EXETER BLVD (HWY 65), ABOUT 5 MILES NORTH OF EXETER.

**Location Detail:** REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.

**Ecological:** 3 LARGE CLUMPS OF SAMBUCUS MEXICANA; SURROUNDING HABITAT CONSISTS OF OPEN, GRAZED GRASSLAND, WITH SOME AGRICULTURE.

**Threat:** THREATENED BY NORMAL ROAD MAINTENANCE ACTIVITIES.

**General:** THE 3 LARGE CLUMPS OF SAMBUCUS MEXICANA HAD MANY EXIT HOLES, AND A DEAD ADULT MALE WAS FOUND IN ONE HOLE.

**Owner/Manager:** UNKNOWN
**Dipodomys nitratoides nitratoides**

Tipton kangaroo rat

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</table>

**Habitat Associations**

**General:** SALTBRUSH SCRUB AND SINK SCRUB COMMUNITIES IN THE TULARE LAKE BASIN OF THE SOUTHERN SAN JOAQUIN VALLEY.

**Micro:** NEEDS SOFT FRIABLE SOILS WHICH ESCAPE SEASONAL FLOODING. DIGS BURROWS IN ELEVATED SOIL MOUNDS AT BASES OF SHRUBS.

---

**Occurrence No. 1**

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**Occ Rank:** None

**Origin:** Natural/Native occurrence

**Presence:** Extirpated

**Trend:** Unknown

**Record Last Updated:** 2006-07-24

**Quad Summary:** Tipton (3611913/311D)

**County Summary:** Tulare

**Location:** TIPTON.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** TYPE COLL. BY STREATOR ON 25 JUNE 1893. UCLA SPECIMENS FROM 1927. 45 SPECIMENS (25M, 20F) COLL. 25 TO 29 APR 1911 BY GRINNELL, CHANDLER & CARR. MVZ #14273-14315. 3 SPECIMENS. (2M, 1F) COLL. 16 & 19 APR 1898 BY STREATOR. MVZ 112048-112050.

**Owner/Manager:** UNKNOWN
**Dipodomys nitratoides nitratoides**

Tipton kangaroo rat

**Element Code:** AMAFD03152

<table>
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<tr>
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<th>Other Lists</th>
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<tr>
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</table>

**Habitat Associations**

**General:** SALTBRUSH SCRUB AND SINK SCRUB COMMUNITIES IN THE TULARE LAKE BASIN OF THE SOUTHERN SAN JOAQUIN VALLEY.

**Micro:** NEEDS SOFT FRIABLE SOILS WHICH ESCAPE SEASONAL FLOODING. DIGS BURROWS IN ELEVATED SOIL MOUNDS AT BASES OF SHRUBS.

---

**Occurrence No. 22**

**Map Index:** 15333

**EO Index:** 12426

**Dates Last Seen**

**Occ Rank:** Unknown

**Origin:** Natural/Native occurrence

**Presence:** Presumed Extant

**Trend:** Unknown

**Element:** 1985-07-XX

**Site:** 1985-07-XX

**Record Last Updated:** 1989-08-10

**Quad Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

**Lat/Long:** 36.00366° / -119.45102°

**UTM:** Zone-11 N3987132 E279084

**Mapping Precision:** SPECIFIC

**Symbol Type:** POLYGON

**Area:** 270.9 acres

**Township:** 22S

**Range:** 23E

**Section:** 23

**Qtr:** XX

**Meridian:** M

**Elevation:** 215 ft

**Location:** PORTIONS OF SECS 23&24, T22S, R23E. APPROX 2 MI E OF JCT HWY43 & HESSE AVE.

**Location Detail:** LESS THAN ONE BURROW PER HA OBSERVED.

**Ecological:** HABITAT IS APPROXIMATELY 75 HA OF SANDY LOAM/ALKALI GRASSLAND.

**Threat:** AREA IS GRAZED.

**General:** SITE #4 (WILLIAMS 1985). AREA MAY BE LARGER; ACCESS TO SOUTHERN PORTIONS OF THE SECTIONS WAS LIMITED.

**Owner/Manager:** PVT
Dipodomys nitratoides nitratoides

<table>
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<th>Other Lists</th>
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**Habitat Associations**

**General:** SALTBRUSH SCRUB AND SINK SCRUB COMMUNITIES IN THE TULARE LAKE BASIN OF THE SOUTHERN SAN JOAQUIN VALLEY.

**Micro:** NEEDS SOFT FRIABLE SOILS WHICH ESCAPE SEASONAL FLOODING. DIGS BURROWS IN ELEVATED SOIL MOUNDS AT BASES OF SHRUBS.

---

**Occurrence No.**: 101  **Map Index**: 65358  **EO Index**: 65437  **Dates Last Seen**

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**Quad Summary:** Woodville (3611912/310C), Cairns Corner (3611922/310B)

**County Summary:** Tulare

**Lat/Long:** 36.12399° / -119.22034°  **Township:** 21S

**UTM:** Zone-11 N3999984 E300183  **Range:** 25E

**Mapping Precision:** NON-SPECIFIC  **Section:** 01  **Meridian:** M

**Symbol Type:** POINT  **Qtr:** XX  **Elevation:** 320 ft

**Radius:** 1 mile  **Record Last Updated:** 2006-07-24

**Location:** 7 MI NE OF TIPTON.

**Location Detail:** HISTORICAL MUSEUM RECORD; EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS ABOUT 2.43 AIR MI NNW OF WOODVILLE, JUST SOUTHWEST OF INTERSECTION OF BLISS LANE AND STRATHMORE RD.

**Ecological:**

**General:** 1 FEMALE SPECIMEN COLLECTED ON 25 OCT 1943 AT "7 MI NE OF TIPTON" BY SETH B. BENSON AND DONALD T. TAPPE. MVZ #101160.

**Owner/Manager:** UNKNOWN
### Eryngium spinosepalum

- **Common Name:** spiny-sepaled button-celery
- **Element Code:** PDAPI0Z0Y0
- **Status**
  - Federal: None
  - Global: G2
  - State: S2.2
- **Habitat Associations**
  - General: VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND.
  - Micro: SOME SITES ON CLAY SOIL OF GRANITIC ORIGIN; VERNAL POOLS, WITHIN GRASSLAND. 100-420M.

