Granite Creek Precise Plan Project

Draft Initial Study / Notice of Preparation
April 2025

SCH No. XXX

Prepared by:

The City of
MADERA

Planning Department
205 W. 4th Street
Madera, CA 93637

Table of Contents

Chapter 1 Introduction

Crawford & Bowen Planning, Inc. has prepared this Initial Study/Notice of Preparation (IS/NOP) on behalf of the City of Madera to address the environmental effects of the Granite Creek Precise Plan (Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et.seq. The City of Madera is the CEQA lead agency for this proposed Project.

The site and the proposed Project are described in detail in the Project Description.

1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq*.)-- also known as the CEQA Guidelines-- Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels.

1.2 Document Format

This IS/NOP contains four chapters plus appendices. Chapter 1 Introduction, provides an overview of the proposed Project and the CEQA process. Chapter 2 Project Description, provides a detailed description of proposed Project components. Chapter 3 Determination identifies the environmental factors potentially affected based on the analyses contained in this IS and includes the Lead Agency's determination based upon those analyses. Chapter 4 Impact Analysis, presents the CEQA checklist and environmental analyses for all impact areas, mandatory findings of significance, and feasible mitigation measures, if applicable. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why the impact is anticipated to be less than significant or why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level, if applicable.

A Biological Resources Evaluation is provided in Appendix A and Cultural Resources Assessment is provided in Appendix B.

Chapter 2 Project Description

2.1 Project Background

2.1.1 Project Title

Granite Creek Precise Plan Project

2.1.2 Lead Agency Name and Address

City of Madera
Planning Department
205 W. 4th Street
Madera, CA 93637

2.1.3 Contact Person and Phone Number

Lead Agency Contact

Robert Smith
Senior Planner
City of Madera
559-661-5430

2.1.4 Project Location

The Granite Creek Plan Area (Plan Area) is generally located east of Road 23 between Avenue 14-1/2 and the Fresno River in unincorporated Madera County. The Plan Area is bound by Avenue 14-1/2 to the south, Road 23 to the west, the Fresno River to the north, and Road 24 to the east. The Plan Area consists of two (2) properties that total approximately 204 acres that are generally bound to the north by the Fresno River, to the south by Avenue 14-1/2, to the west by Road 23, and to the east by the Vineyard West Phase II Subdivision. The Plan Area is directly west of the city limits of the City of Madera and lies within the Urban Growth Boundary (UGB) and the Sphere of Influence (SOI) for the City of Madera. The Plan Area consists of two (2) parcels including Madera County Assessor's Parcel Numbers (APNs) 045-070-025 and a portion of 045-070-026. The proposed Plan Area lies within the UGB and SOI just west of the current city limit boundary.

Latitude and Longitude

The centroid of the Project area is approximately 36°57'44.29"N, 120°07'09.50"W.

2.1.5 General Plan Designation

The Project site lies within the Urban Growth Boundary (UGB) and Sphere of Influence (SOI) just west of the current city limit boundary. The site is designated by the General Plan as Village Reserve.

2.1.6 Zoning

The Project site is currently zoned by Madera County as Agricultural, Rural, Exclusive-40 (ARE-40).

2.1.7 Description of Project

Project Background and Purpose

The proposed Project intends to provide a well-planned community with a mix of uses for the residents of the City of Madera in an area planned for urban development.

Project Description

DR Horton (Applicant) requests an Annexation, General Plan Amendment, Pre-Zone, Tentative Parcel Map, and Tentative Subdivision Map for to develop the Granite Creek Precise Plan (Project, or Plan Area). The Project consists of the following:

Annexation to annex approximately 327-acres of property located on the north side of Avenue 14-½ between Road 23 and Road 24 into the City of Madera.

General Plan Amendment (GPA) to change the existing land use to a mix of uses, including residential, mixed use, commercial, open space, and public/semi-public uses as detailed in Figure 2-4. In 2009, the City of Madera adopted its current General Plan which designates the 204-acres of the Granite Creek Plan Area (Plan Area) as Village Reserve (VR). The GPA will also remove the Village E Specific Policy that requires a permanent agricultural buffer where the westerly edge of the Village abuts the Growth Boundary. While only 60-acres of the project is proposed for immediate development, a general plan amendment for 210-acres is proposed.

Pre-Zone to zone approximately 327-acres of property consistent with existing City of Madera zone districts. Proposed zoning includes approximately: 5.48 acres of P-D (1500), 35.35 acres of P-D (3000), 105.44 acres of P-D (4500), 18.27 acres of P-D (6000), 10.06 acres of C-1 (Light Commercial), 15.19 acres of C-N (Neighborhood Commercial), 22.34 acres of PF (Public Facilities), 23.70 acres of RCO (Resource Conservation and Open Space), and 91.61 acres of Unclassified zoning (Fresno River) as shown on Figure 2-5.

Tentative Subdivision Map to subdivide the approximately 60-acre parcel into 345 residential lots ranging in size from 4,500 square feet to 10,723 square feet (sf.). Approximately 60 acres of the 203-acre development are proposed for residential development. The 60-acre site is proposed to be developed with 345 residential lots at approximately 6.1 dwelling units per acre and with a 1.19-acre out lot for development as a park area along with streets, lighting, and outer landscape areas to accommodate sidewalk and trail areas. The 60-acre residential development is located entirely on APN 045-070-025 and

will be built over three (3) phases of development beginning at the south end of the parcel closest to Road 14-1/2.

Project Assumptions

Although the only physical development proposed by the Project includes the 60-acre TSM as described previously, this environmental document analyzes the potential buildout of the Project site at a programmatic level, using reasonable assumptions so that future development described in the Precise Plan can tier from this EIR pursuant to CEQA Guidelines Section 15168(C)(1) and 15168(d) for evaluations of environmental issues associated with later activities/subsequent projects. Depending on the final design of future physical development, additional project specific CEQA review may be required as determined by the City through the entitlement review and approval process.

The proposed density, intensity, acreage, and realistic maximum development potential (housing units or square footage) of the proposed Project are summarized in Table 2-1. Build out of the Granite Creek Plan Area is limited to a maximum of 1,542 residential dwelling units and approximately 612,235 square feet over approximately 204 acres. Proposed development beyond these limitations may require additional environmental review. The number of residents at full build out is estimated at 5,119 based on an average household size of 3.32. Nearly 60% of the proposed Project area is planned for residential uses, followed by 40% planned for employment uses including commercial and mixed use, and the remaining for public institutional (K-8 School Site), open space, and roadways.

Table 2-1 Project Buildout Assumptions

Land Use Designation	Zoning Designation	Total Acreage	Maximum Dwelling Units per Gross Acre or Maximum Non-Residential Floor Area Ratio	Maximum Development Potential
Residential Land Use Designations				
Low Density Residential	P-D (4500)	105.44	2.1 – 7.0 dwelling units	738 units
Medium Density Residential	P-D (3000)	35.35	7.1 – 15.0 dwelling units	530 units
High Density Residential	P-D (1500)	5.48	15.1-50 dwelling units	274 units
Employment Land Use Designations				
Village Mixed Use (VMU)	C-1 (Light Commercial)	10.06	0.5 Maximum Non-Residential FAR	219,106 square feet
Commercial (C)	C-N (Neighborhood Commercial)	15.19	0.3 Maximum Non-Residential FAR	198,503 square feet
Public and Semi-Public Land Use Designations				
Other Public and Semi-Public	PF (Public Facilities)	22.34	0.2 (Assumed Maximum FAR)	194,626 square feet
Open Space	RCO (Resource Conservation and Open Space)	9.74	0.2 (Assumed Maximum FAR)	84,854 square feet

Land Use Designation	Zoning Designation	Total Acreage	Maximum Dwelling Units per Gross Acre or Maximum Non-Residential Floor Area Ratio	Maximum Development Potential
TOTAL		203.60	--	1,542 units 612,235 square feet

Currently, there are no plans for the development of the remaining 123 acres of land proposed to be annexed. However, entitlements for this project will include a General Plan Amendment for approximately 210 acres and Pre-Zoning of all 327 acres. This includes the establishment of a 20-acre K-8 school site and an 8.8-acre dual use basin for water retention and recreational purposes.

Infrastructure

Water

The proposed Project will connect to the existing City water system. Per the City of Madera Water System Master Plan, adopted by City Council on November 19, 2014 via Resolution No. 14-212, the Project will install master planned water mains on Avenue 14 ½: a 12-inch between Road 23 ½ and Buena Posada Drive, and an 18-inch water main between Road 23 and Road 23 ½.An 18-inch water main will also be installed in the westerly boundary of the Project and will tie-in to the Villages at Almond Grove Development, located to the north.

The proposed Project will comply with the California Green Building Code standards, which requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside the building by 20 percent. The Project will be required to install ultra-low flow fixtures and appliances. All development within the Project area will be required to install water meters at all service connections. The City will assess service charges based on volumetric rates and/or tiered rates, which encourages reasonable water use.

Wastewater

The City of Madera Sanitary Sewer System Master Plan identified the need for an additional sewer trunk line running down Road 23 (Road 23 Trunk) to connect to the existing Wastewater Treatment Plant (WWTP). The Road 23 Trunk will be a 30-inch line that connects to a 48-inch line running parallel to an existing 48-inch pipe on Avenue 13. Both 48-inch pipelines will connect to the existing WWTP. The 30-inch line will be approximately 16,000 (about 8,000 at the Avenue 14 ½ tie-in) linear feet (lf) and the parallel 48-inch pipe will be approximately 8,000. It was determined that there is sufficient capacity to temporarily tie into the Westberry Boulevard Sewer Line (Westberry Trunk)until the Road 23 Sewer Trunk Line is installed. This is supported by a report from Akel Engineering, the City's consultant for their sewer master plan. The report dated December 21, 2023, and titled Sewer System Hydraulic Analysis for Granite Creek Subdivision, analyzed the possibility for the first 345 lots of the Granite Creek Development to be accommodated by the Westberry Trunk. The report indicated that the extra capacity is due in part to greater water use efficiency since the adoption of the 2014 Sewer System Master Plan.

A lift station will be needed to temporarily direct sewer flows to the Westberry Trunk. The lift station will be located along Avenue 14 ½, on the east side of the development area, near the entrance to the initial

first 345 lots. Upon the installation of the Road 23 Trunk, Granite Creek would be required to reverse sewer flows to the Road 23 Trunk and remove the temporary lift station. The environmental impacts of the sewer infrastructure described herein have been analyzed in the City's General Plan Update Draft EIR, SCH# 2007121153, where impacts were found to be less than significant.

The entire Project site is estimated to generate 187,000 gallons per day (gpd) of wastewater flows. Assuming seven percent inflow and infiltration, the total generated wastewater is expected to be about 200,000 gpd.

Stormbasin

The proposed basin will be a dual-use basin that will have a park area and a low flow area. The low flow area will have enough capacity so that a 2-year storm event can be retained without utilizing storage from the park area. The park area will only be used for storage during other major storm events. Approximately 54 acre-feet will be required to store the anticipated runoff generated from the project area during a 100-year major storm event, while 14 acre-feet will be needed to store the 2-year storm event flows.

A smaller temporary basin will be constructed for the initial 345 units at the same location and will be gradually expanded as development occurs. The ultimate basin design will be constructed at full buildout or when conditioned by the City.

Electric, Natural Gas and Telecommunication

Power will be provided to the Project area by Pacific Gas and Electric Company (PG&E). The location and alignment of future electrical lines will be determined by PG&E based on the required electrical loads and existing capacity of surrounding infrastructure. Natural gas will also be provided by PG&E through the extension of existing gas distribution lines. Telecommunications will be provided through existing telephone lines and wireless communication systems.

2.1.8 Site and Surrounding Land Uses and Setting

Project Setting

Project Site

A majority of the proposed Project site is currently in agricultural production of grapevines and almond trees.

Surrounding Area

The Project area is surrounded primarily by agricultural uses to the north past the Fresno River and to the west, and single-family residential uses to the east. The south side of the Project area includes a combination of residential uses and agricultural uses. Table 2-2 shows the existing uses, general plan designations, and zone districts of the surrounding properties.

A majority of the properties surrounding the Project area to the south and west are planned and zoned for agricultural uses. Properties to the north and east are planned and zoned for multiple uses including residential, commercial, industrial, office, public institutional, and open spaces.