### Occurrence Details

<table>
<thead>
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<th>Occurrence No.</th>
<th>Map Index</th>
<th>EO Index</th>
<th>Dates Last Seen</th>
<th>Element</th>
<th>Site</th>
<th>Record Last Updated</th>
</tr>
</thead>
</table>

- **Origin:** Natural/Native occurrence
- **Presence:** Possibly Extirpated
- **Trend:** Unknown

### Location

- **Lat/Long:** 36.29677° / -119.14109°
- **Map Index:** UTM: Zone-11 N4018992 E307740
- **Symbol Type:** POINT
- **Radius:** 1 mile

- **Location:** EXETER.
- **Location Detail:** MAPPED IN VICINITY OF EXETER. COLLECTION MAY HAVE BEEN MADE SEVERAL MILES TO THE EAST WHERE ERYNGIUM HAS BEEN OBSERVED RECENTLY.
- **Ecological:**
  - **Threat:** CONVERSION TO URBAN AND AGRICULTURAL USES HAS PROBABLY ELIMINATED HABITAT IN THIS AREA FOR ERYNGIUM.
  - **General:** TYPE COLLECTION MADE HERE IN 1905 BY K. BRANDEGEE (SN JEPS).
- **Owner/Manager:** UNKNOWN

### Quad Summary

- **Quad Summary:** Exeter (3611932/333C), Rocky Hill (3611931/333D)
- **County Summary:** Tulare
**Eumops perotis californicus**

**western mastiff bat**

<table>
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</table>

**Habitat Associations**

- General: MANY OPEN, SEMI-ARID TO ARID HABITATS, INCLUDING CONIFER & DECIDUOUS WOODLANDS, COASTAL SCRUB, GRASSLANDS, CHAPARRAL ETC
- Micro: ROOSTS IN CREVICES IN CLIFF FACES, HIGH BUILDINGS, TREES & TUNNELS.

---

**Occurrence No. 44**

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</table>

**Origin:** Natural/Native occurrence

**Presence:** Presumed Extant

**Trend:** Unknown

**Location:** ALONG NORTHERN BEND OF PACKWOOD CREEK ABOUT 0.5 MILES WEST OF MOONEY BLVD.

**Ecological:** OAK RIPARIAN ALONG CREEK, ADJACENT TO CULTIVATED FARMLAND TO THE SOUTH & RESIDENTIAL, COMMERCIAL & INDUSTRIAL DEVELOPMENTS TO THE NORTH.

**Threat:** CONVERSION OF FARMLAND TO DEVELOPMENT.

**General:** ONE HEARD AND DETECTED (USING ANABAT) FLYING OVERHEAD DURING ACOUSTIC AND NIGHT-VISION SURVEYS.

**Owner/Manager:** PVT

**Lat/Long:** 36.29393° / -119.32266°

**UTM:** Zone-11 N4019054 E291425

**Mapping Precision:** SPECIFIC

**Symbol Type:** POINT

**Radius:** 80 meters

---

**County Summary:** Tulare

**Quad Summary:** Visalia (3611933/334D)

**Township:** 19S

**Range:** 24E

**Section:** 12

**Meridian:** M

**Elevation:** 300 ft

---

**Record Last Updated:** 2005-05-06
**Gambelia sila**
blunt-nosed leopard lizard

**Element Code:** ARACF07010

---

**Status**

**Federal:** Endangered  
**Global:** G1  
**State:** Endangered  
**State:** S1

---

**Habitat Associations**

**General:** RESIDENT OF SPARSELY VEGETATED ALKALI AND DESERT SCRUB HABITATS, IN AREAS OF LOW TOPOGRAPHIC RELIEF.

**Micro:** SEEKS COVER IN MAMMAL BURROWS, UNDER SHRUBS OR STRUCTURES SUCH AS FENCE POSTS; THEY DO NOT EXCAVATE THEIR OWN BURROWS.

---

**Occurrence No. 187**  
**Map Index:** 15327  
**EO Index:** 27746  
**Dates Last Seen:**  
**Element:** 1981-XX-XX  
**Site:** 1981-XX-XX

---

**Quad Summary:** Taylor Weir (3611914/311C)  
**County Summary:** Tulare

---

**Lat/Long:** 36.03022° / -119.45568°  
**Township:** 22S  
**UTM:** Zone-11 N3990090 E278738  
**Range:** 23E  
**Mapping Precision:** NON-SPECIFIC  
**Section:** 11  
**Symbol Type:** POINT  
**Qtr:** XX  
**Elevation:** 215 ft  
**Meridian:** M  
**Radius:** 1 mile  
**Record Last Updated:** 1989-08-10

---

**Location:** 1.5 MI E OF LAKELAND CANAL.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** OBSERVATIONS BASED UPON CDFG BLUNT NOSED LEOPARD LIZARD SURVEY 1981. INFORMATION PROVIDED BY J. BRODE, CDFG.

**Owner/Manager:** UNKNOWN
**Gambelia sila**  
blunt-nosed leopard lizard

<table>
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**Habitat Associations**

**General:** RESIDENT OF SPARSELY VEGETATED ALKALI AND DESERT SCRUB HABITATS, IN AREAS OF LOW TOPOGRAPHIC RELIEF.

**Micro:** SEeks COVER IN MAMMAL BURROWS, UNDER SHRUBS OR STRUCTURES SUCH AS FENCE POSTS; THEY DO NOT EXCAVATE THEIR OWN BURROWS.