Table 2-2 Existing Uses, General Plan Designations, and Zone Districts of Surrounding Properties

Direction from Project Site	Existing Use	General Plan Designation	Zone District
North	Agriculture, Fresno River	Village Mixed Use (VMU, Medium Density Residential (MDR), Low Density Residential (LDR), Open Space (OS), High Density Residential (HDR)	Village Country Estates (VCE), Village Low Density Residential (VLDR), Village Medium Density Residential (VMDR), Village High Density Residential (VHDR), Village Mixed Use (VME)(City)
East	Agriculture, Residential	AE – Agricultural Exclusive, A – Agricultural	ARE-20, AR-5, RRS-2 (County)
South	Residential	Low Density Residential	PD (6000), PD (4500) (City)
West	Agriculture	AE – Agricultural Exclusive	AR-5 (County)

2.1.9 Other Public Agencies Whose Approval May Be Required

- Madera County LAFCO
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- California Regional Water Quality Control Board

2.1.10 Consultation with California Native American Tribes

Public Resources Code Section 21080.3.1, *et seq. (codification of AB 52, 2013-14)*) requires that a lead agency, within 14 days of determining that it will undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 90 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement will be made.

Letters were sent out to tribes on April 10, 2025. City of Madera has not received any written correspondence from a Tribe pursuant to Public Resources Code Section 21080.3.1 requesting notification of proposed Project at the time of public review

Figure 2-1 Regional Location

Figure 2-2 Site Aerial

Figure 2-3 Annexation Area

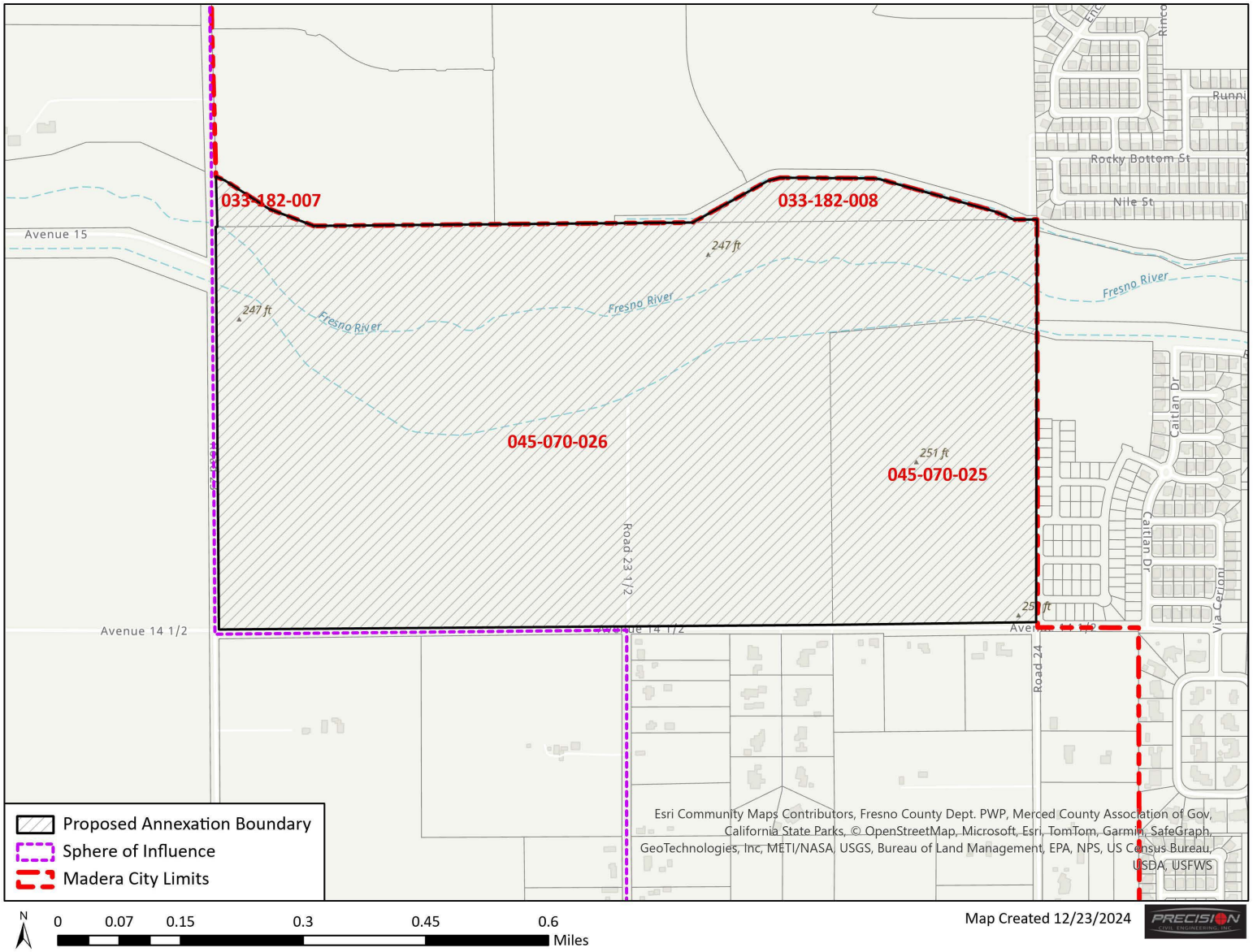


Figure 2-4 Proposed Land Use Plan

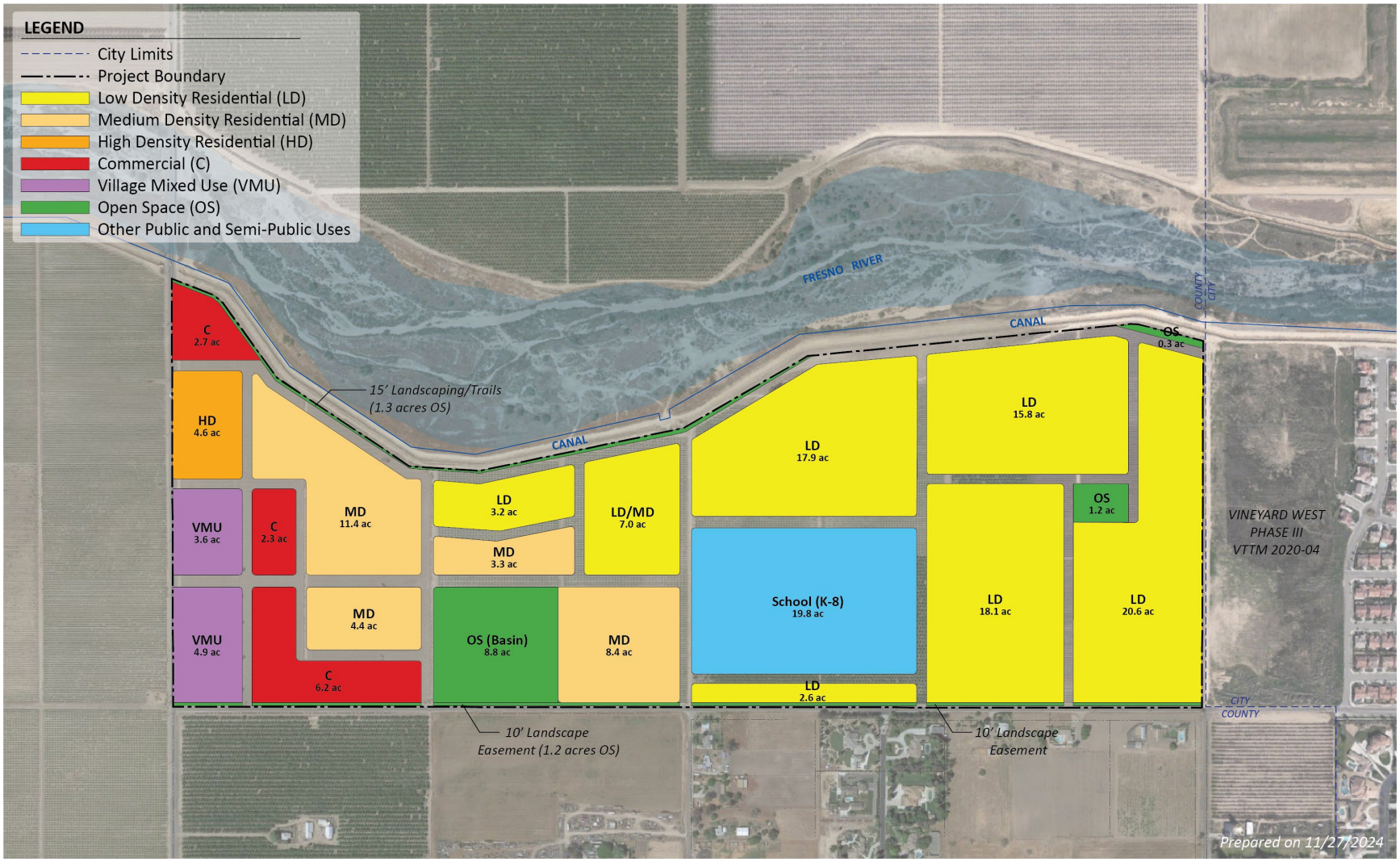
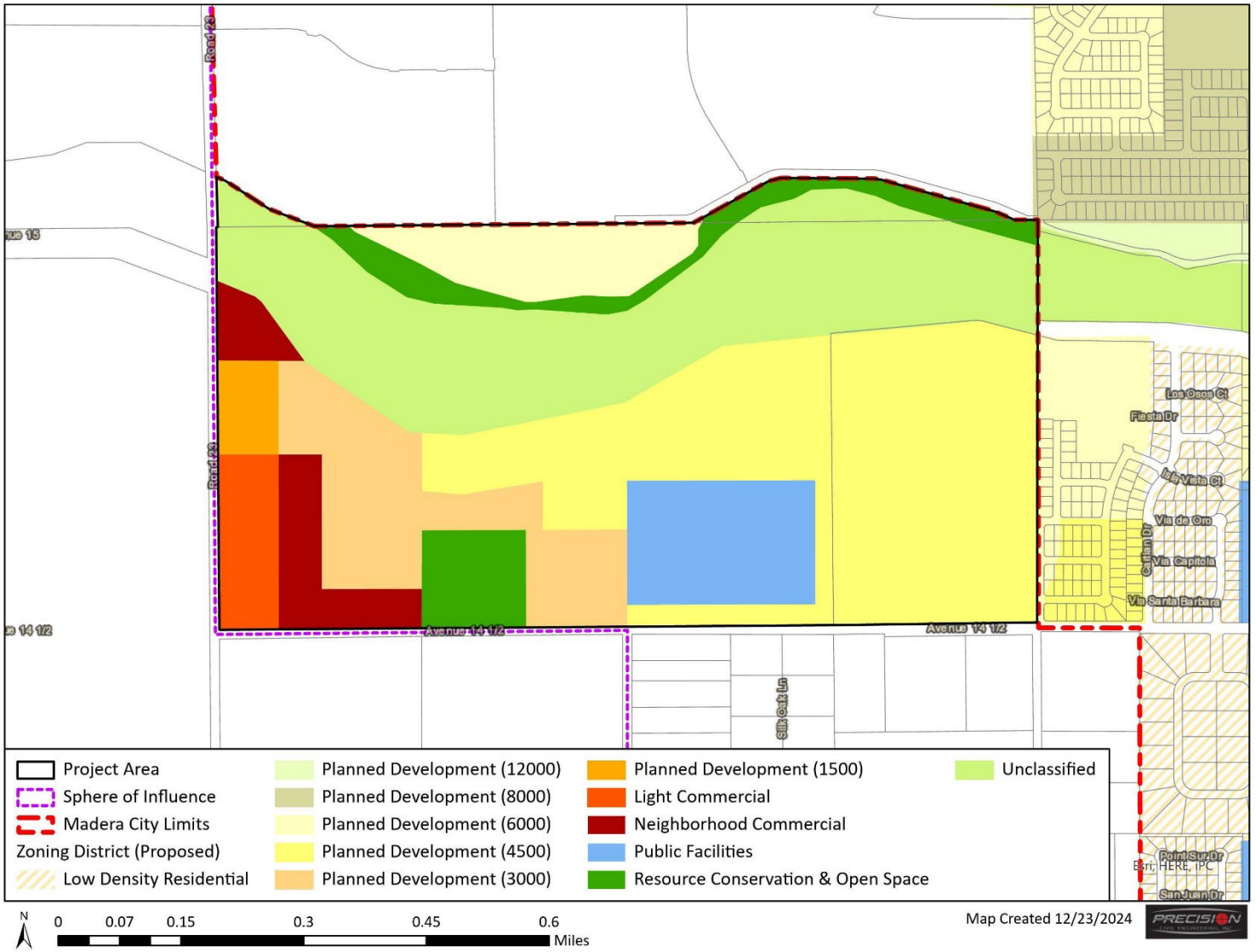
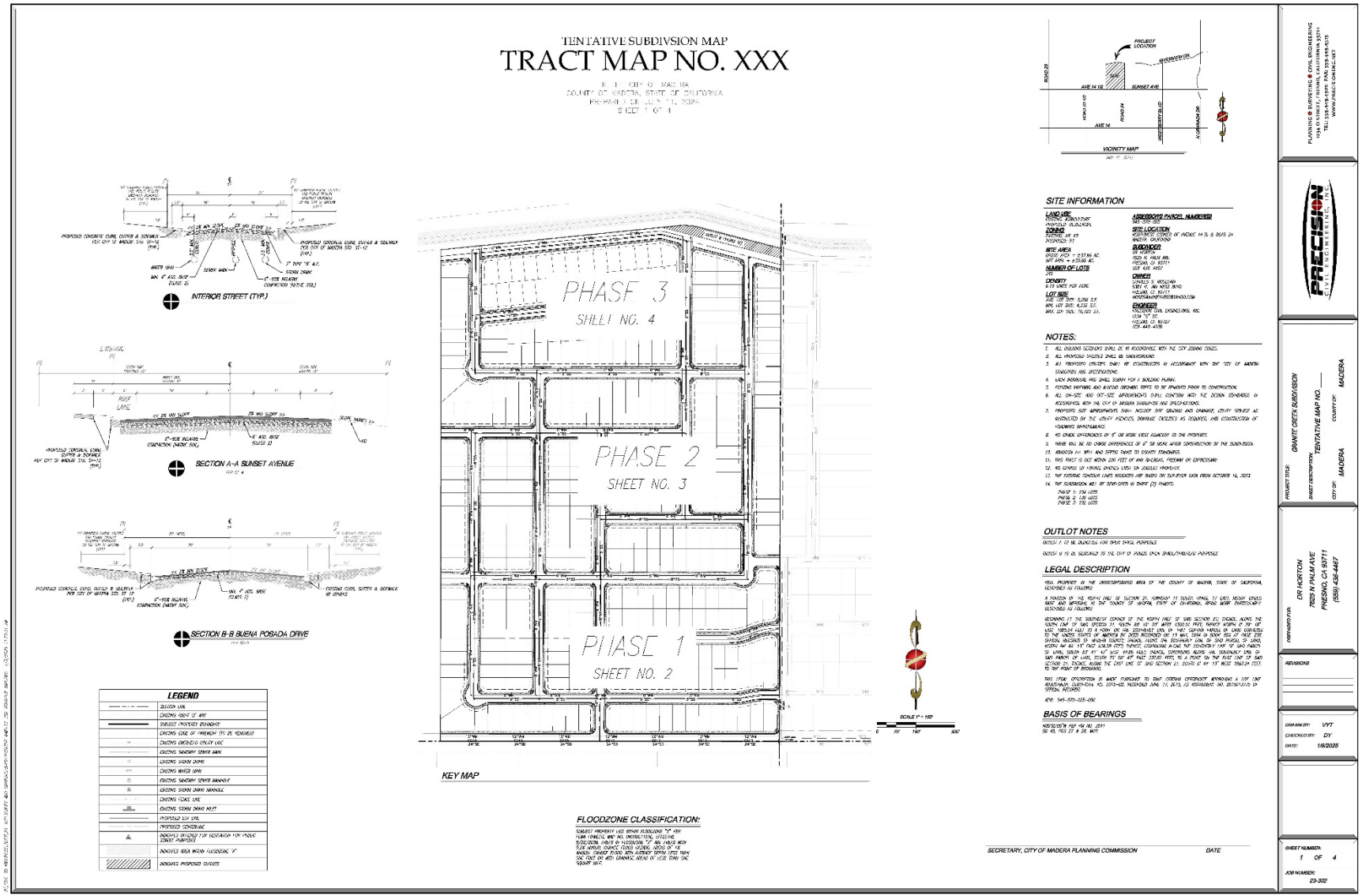