<table>
<thead>
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<th>Occurrence No.</th>
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**Quad Summary:** Corcoran (3611915/312D), Waukena (3611925/312A), Taylor Weir (3611914/311C), Paige (3611924/311B)

**County Summary:** Tulare

**Location:** 0.25 MI S OF WAUKENA RD.

**Owner/Manager:** UNKNOWN
## Great Valley Valley Oak Riparian Forest

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### Occurrence No. 22

- **Map Index:** 15697
- **EO Index:** 15609
- **Dates Last Seen:** 1985-12-30
- **Element:** 1985-12-30
- **Site:** 1985-12-30
- **Record Last Updated:** 1998-07-23

**Occ Rank:** Good

**Origin:** Natural/Native occurrence

**Presence:** Presumed Extant

**Trend:** Unknown

**Quadrangle:** Exeter (3611932/333C)

**County Summary:** Tulare

**Lat/Long:** 36.33307° / -119.17561°

**UTM:** Zone-11 N4023088 E304730

**Mapping Precision:** SPECIFIC

**Symbol Type:** POLYGON

**Area:** 168.4 acres

**Township:** 18S

**Range:** 26E

**Section:** 29

**Qtr:** S

**Meridian:** M

**Elevation:** 320 ft

**Location:** ABOUT 2 MI NW OF EXETER, N OF HWY 198. (FORMERLY KAWEAH OAKS PRESERVE).

**Location Detail:**

**Ecological:** VALLEY OAKS IN BOTTOMLANDS NEAR STREAM CHANNELS W/SALIX GOODDINGII, SALIX SP, FRAXINUS, PLATANUS, POPULUS, ALNUS, CEPHALANTHUS, VITIS, RUBUS URSINUS, RUBUS SP. EXCLOSURES PROTECT OAKS FROM GRAZING, GOOD REPROD W/HUNDREDS OF SEEDLINGS.

**Threat:**

**General:** THIS WAS OCC #022 OF CTT63410CA. FORMERLY TNC KAWEAH OAKS PRESERVE; TRANSFERRED TO LAND TRUST ON 12/97.

**Owner/Manager:** FOUR CREEKS LAND TRUST
Imperata brevifolia

California satintail

Element Code: PMPOA3D020

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</table>

Habitat Associations

General: COASTAL SCRUB, CHAPARRAL, RIPARIAN SCRUB, MOJAVEAN SCRUB, MEADOWS AND SEEPS (ALKALI).

Micro: MESIC SITES, ALKALI SEEPS, RIPARIAN AREAS, 0-500M.

<table>
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<th>Map Index</th>
<th>EO Index</th>
<th>Dates Last Seen</th>
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Occ Rank: Unknown

Origin: Natural/Native occurrence

Presence: Presumed Extant

Trend: Unknown

Record Last Updated: 2007-04-25

Quad Summary: Visalia (3611933/334D)

County Summary: Tulare

Lat/Long: 36.33377° / -119.29640°

UTM: Zone-11 N4023417 E293889

Mapping Precision: NON-SPECIFIC

Symbol Type: POINT

Radius: 1 mile

Location: VISALIA.

Location Detail: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS A BEST GUESS IN VISALIA.

Ecological:

Threat:

General: ONLY SOURCES OF INFORMATION FOR THIS OCCURRENCE IS AN ANONYMOUS 1881 COLLECTION (POSSIBLY BY CONGDON?), AN 1881 CONGDON COLLECTION, AND AN 1895 DUDLEY COLLECTION. NEEDS FIELDWORK.

Owner/Manager: CITY OF VISALIA, PVT
### Lytta hoppingi

**Hopping's blister beetle**

**Element Code:** II.COL4C010

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</table>

**Habitat Associations**

**General:** INHABITS THE FOOTHILLS AT THE SOUTHERN END OF THE CENTRAL VALLEY.

**Micro:**

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<th>Occurrence No.</th>
<th>Map Index</th>
<th>EO Index</th>
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- **Occ Rank:** Unknown
- **Origin:** Natural/Native occurrence
- **Presence:** Presumed Extant
- **Trend:** Unknown

**Quad Summary:** Visalia (3611933/334D)

**County Summary:** Tulare

- **Lat/Long:** 36.33377º / -119.29640º
- **UTM:** Zone-11 N4023417 E293889
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 1 mile

- **Township:** 18S
- **UTM Range:** 25E
- **Section:** 29
- **Qtr:** XX
- **Meridian:** M
- **Elevation:** 325 ft

**Location:** VISALIA.

**Location Detail:**

**Ecological:**

- **Threat:** SITE MAY BE THREATENED BY AGRICULTURE AND/OR DEVELOPMENT.

- **General:** UNKNOWN NUMBER OF INDIVIDUALS FOUND IN MARCH AND ON JUNE 17 OF UNKNOWN YEAR (OBSERVER UNKNOWN). RECORED REPORTED BY SELANDER. A HISTORICAL SPECIMEN COLLECTED 23 MAR 1935 IS DEPOSITED IN THE UC DAVIS BOHART MUSEUM OF ENTOMOLOGY.

**Owner/Manager:** CITY OF VISALIA, PVT
**Lytta morrisoni**

**Morrison's blister beetle**

**Element Code:** IICOL4C040

**Status**

- Federal: None
- State: None

**Habitat Associations**

- **General:** INHABITANT OF THE SOUTHERN CENTRAL VALLEY OF CALIFORNIA.

**Occurrence No.** 4  
**Map Index:** 15544  
**EO Index:** 64452  
**Dates Last Seen**

- Element: 19XX-XX-XX
- Site: 19XX-XX-XX

**Dates Last Seen**

- 19XX-XX-XX
- 19XX-XX-XX

**Quad Summary:** Tipton (3611913/311D)  
**County Summary:** Tulare

**Lat/Long:** 36.05939º / -119.31039º  
**UTM:** Zone-11 N3993006 E291909  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 1 mile

**Location:** TIPTON.

**Ecological:**

**General:** LOCALITY FROM CALIFORNIA BEETLE PROJECT ONLINE DATABASE; COLLECTION INFORMATION NOT GIVEN. HISTORICAL RECORD; EXACT LOCATION UNKNOWN.