Figure 2-5 Proposed Zone District Map




TENTATIVE SUBDIVISION MAP
TRACT MAP NO. XXX
SHEET 1 OF 4
INTERIOR STREET (TYP.)
SECTION A-A SUNSET AVENUE
SECTION B-B BUENA POSADA DRIVE
PHASE 3
SHEET NO. 4
PHASE 2
SHEET NO. 3
PHASE 1
SHEET NO. 2
KEY MAP
LEGEND
VICINITY MAP
SITE INFORMATION
NOTES:
OUTLOT NOTES
LEGAL DESCRIPTION
BASIS OF BEARINGS
FLOODZONE CLASSIFICATION:
SECRETARY, CITY OF MADERA PLANNING COMMISSION
DATE
PRECISION CIVIL ENGINEERING, INC.
PROJECT TITLE: GRANITE CREEK SUBDIVISION
SHEET DESCRIPTION: TENTATIVE MAP NO. ____
CITY OF: MADERA
COUNTY OF: MADERA
PREPARED FOR: DR HORTON
7625 N PALM AVE
FRESNO, CA 93711
(559) 436-4407
REVISIONS
DRAWN BY: VVT
CHECKED BY: DY
DATE: 1/6/2025
SHEET NUMBER: 1 OF 4
JOB NUMBER: 23-302

Chapter 3 Determination

3.1 Environmental Factors Potentially Affected

As indicated by the discussions of existing and baseline conditions, and impact analyses that follow in this Chapter, environmental factors not checked below would have no impacts or less than significant impacts resulting from the project. Environmental factors that are checked below would have potentially significant impacts resulting from the project and will be further analyzed in an Environmental Impact Report. Mitigation measures are recommended for each of the potentially significant impacts that would reduce the impact to less than significant.

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

The analyses of environmental impacts in Chapter 4 Impact Analysis result in an impact statement, which shall have the following meanings.

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less Than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (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).

3.2 Determination

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

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

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

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

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

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

Signature

April 11, 2025
Date

Will Tackett, Community Development Director
Printed Name/Position

Chapter 4 Impact Analysis

4.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

4.1.1 Environmental Setting

The City of Madera is located in central Madera County on the east side of the San Joaquin Valley floor. The City of Madera is characterized by flat terrain of approximately 250 to 275 feet above mean sea level. The City is approximately 15 miles from the Sierra Nevada foothills located to the east.

The proposed Project site is currently in agricultural production of grapevines and almond trees. The property is located east of Road 23, between Avenue 14 ½ and the Fresno River in an unincorporated area of Madera County, west of the City limits of Madera.

The aesthetic features in the proposed Project area are relatively uniform; consisting primarily of rows of almond trees and vining grapes. There are no scenic resources or scenic vistas in the area. State Highway 99 is located approximately 2.3 miles to the northeast.

4.1.2 Impact Assessment

a) Would the project have a substantial adverse effect on a scenic vista?

The proposed development is located within the Granite Creek Plan Area, which is a new growth area intended to meet the vision of the City of Madera General Plan. The Granite Creek Precise Plan is designed to guide and implement a series of objectives with corresponding goals and policies that will promote quality residential development in the plan area. This area will be consistent with the surrounding visual character which consists of single family and rural residential developments, agricultural land and vacant/disturbed land. The City of Madera General Plan does not identify or designate any scenic vistas in the Project area. A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The Project is located in an area of minimal topographic relief, and views of the site are easily obscured by buildings, fences, other structures and trees. Neither the Project area nor any surrounding land use contains features typically associated with scenic vistas (e.g., ridgelines, peaks, overlooks).

The proposed structures will also conform to design standards set forth by the City's General Plan and Zoning Ordinance. Construction activities will be visible from the adjacent roadsides; however, the construction activities will be temporary in nature and will not affect a scenic vista. The impact will be ***less than significant***.

Mitigation Measures: None are required.

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

Less than Significant Impact. According to the California Department of Transportation Scenic Highway Mapping System, there are no state designated or eligible scenic highways within the immediate proximity to the Project site.[1] In addition, no scenic highways or roadways are listed within the Project area in the City of Madera's General Plan or Madera County's General Plan. Based on the National Register of Historic Places (NRHP) and the City's General Plan, no historic buildings exist on the Project site. The proposed Project would not damage any trees, rock outcroppings or historic buildings within a State scenic highway corridor. Any impacts would be considered ***less than significant***.

Mitigation Measures: None are required.

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

The initial 345 single-family residences and associated infrastructure proposed by the 60-acre TSM will conform to design standards set forth by the City's General Plan and Zoning Ordinance. Further development of the acreage, which is proposed to include an additional 1,197 residential units, an elementary school site, approximately 612,235 square feet of employment areas, and a water retention basin, will also be required to conform to the City of Madera's design standards pertaining to commercial sites and public facilities. The proposed Project site is located in an area that is planned for urban development and is immediately adjacent to an established residential development. The proposed Project will not result in a use that is visually incompatible with the surrounding area.

The site is visible from surrounding residences and from vehicles traveling along adjacent streets. The proposed Project site is planned as a Village Reserve area, and upon approval of a general plan amendment to change the existing use to a mix of uses, the Project will add neighborhood continuity and will be similar in visual character to

[1] California Department of Transportation. California Scenic Highway Mapping System. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html. Accessed March 2025.

the Vineyard West Phase II Subdivision, which lies to the east. Similar urban uses are found in the area and throughout both rural and urban parts of the Central Valley. As such, the proposed Project will not substantially degrade the existing visual character or quality of the area or its surroundings. The impact will be ***less than significant***.

Mitigation Measures: None are required.

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

Less Than Significant Impact. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spillover light and glare and waste energy, and if designed incorrectly, could be considered unattractive. Light that falls beyond the intended area is referred to as "light trespass." Types of light trespass include spillover light and glare. Minimizing all these forms of obtrusive light is an important environmental consideration. A less obtrusive and well-designed energy efficient fixture would face downward, emit the correct intensity of light for the use, and incorporate energy timers.

Spillover light is light emitted by a lighting installation that falls outside the boundaries of the property on which the installation is sited. Spillover light can adversely affect light-sensitive uses, such as residential neighborhoods at nighttime. Because light dissipates as it travels from the source, the intensity of a light fixture is often increased at the source to compensate for the dissipated light. This can further increase the amount of light that illuminates adjacent uses. Spillover light can be minimized by using only the level of light necessary, and by using cutoff type fixtures or shielded light fixtures, or a combination of fixture types.

Glare results when a light source directly in the field of vision is brighter than the eye can comfortably accept. Squinting or turning away from a light source is an indication of glare. The presence of a bright light in an otherwise dark setting may be distracting or annoying, referred to as discomfort glare, or it may diminish the ability to see other objects in the darkened environment, referred to as disability glare. Glare can be reduced by design features that block direct line of sight to the light source and that direct light downward, with little or no light emitted at high (near horizontal) angles, since this light would travel long distances. Cutoff-type light fixtures minimize glare because they emit relatively low-intensity light at these angles.

Currently the sources of light in the Project area are from streetlights, the vehicles traveling along Avenue 14 1/2 and nearby residences to the south and east. The Project would include nighttime lighting for security. Such lighting would be subject to the requirements of the City of Madera General Plan Policy CON-44, which ensures that outdoor lighting does not produce obtrusive glare onto the public right-of-way or adjoining properties. Lighting fixtures for security would be designed with "cutoff" type fixtures or shielded light fixtures, or a combination of fixture types to cast light downward, thereby providing lighting at the ground level for safety while reducing glare to adjacent properties. Accordingly, the Project would not create substantial new sources of light or glare. Potential impacts are ***less than significant***.