**Owner/Manager:** UNKNOWN
### Pseudobahia peirsonii

**San Joaquin adobe sunburst**

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</table>

**Habitat Associations**

**General:** VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

**Micro:** GRASSY VALLEY FLOORS AND ROLLING FOOTHILLS IN HEAVY CLAY SOIL. 85-800M.

<table>
<thead>
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<th>Occurrence No.</th>
<th>Map Index</th>
<th>EO Index</th>
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**Quad Summary:** Tulare (3611923/311A)

**County Summary:** Tulare

**Lat/Long:** 36.20509° / -119.32639°

**UTM:** Zone-11 N4009205 E290854

**Mapping Precision:** NON-SPECIFIC

**Symbol Type:** POINT

**Radius:** 1 mile

**Location:** TULARE.

**Ecological:**

**Threat:** RUDERAL AND AGRICULTURE LANDS DOMINATE THE LANDSCAPE IN VICINITY OF TULARE.

**General:** ONLY SOURCE OF LOCATION INFORMATION IS COLLECTION BY DAVY SN APRIL 1997 (UC). STEBBINS SUGGESTS THAT BASED UPON SOIL CONDITIONS AND HISTORIC DATE OF COLLECTION IT IS POSSIBLE THAT ACTUAL LOCATION MAY BE FURTHER EAST NEAR PORTERVILLE.

**Owner/Manager:** PVT
### Spea hammondii

**western spadefoot**

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</table>

**Habitat Associations**

**General:** OCCURS PRIMARILY IN GRASSLAND HABITATS, BUT CAN BE FOUND IN VALLEY-FOOTHILL HARDWOOD WOODLANDS.

**Micro:** VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

### Occurrence Details

<table>
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**Occ Rank:** Good

**Origin:** Natural/Native occurrence

**Presence:** Presumed Extant

**Trend:** Unknown

**Dates Last Seen:**

- Element: 2004-04-19
- Site: 2004-04-19
- Record Last Updated: 2004-04-26

**County Summary:** Tulare

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**UTM:**

- Zone-11 N4025020 E285001
- Mapping Precision: SPECIFIC
- Symbol Type: POINT
- Radius: 80 meters

**Location:** 0.3 MILE NNW OF THE INTERSECTION OF ROAD J32 AND ROAD J19, SE OF GOSHEN

**Location Detail:**

**Ecological:** HABITAT CONSISTS OF VERNAL POOLS, WITH TYPICAL VERNAL POOL PLANTS, SURROUNDED BY NON-NATIVE ANNUAL GRASSLAND DOMINATED BY TARWEED, WILD RYE, RIP-GUT BROME, FIDDLENECK, AND STINGING NETTLE. OVERALL TOPOGRAPHY FLAT.

**Threat:** THREATENED BY FUTURE DEVELOPMENT.

**General:** 12 JUVENILES OBSERVED ON 19 APR 2004.

**Owner/Manager:** PVT-JACUZZI PROPERTY
**Talanites moodyae**  
Moody's gnaphosid spider

<table>
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**Habitat Associations**

- General: SERPENTINE ENDEMIC.
- Micro:

---

**Occurrence No.**: 6  
**Map Index**: 59134  
**EO Index**: 59170  
**Dates Last Seen**: 1991-03-12

- **Occ Rank**: Unknown  
- **Origin**: Natural/Native occurrence  
- **Presence**: Presumed Extant  
- **Trend**: Unknown  
- **Element**: 1991-03-12  
- **Site**: 1991-03-12  
- **Record Last Updated**: 2005-01-06

---

**Quad Summary**: Exeter (3611932/333C), Ivanhoe (3611942/333B)  
**County Summary**: Tulare

| Lat/Long: 36.37297\(^\circ\) / -119.18000\(^\circ\)  | Township: 18S |
| UTM: Zone-11 N4027524 E304436  | Range: 26E |
| Mapping Precision: SPECIFIC  | Section: 08 |
| Symbol Type: POLYGON  | Qtr: XX |
| Area: 1,620.6 acres  | Meridian: M |
| Elevation: 700 ft  |  

**Location**: VENICE HILLS.

- **Location Detail**: FOUND UNDER ROCKS.
- **Threat**: I JUVENILE COLLECTED BY W.H. TYSON FROM CALIF DEPT OF FOOD & AG ON 12 MAR 1991.
- **Owner/Manager**: UNKNOWN
### Taxidea taxus

**American badger**

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#### Habitat Associations

**General:**
MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

**Micro:**
NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

---

### Occurrence Details

- **Occurrence No.:** 70
- **Map Index:** 56584
- **EO Index:** 56600
- **Dates Last Seen:**
  - **Element:** 1994-10-28
  - **Site:** 1994-10-28

- **Quadrant Summary:** Exeter (3611932/333C)
- **County Summary:** Tulare

- **Location:**
  - 1/3 MILE NORTH OF HIGHWAY 198 AND A 1/4 MILE WEST OF KAWEAH OAKS PRESERVE, 3.5 MILES NW OF EXETER.

- **Ecological:**
  HABITAT CONSISTS OF PASTURE AND FALLOW FIELD. SCATTERED HOMES ON LARGE PARCELS IN AREA. WALNUT ORCHARDS LOCATED TO THE NORTH AND WEST.

- **Threat:**
  AGRICULTURAL CULTIVATION, DEVELOPMENT.

- **General:**
  1 INDIVIDUAL OBSERVED ON 28 OCT 1994. SMALL POPULATION LIKELY TO SURVIVE. AREA SUPPORTS A LARGE CALIFORNIA GROUND SQUIRREL POPULATION AND GOPHERS/VOLES.

- **Owner/Manager:** PVT
Valley Sacaton Grassland

Element Code: CTT42120CA

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Habitat Associations

General:

Micro:

Occurrence No. 12  Map Index: 15270  EO Index: 8665  Dates Last Seen

Occ Rank: Poor  Element: 1985-03-12
Origin: Natural/Native occurrence  Site: 1985-03-12
Presence: Presumed Extant  Record Last Updated: 1998-07-14
Trend: Decreasing

Quad Summary: Goshen (3611934/334C), Remnoy (3611935/335D), Traver (3611944/334B), Burris Park (3611945/335A)
County Summary: Tulare, Kings

Lat/Long: 36.36772º / -119.49151º  Township: 18S
UTM: Zone-11 N4027618 E276472  Range: 23E
Mapping Precision: NON-SPECIFIC  Section: 16  Qtr: NW
Symbol Type: POINT  Meridian: M
Radius: 1 mile  Elevation: 260 ft

Location: CROSS CREEK N OF HWY 198, ABOUT 3 MI W OF HWY 99 VIA AVE 328 & DIRT RD CONNECTING TO 320.