Mitigation Measures: None are required.

4.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

4.2.1 Environmental Setting

The Project lies within the Central Valley, an area dominated by active agriculture. The Project site is within an urbanized region of Madera County and has been designated for growth by the City of Madera in its General Plan. The surrounding area consists of single family and rural residential developments, and vacant or agricultural land. The State Farmland Mapping and Monitoring Program (FMMP) has designated the surrounding area as Urban and Built-Up Land, Rural Residential Land, Grazing Land, Nonagricultural or Natural Vegetation and Farmland of Statewide Importance. The FMMP has designated the site as Prime Farmland and Farmland of Statewide Importance.[2] The Project development site is currently being utilized for almond orchards and vineyards.

[2] Department of Conservation, California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 2025.

4.2.2 Impact Assessment

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

The only physical development proposed by the Project includes the 60-acre TSM. Full buildout of the entire Granite Creek Plan Area is limited to a maximum of 1,542 dwelling units and approximately 612,235 square feet over approximately 204 acres. The proposed Project site has historically been used for agricultural purposes and currently contains grape vineyards and almond orchards. The Project site is designated as Prime Farmland and Farmland of Statewide Importance by the FMMP.[3] However, the development site is on land that was previously analyzed for agricultural conversion in the City's General Plan EIR.[4] As such, because the City designated the area as a Village Reserve with the intention of future build-out, no new impacts resulting from agricultural conversion would occur. Impacts would be considered ***less than significant***.

Mitigation Measures: None are required.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The proposed Project is located in an area planned for urban development. Residential development lies immediately to the east while the Fresno River is directly north. The proposed Project site is not under a Williamson Act Contract. There is ***no impact***.

Mitigation Measures: None are required.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. This impact evaluates the potential for the proposed Project to conflict with existing Forest Land zoning or result in the loss of forest land or result in the conversion of forest land to non-forest use. There is no forest land zoning on the proposed Project site and there are no forest uses on the site. No loss of forest land would occur and no conflicts would occur. Therefore, ***no impacts*** would occur.

Mitigation Measures: None are required.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. No conversion of forestland, as defined under Public Resource Code or General Code, as referenced above, would occur as a result of the Project. There is ***no impact.***

Mitigation Measures: None are required.

[3] Ibid.
[4] City of Madera, General Plan Update Draft EIR. April 29, 2009. Figure 4.2-2, Agricultural Conversion. https://www.madera.gov/wp-content/uploads/2018/01/Draft-EIR.pdf. Accessed March 2025.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Less Than Significant Impact. The proposed Project will result in the conversion of Farmland to non-agricultural uses; however, the development site is on land that was previously analyzed for agricultural conversion in the City's General Plan EIR. As such, because the City designated the area as a Village Reserve with the intention of future build-out, no new impacts would occur and impacts would be considered *less than significant*.

Mitigation Measures: None are required.

4.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

4.3.1 Environmental Setting

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

The proposed Project lies within the San Joaquin Valley Air Basin, which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District). National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O3), sulfur dioxide (SO2), nitrogen dioxide (NO2), particulate matter (PM10 and PM2.5), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either “attainment”, “non-attainment”, or “extreme non-attainment” areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal extreme non-attainment area for O3, a State and Federal non-attainment area for PM2.5, a State non-attainment area for PM10, and Federal and State attainment area for CO, SO2, NO2, and Pb.[5]

[5] San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. https://ww2.valleyair.org/air-quality-information/ambient-air-quality-standards-valley-attainmnet-status/. Accessed March 2025.

4.3.2 Impact Assessment

Thresholds of Significance

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD has published the *Guide for Assessing and Mitigating Air Quality Impacts*. This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized, as follows:

Short-Term Emissions of Particulate Matter (PM10): Construction impacts associated with the proposed Project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented, or if project-generated emissions would exceed 15 tons per year (TPY).

Short-Term Emissions of Ozone Precursors (ROG and NOX): Construction impacts associated with the proposed Project would be considered significant if the project generates emissions of Reactive Organic Gases (ROG) or NO_X that exceeds 10 TPY.

Long-Term Emissions of Particulate Matter (PM10): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of PM_{10} that exceed 15 TPY.

Long-Term Emissions of Ozone Precursors (ROG and NOX): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of ROG or NOX that exceeds 10 TPY.

Conflict with or Obstruct Implementation of Applicable Air Quality Plan: Due to the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_x) or PM_{10} would exceed the SJVAPCD's significance thresholds, then the project would be considered to conflict with the attainment plans. In addition, if the project would result in a change in land use and corresponding increases in vehicle miles traveled, the project may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

Local Mobile-Source CO Concentrations: Local mobile source impacts associated with the proposed Project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e. 9.0 ppm for 8 hours or 20 ppm for 1 hour).

Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than 1.

Odor impacts associated with the proposed Project would be considered significant if the Project has the potential to frequently expose members of the public to objectionable odors.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

b) Would the project 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?

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

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

Potentially Significant Impact. The San Joaquin Valley Air Basin (SJVAB) is designated nonattainment of state and federal health-based air quality standards for ozone and PM2.5. The SJVAB is designated nonattainment of state PM10. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard (2004);
- 2007 Ozone Plan for attainment of the 8-hour ozone standard;
- 2007 PM10 Maintenance Plan and Request for Redesignation; and
- 2008 PM2.5 Plan.

Because of the region's non-attainment status for ozone, PM2.5, and PM10, if the project-generated emissions of either of the ozone precursor pollutants (ROG or NOx), PM10, or PM2.5 were to exceed the SJVAPCD's significance thresholds, then the project uses would be considered to conflict with the attainment plans. In addition, if the project uses were to result in a change in land use and corresponding increases in vehicle miles traveled, they may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

Predicted construction and operational emissions may exceed the SJVAPCD's significance thresholds for ROG, NOx, PM10, and PM2.5, and could potentially create a cumulatively considerable net increase of these pollutants, could potentially expose sensitive receptors to substantial pollutant concentrations and could result in other emissions. Therefore, this impact is ***potentially significant.*** This topic will be addressed in the Project's forthcoming EIR.