Location Detail:

Ecological: HEAVILY GRAZED W/ VERY FEW SPOROBOLUS & SOME DEGRADED VERNAL POOLS, DISTICHLIS, HORDEUM, ERODIUM, ELYMUS DOM. LOW DIVERSITY, LOW NATIVE COVER. POOLS W/ MYOSURUS, LASTHENIA GLABRATA, JUNCUS, LEPIDIUM, PLAGIOBOTHrys.

Threat: GRAZING HAS DISTURBED THIS SITE.

General: THIS WAS OCC #012 OF CTT42120CA.

Owner/Manager: PVT
Valley Sacaton Grassland

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General:  
Micro:  

Occurrence No. 13  
Map Index: 15699  
EO Index: 8664  
Dates Last Seen: 1985-11-30

Element: 1985-11-30  
Site: 1985-11-30  
Record Last Updated: 1998-07-14

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Quad Summary: Exeter (3611932/333C)  
County Summary: Tulare

Lat/Long: 36.32828º / -119.17817º  
UTM: Zone-11 N4022562 E304489  
Mapping Precision: NON-SPECIFIC  
Symbol Type: POINT  
Radius: 1 mile

Location: IN EXCLOSURES IN NE PORTION, S PORTION & W PART NEAR DEEP CREEK OF FORMER KAWEAH OAKS PRESERVE.

Location Detail:
Ecological: SPOROBOLUS AIROIDES, ELYMUS SP, HORDEUM DEPRESSUM, DISTICHILIS AMONG INTRODUCED ANNUALS. MORE ALKALINE AREAS W/ ANEMOPSIS. HIGH WATER TABLE IN PARTS W/JUNCUS & CAREX. IN AREAS EXCLUDED FROM GRAZING.

Threat:
General: ANNUAL PHOTOMONITORING. THIS WAS OCC #013 OF CTT42120CA. FORMER TNC KAWEAH OAKS PRESERVE; TRANSFERRED TO LAND TRUST ON 12/97.

Owner/Manager: FOUR CREEKS LAND TRUST
**Vulpes macrotis mutica**

San Joaquin kit fox

**Element Code:** AMAJA03041

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<th>Status</th>
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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION. NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

**Occurrence No.** 620  
**Map Index:** 67379  
**EO Index:** 67547  
**Dates Last Seen**  
**Element:** 1973-XX-XX  
**Site:** 1973-XX-XX

**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown

**Quad Summary:** Goshen (3611934/334C)

**County Summary:** Tulare, Kings

**Lat/Long:** 36.32851° / -119.47521°  
**UTM:** Zone-11 N4023230 E277822  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 1/5 mile

**Township:** 18S  
**Range:** 23E  
**Section:** 27  
**Qtr:** XX  
**Meridian:** M  
**Elevation:** 270 ft

**Location:** INTERSECTION OF HWY 198 AND TULARE/KINGS COUNTY LINE.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** KIT FOX OBSERVATION(S) IN 1973.

**Owner/Manager:** UNKNOWN
### San Joaquin kit fox

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<td><strong>Habitat Associations</strong></td>
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<td>Micro: NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.</td>
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#### Occurrence No. 622
- **Map Index:** 67382
- **EO Index:** 67550
- **Dates Last Seen:** 1975-07-XX
- **Element:** 1975-07-XX
- **Site:** 1975-07-XX
- **Record Last Updated:** 2007-01-17

#### Installation Details:
- **Lat/Long:** 36.36545º / -119.13605º
- **UTM:** Zone-11 N4026602 E308361
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 2.5 mile
- **Township:** 18S
- **Range:** 26E
- **Section:** 15
- **Qtr:** XX
- **Meridian:** M
- **Elevation:** 400 ft

**Location:** ABOUT 4MI SW OF WOODLAKE, JUST N OF KAWEAH RIVER.

**Location Detail:**
- **Ecological:**
- **Threat:**
  - **General:** KIT FOX OBSERVATION(S) IN 1973. DEN OBSERVED SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**  
San Joaquin kit fox  
Element Code: AMAJA03041

---

**Status**
Federal: Endangered  
State: Threatened  

**Habitat Associations**
**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.  
**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

**Occurrence No.** 629  
**Map Index:** 67383  
**EO Index:** 67551  
**Dates Last Seen**
Element: 1975-07-XX  
Site: 1975-07-XX  
**Record Last Updated:** 2007-01-17

---

**Quad Summary:** Cairns Corner (3611922/310B), Exeter (3611932/333C)  
**County Summary:** Tulare

---

**Lat/Long:** 36.25021° / -119.14925°  
**Township:** 19S  
**UTM:** Zone-11 N4013844 E306892  
**Range:** 26E  
**Mapping Precision:** NON-SPECIFIC  
**Section:** 27  
**Symbol Type:** POINT  
**Meridian:** M  
**Radius:** 2/5 mile  
**Elevation:** 350 ft

---

**Location:** ABOUT 4.5MI NW OF LINDSAY, SE OF INTERSECTION OF BELMONT AVE AND SYCAMORE AVE (AVE 256).  
**Location Detail:**
**Ecological:**
**Threat:**
**General:** KIT FOX OBSERVATION(S) IN 1973. DEN OBSERVED SOMETIME FROM 1972 THROUGH JUL 1975.  
**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**

San Joaquin kit fox

**Element Code:** AMAJA03041

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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

**Occurrence No.** 624  **Map Index:** 67384  **EO Index:** 67552  **Dates Last Seen**

**Occ Rank:** Unknown  **Element:** 1975-07-XX

**Origin:** Natural/Native occurrence  **Site:** 1975-07-XX

**Presence:** Presumed Extant  **Record Last Updated:** 2007-01-17

**Trend:** Unknown

**Quad Summary:** Cairns Corner (3611922/310B)

**County Summary:** Tulare

**Lat/Long:** 36.2360º / -119.1394º  **Township:** 19S

**UTM:** Zone-11 N4012248 E307739  **Range:** 26E

**Mapping Precision:** NON-SPECIFIC  **Section:** 34

**Symbol Type:** POINT  **Qtr: XX**

**Radius:** 2/5 mile  **Meridian:** M

**Elevation:** 340 ft

**Location:** ABOUT 3.6MI NW OF LINDSAY, NW OF INTERSECTIN OF ACACIA AND CAIRNS AVE.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** KIT FOX OBSERVATION(S) IN 1973. OBSERVATION SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**  
San Joaquin kit fox

<table>
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**Habitat Associations**
- General: ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.
- Micro: NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

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**Quad Summary:** Cairns Corner (3611922/310B)
**County Summary:** Tulare

**Lat/Long:** 36.21748º / -119.16833º  
**UTM:** Zone-11 N4010250 E305097  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POLYGON  
**Area:**  

**Location:** ABOUT 4.9MI WNW OF LINDSAY, 1.2MI W OF INTERSECTION OF HWY 137 AND BELMONT RD.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** KIT FOX OBSERVATION(S) IN 1972. SIGHTING AT DEN FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**

San Joaquin kit fox  

<table>
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<th>Status</th>
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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.  
**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

<table>
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<th>Occurrence No.</th>
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**Occurrence Details:**  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown

**Record Last Updated:** 2007-01-17

**Quad Summary:** Cairns Corner (3611922/310B)  
**County Summary:** Tulare

**Lat/Long:** 36.13544° / -119.23227°  
**UTM:** Zone-11 N4001279 E299138  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 1/5 mile

**Location:** ABOUT 3.4MI NW OF WOODVILLE, S OF INTERSECTION OF STRATHMORE RD (AVE 192) AND BLISS LANE (RD 152).

**Location Detail:**  
**Ecological:**  
**Threat:**  
**General:** KIT FOX OBSERVATION(S) IN 1973. ROAD KILL FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
Vulpes macrotis mutica
San Joaquin kit fox

Element Code: AMAJA03041

Status
Federal: Endangered
Global: G4T2T3
State: Threatened
State: S2S3

Habitat Associations
General: ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.
Micro: NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Occurrence No. 627 Map Index: 67387 EO Index: 67555
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1973-XX-XX
Site: 1973-XX-XX
Record Last Updated: 2007-01-17

Quad Summary: Woodville (3611912/310C), Tipton (3611913/311D), Cairns Corner (3611922/310B), Tulare (3611923/311A)
County Summary: Tulare

Lat/Long: 36.11984º / -119.25002º
UTM: Zone-11 N3999585 E297501
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 2/5 mile

Township: 21S
Range: 25E
Section: 11
Quar: XX
Meridian: M
Elevation: 300 ft

Location: ABOUT 3.3MI NW OF WOODVILLE, S OF INTERSECTION OF AVE 184 & ROAD 144.

Location Detail:
Ecological:

Threat:
General: SIGHTING, ROAD KILL OR DEN PRIOR TO 1972. KIT FOX OBSERVATION(S) IN 1973.

Owner/Manager: UNKNOWN

Information Expired 12/01/2008
### Vulpes macrotis mutica

**San Joaquin kit fox**

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<td>CDFG Status:</td>
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**Habitat Associations**

**General:**
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:**
NEED LOOSE-TEXTURE SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

**Occurrence No.:** 628  
**Map Index:** 67388  
**EO Index:** 67557  
**Dates Last Seen:** 1973-XX-XX  
**Element:** 1973-XX-XX  
**Site:** 1973-XX-XX  
**Record Last Updated:** 2006-12-13

**Quad Summary:** Tipton (3611913/311D)

**County Summary:** Tulare

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**Location:** ABOUT 3.7MI WNW OF WOODVILLE, JUST N OF INTERSECTION OF AVENUE 168 AND ROAD 136.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** KIT FOX OBSERVATION(S) IN 1973.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**  
San Joaquin kit fox  

<table>
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<th>Status</th>
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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

**Occurrence No.:** 629  
**Map Index:** 67390  
**EO Index:** 67561  
**Dates Last Seen:** 1972-XX-XX  
**Element:** 1972-XX-XX  
**Site:** 1972-XX-XX  
**Record Last Updated:** 2007-01-17

**Quad Summary:** Woodville (3611912/310C)

**County Summary:** Tulare

**Lat/Long:** 36.07606° / -119.22343°  
**Township:** 21S  
**UTM:** Zone-11 N3994673 E299784  
**Range:** 25E  
**Section:** 25  
**Qtr:** XX  
**Meridian:** M  
**Elevation:** 320 ft

**Location:** ABOUT 1.7MI SW OF WOODVILLE, SE OF INTERSECTION OF ROAD 152 AND AVE 160.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** 1 ACTIVE DEN OBSERVED IN 1970. SIGHTING, ROAD KILL OR DEN PRIOR TO 1972.

**Owner/Manager:** UNKNOWN
### Vulpes macrotis mutica

**San Joaquin kit fox**

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<th>Other Lists</th>
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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

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**Occ Rank:** Unknown

**Origin:** Natural/Native occurrence

**Presence:** Presumed Extant

**Trend:** Unknown

**Quad Summary:** Taylor Weir (3611914/311C), Paige (3611924/311B)

**County Summary:** Tulare

**Location:** ABOUT 6.4MI SSW OF TULARE, SE OF INTERSECTION OF OCTOL AVE (AVE 184) AND ELK BAYOU AVE (ROAD 80).

**Location Detail:**

**Ecological:**

**Threat:** TRAFFIC.


**Owner/Manager:** UNKNOWN
### Vulpes macrotis mutica

**San Joaquin kit fox**

<table>
<thead>
<tr>
<th>Status</th>
<th>NDDB Element Ranks</th>
<th>Other Lists</th>
</tr>
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<tr>
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<td>Global: G4T2T3</td>
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<tr>
<td>State: Threatened</td>
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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

**Occurrence No.** 631  
**Map Index:** 67396  
**EO Index:** 67563  
**Dates Last Seen**

**Occ Rank:** Unknown  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown  
**Record Last Updated:** 2006-12-13

**Quad Summary:** Taylor Weir (3611914/311C), Corcoran (3611915/312D)

**County Summary:** Tulare

**Lat/Long:** 36.06040º / -119.50378º  
**UTM:** Zone-11 N3993549 E274490  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 2/5 mile  
**Township:** 21S  
**Range:** 23E  
**Section:** 32  
**Meridian:** M  
**Elevation:** 220 ft  
**Location:** ABOUT 4.2MI SE OF CORCORAN, 1.2MI NE OF INTERSECTION OF HWY 43 & AVE 144, DEEP CREEK.

**Location Detail:**

**Ecological:**

**General:** SPOTLIGHTED IN 1973.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**

San Joaquin kit fox

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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

<table>
<thead>
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**Occ Rank:** Unknown

**Origin:** Natural/Native occurrence

**Presence:** Presumed Extant

**Trend:** Unknown

**Record Last Updated:** 2006-12-13

**Quad Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

- **Lat/Long:** 36.05403° / -119.48511°
- **UTM:** Zone-11 N3992800 E276153
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POINT
- **Radius:** 2.5 mile

**Location:** ABOUT 5.2 MI SE OF CORCORAN, 2 MI E OF INTERSECTION OF HWY 43 & AVE 144.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** SIGHTINGS AND ACTIVE DENS OBSERVED IN 1973.

**Owner/Manager:** UNKNOWN

---

Commercial Version -- Dated June 01, 2008 -- Biogeographic Data Branch
Report Printed on Monday, January 12, 2009

Information Expired 12/01/2008
Vulpes macrotis mutica
San Joaquin kit fox

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Habitat Associations

General: ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.
Micro: NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Occurrence No. 900 Map Index: 67777 EO Index: 67929
Occ Rank: Unknown Origin: Natural/Native occurrence Presence: Presumed Extant Trend: Unknown

Dates Last Seen

Record Last Updated: 2007-02-20

Quad Summary: Woodville (3611912/310C)
County Summary: Tulare

Lat/Long: 36.05151º / -119.21638º Township: 21S
UTM: Zone-11 N3991935 E300357 Range: 25E
 Mapping Precision: NON-SPECIFIC Section: 36 Qtr: XX
Symbol Type: POINT Meridian: M
Radius: 2/5 mile Elevation: 330 ft

Location: ABOUT 3MI SSW OF WOODVILLE, 0.9 ROAD MI E OF LAIRDS CORNER ON HWY 190.
Location Detail:
Ecological:
Threat:

General: SIGHTING, ROAD KILL OR DEN PRIOR TO 1972.
Owner/Manager: UNKNOWN
**Vulpes macrotis mutica**  
San Joaquin kit fox

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**Habitat Associations**

- **General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.
- **Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

**Occurrence No.** 902  
**Map Index:** 67779  
**EO Index:** 67931  
**Dates Last Seen**

- **Element:** 1975-07-XX  
- **Site:** 1975-07-XX

**General:** ROAD KILL SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
### Vulpes macrotis mutica

**San Joaquin kit fox**

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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

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**Dates Last Seen:**

- 1975-07-XX
- 1975-07-XX

**Record Last Updated:** 2007-01-17

**Quad Summary:** Tulare (3611923/311A)

**County Summary:** Tulare

**Location:** ALONG LINDSAY HWY, ABOUT 3.4MI E OF TULARE, NEAR INTERSECTION OF TULARE LINDSAY HWY AND BATES SLOUGH.

**Location Detail:**

- **Ecological:**
- **Threat:**

  - **General:** ROAD KILL SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**  
San Joaquin kit fox

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**Global:** G4T2T3  
**State:** S2S3

**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

### Occurrence Details

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**Occ Rank:** Unknown  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown

**Record Last Updated:** 2007-01-17

### Location Details

**Lat/Long:** 36.29880º / -119.26426º  
**UTM:** Zone-11 N4019469 E296683  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 2/5 mile

**Township:** 19S  
**Range:** 25E  
**Section:** 04  
**Qtr:** XX  
**Meridian:** M  
**Elevation:** 340 ft

**Location:** ABOUT 3MI SE OF VISALIA, JUST W OF INTERSECTION OF OAKDALE AVE AND CAMERON CREEK.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** ROAD KILL FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**
San Joaquin kit fox

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### Habitat Associations

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

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### Location

**Quad Summary:** Exeter (3611932/333C)

**County Summary:** Tulare

**Lat/Long:** 36.32912º / -119.19232º

**UTM:** Zone-11 N4022685 E303220

**Mapping Precision:** NON-SPECIFIC

**Symbol Type:** POINT

**Radius:** 2.5 mile

**Township:** 18S

**Range:** 26E

**Section:** 30

**Meridian:** M

**Elevation:** 370 ft

**Location:** ABOUT 5.5 ROAD MI E OF VISALIA ON HWY 198, JUST E OF INTERSECTION WITH 9TH AVE.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** ROAD KILL SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**  
San Joaquin kit fox

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### Habitat Associations

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

### Occurrence Details

- **Occurrence No.:** 906
- **Map Index:** 67783
- **EO Index:** 67935
- **Dates Last Seen:**
  - Element: 1975-07-XX
  - Site: 1975-07-XX

### Location

- **Lat/Long:** 36.36396º / -119.16661º
- **UTM:** Zone-11 N4026498 E305615
- **Mapping Precision:** NON-SPECIFIC
- **Symbol Type:** POLYGON
- **Area:**
- **Township:** 18S
- **Range:** 26E
- **Section:** 16
- **Qtr:** XX
- **Meridian:** M
- **Elevation:** 720 ft

**Location:** ABOUT 3.3MI ESE OF IVANHOE, VENICE HILLS.

**Location Detail:**

- **Ecological:**
- **Threat:**

**General:** SIGHTING AND DEAD FOX OTHER THAN ROAD KILL SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**

**San Joaquin kit fox**

**Element Code:** AMAJA03041

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<th>Status</th>
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</table>

**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION. NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

**Occurrence No:** 907  
**Map Index:** 67784  
**EO Index:** 67936  
**Dates Last Seen:** 1975-07-XX

**Occ Rank:** Unknown  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown  
**Element:** 1975-07-XX  
**Site:** 1975-07-XX  
**Record Last Updated:** 2007-01-17

**Quad Summary:** Goshen (3611934/334C)  
**County Summary:** Tulare

**Lat/Long:** 36.36357º / -119.39525º  
**UTM:** Zone-11 N4026939 E285097  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 2/5 mile

**Location:** ABOUT 1.7MI NE OF GOSHEN, NEAR INTERSECTION OF ALLISON RD AND MODOC DITCH.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** SIGHTING SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
**Vulpes macrotis mutica**

San Joaquin kit fox

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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

**Occurrence No.** 908  
**Map Index:** 67785  
**EO Index:** 67937  
**Dates Last Seen:** Element: 1975-07-XX  
**Site:** 1975-07-XX  
**Occ Rank:** Unknown  
**Origin:** Natural/Native occurrence  
**Presence:** Presumed Extant  
**Trend:** Unknown  
**Record Last Updated:** 2007-01-17

**Quad Summary:** Tipton (3611913/311D)  
**County Summary:** Tulare

**Lat/Long:** 36.09426° / -119.28975°  
**UTM:** Zone-11 N3996831 E293858  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 2/5 mile  
**Township:** 21S  
**Range:** 25E  
**Section:** 20  
**Qtr:** XX  
**Meridian:** M  
**Elevation:** 280 ft

**Location:** ABOUT 2.7MI NE OF TIPTON, JUST S OF SORTH BRANCH TULE RIVER.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** SIGHTING SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
### Vulpes macrotis mutica

**San Joaquin kit fox**

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**Habitat Associations**

- General: ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.
- Micro: NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

**Occurrence No.** 909  
**Map Index:** 67786  
**EO Index:** 67938  
**Dates Last Seen**  
**Element:** 1975-07-XX  
**Site:** 1975-07-XX  
**Record Last Updated:** 2007-01-17

**Quad Summary:** Tipton (3611913/311D)  
**County Summary:** Tulare

**Lat/Long:** 36.07464° / -119.32615°  
**UTM:** Zone-11 N3994732 E290528  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POLYGON  
**Area:**

**Location:** ABOUT 1MI WNW TO 1.7MI NNW OF TIPTON, 0.5MI W OF I-99.  
**Location Detail:**  
**Ecological:**
- **General:** SIGHTING AT DEN SOMETIME FROM 1972 THROUGH JUL 1975.  
**Owner/Manager:** UNKNOWN
### Habitat Associations

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

### Presence

- **Micro:** Natural/Native occurrence
- **Macro:** Presumed Extant
- **Trend:** Unknown

### Dates Last Seen

- 1975-07-XX
- 1975-07-XX

### Record Last Updated

- 2007-01-17

### Location

- **General:** SIGHTING AT DEN SOMETIME FROM 1972 THROUGH JUL 1975.
- **Owner/Manager:** UNKNOWN

---

### Vulpes macrotis mutica

**Element Code:** AMAJA03041

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**Habitat Associations**

- **General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.
- **Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.
**Vulpes macrotis mutica**

San Joaquin kit fox

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**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

---

**Occurrence No.** 911  
**Map Index:** 67788  
**EO Index:** 67940  
**Dates Last Seen**  
**Element:** 1975-07-XX  
**Site:** 1975-07-XX  
**Record Last Updated:** 2007-01-17

**Quad Summary:** Taylor Weir (3611914/311C)

**County Summary:** Tulare

**Lat/Long:** 36.07606° / -119.48940°  
**UTM:** Zone-11 N3995253 E275829  
**Mapping Precision:** NON-SPECIFIC  
**Symbol Type:** POINT  
**Radius:** 2/5 mile  
**Township:** 21S  
**Range:** 23E  
**Section:** 28  
**Qtr:** XX  
**Meridian:** M  
**Elevation:** 220 ft

**Location:** ABOUT 4.3MI ESE OF CORCORAN, 0.7MI SE OF INTERSECTION OF LAKELAND CANAL AND DEEP CREEK.

**Location Detail:**

**Ecological:**

**Threat:**

**General:** SIGHTING SOMETIME FROM 1972 THROUGH JUL 1975.

**Owner/Manager:** UNKNOWN
### Vulpes macrotis mutica

San Joaquin kit fox

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#### Habitat Associations

- **General**: ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.
- **Micro**: NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

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**Dates Last Seen**

|-------------------|-----------------------------------|---------------------------|----------------|--------------------------------|

**Quad Summary**: Goshen (3611934/334C), Burris Park (3611945/335A), Traver (3611944/334B), Remnoy (3611935/335D)

**County Summary**: Kings

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<tbody>
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<td>UTM: Zone-11 N4028199 E275554</td>
<td>Range: 23E</td>
</tr>
<tr>
<td>Mapping Precision: NON-SPECIFIC</td>
<td>Section: 08</td>
</tr>
<tr>
<td>Symbol Type: POINT</td>
<td>Qtr: XX</td>
</tr>
<tr>
<td>Radius: 2/5 mile</td>
<td>Meridian: M</td>
</tr>
<tr>
<td>Elevation: 260 ft</td>
<td>Elevation: 260 ft</td>
</tr>
</tbody>
</table>

**Location**: ABOUT 8.3MI ENE OF HANFORD & 4.7 MI NW OF GOSHEN, NEAR EAST BRANCH CROSS CREEK.

**Location Detail**

- **Ecological**
- **Owner/Manager**: UNKNOWN

---

California Department of Fish and Game
Natural Diversity Database
Full Report for Selected Elements - UC Davis, Tulare
**Vulpes macrotis mutica**

San Joaquin kit fox

<table>
<thead>
<tr>
<th>Status</th>
<th>NDDB Element Ranks</th>
<th>Other Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal: Endangered</td>
<td>Global: G4T2T3</td>
<td>CDFG Status:</td>
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<tr>
<td>State: Threatened</td>
<td>State: S2S3</td>
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</tbody>
</table>

**Habitat Associations**

**General:** ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

**Micro:** NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

**Occurrence No:** 1120  
**Location Detail:** IN THE VICINITY OF TULARE.

**Mapping Precision:** NON-SPECIFIC

**UTM:** Zone-11 N4009540 E289151

**Symbol Type:** POLYGON

**Area:**

**Dates Last Seen:** 1992-XX-XX

**Dates Last Seen:** 1992-XX-XX

**Location:** IN THE VICINITY OF TULARE.

**Ecological:**

**General:** A KIT FOX POPULATION WAS NOTED AS BEING PRESENT IN THE VICINITY OF TULARE BY GAIL PRESLEY (DFG).

**Owner/Manager:** UNKNOWN