4.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

4.4.1 Environmental Setting

The proposed Project site is located in a portion of the central San Joaquin Valley that has, for decades, experienced intensive agricultural and urban disturbances. Current agricultural endeavors in the region include vineyards, orchards, and row crops.

Like most of California, the Central San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures usually exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely raise much above 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation within the proposed Project site is about 10 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain and storm-water readily infiltrates the soils of the surrounding the sites.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of upland, riparian, and aquatic habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region.

A Biological Resource Evaluation (BRE) report was prepared on behalf of the Project by Colibri Ecological Consulting in December 2024. The following impact analysis directly references this report. The BRE can be found in its entirety in Appendix A. The Project site and a 50-foot buffer surrounding the Project site were walked and thoroughly inspected to evaluate and document the potential for the area to support state or federally protected resources. An additional buffer of 0.5 miles around the Project site was inspected for potential nesting habitat for special-status raptors. The 0.5-mile buffer was surveyed by driving public roads and identifying the presence of large trees or other potentially suitable substrates for nesting raptors as well as open areas that could provide foraging habitat.

The Project site consisted of an irrigated, maintained almond orchard and vineyard and an area of disturbed land in the north-central portion. Ruderal herbaceous vegetation was distributed throughout the Project site. The disturbed area in the north-central portion of the Project site contained piles of tree limbs, a felled tree, and bricks and other debris. California ground squirrel (*Otospermophilus beecheyi*) and other small mammal burrows were present throughout the north-central and northeastern portions of the Project site and along the canal in the survey area. The site was bordered by a Madera Irrigation District canal and the Fresno River to the north, rural residential development and idle agricultural lands to the south, an orchard to the west, and a residential development under construction to the east. Aerial imagery indicates the Project site has been used for agricultural production since at least 1985.

4.4.2 Impact Assessment

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

Less Than Significant Impact with Mitigation. The Project site consisted of an irrigated, maintained almond orchard and vineyard and an area of disturbed land in the north-central portion. Ruderal herbaceous vegetation was distributed throughout the Project site. The site was bordered by a Madera Irrigation District canal and the Fresno River to the north, rural residential development and idle agricultural lands to the south, an orchard to the west, and a residential development under construction to the east.

The California Natural Diversity Database (CNDDB) was searched for special-status species for the Madera 7.5-minute USGS topographic quadrangle and the eight surrounding quadrangles, which produced 225 records of 34 species. Of those 34 species, five were not considered further because they are not CEQA-recognized as special-status species by state or federal regulatory agencies or public interest groups or are considered extirpated in California. Of the remaining 29 species, nine are known from within 5 miles of the Project site. Of those species, only the state candidate for listing as threatened burrowing owl (*Athene cunicularia*) could occur on or near the

Project site. None of the other species nor the sensitive natural communities identified in the nine-quad search could occur on or near the Project site due to the lack of habitat.

The California Native Plant Society (CNPS) inventory of rare and endangered plants of California was also searched and produced 17 species, 16 of which have a California Rare Plant Rank (CRPR) of one or two and four of which are also state and federally listed. Of those 16 plant species, none could occur on or near the Project site due to the lack of habitat.

Migratory birds could nest on or near the Project site. Bird species that may nest on or near the property include, but are not limited to, killdeer *(Charadrius vociferus*) and house finch (*Haemorhous mexicanus*). Large trees within 0.5 miles of the Project site could provide nesting substrates for raptors.

Burrowing owl is a member of the family Strigidae recognized as a state candidate for listing as threatened or endangered by the CDFW. It occurs primarily in grassland but can persist and even thrive in agricultural or other developed and disturbed areas. Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel and American badger (*Taxidea taxus*). The burrowing owl uses burrows for protection from predators, weather, as roosting sites, and dwellings to raise young. It commonly perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards. The nesting season begins in March, and incubation lasts 28–30 days. The female incubates the eggs while the male forages and delivers food items to the burrow-nest; young then fledge between 44 and 53 days after hatching. Adults can live up to eight years in the wild.

There is one CNDDB occurrence record of burrowing owl from within 5 miles of the Project site. Two additional CNDDB occurrence records were found in the nine-quad search. California ground squirrel burrows on the Project site could support the species. However, the Project site is routinely disturbed, and no sign of burrowing owl was detected during the 17 December 2024 reconnaissance survey. Therefore, the potential for this species to occur on or near the Project site is low.

The Project could adversely affect, either directly or through habitat modifications, burrowing owls that occur or may occur on or near the Project site. Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species or substantially modifies its habitat could constitute a significant impact. Implementation of Mitigation Measure BIO-1 would reduce potential impacts to *less than significant levels*.

Mitigation Measures:

BIO-1: Protect burrowing owl.

1. A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no burrowing owl will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential burrowing owl habitat in and immediately adjacent to the impact areas. If it is not possible to schedule construction between September and February, a qualified biologist shall conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. These methods require six surveys, three in each of the two survey periods, prior to project initiation. Surveys shall be conducted within a minimum 0.5-mile radius around the Project site.
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would

disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.

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

Less Than Significant Impact. A Madera Irrigation District canal bordered the northern boundary of the Project site. The canal is listed in the National Wetlands Inventory as riverine with a classification of R4SBCx, which means unknown intermittent, streambed, seasonally flooded, and excavated. The canal contained discontinuous, standing water during the 17 December 2024 reconnaissance survey. As the canal evidently lacks a continuous surface connection to a water of the United States, it is not likely regulated by the USACE. However, as it contained surface water and would be classified as a stream, it is likely under the regulatory jurisdiction of the SWRCB and the CDFW, respectively. Regardless, the Project is not expected to impact the canal. As such, any impacts would be *less than significant.*

Mitigation Measures: None are required.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant Impact There are no state or federally protected wetlands on the Project site. Additionally, the Project site has been previously utilized for agricultural purposes. As such, any impacts would be *less than significant.*

Mitigation Measures: None are required.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact with Mitigation. There are no waterways on the Project site and the area consists of disturbed grassland dominated by nonnative grasses and ruderal forbs.

The Project has the potential to impede the use of nursery sites for native birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGG). Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant effect. Mitigation measure BIO-2 will be included in the conditions of approval to reduce the potential effect to a *less than significant* level.

Mitigation Measure:

BIO-2: Protect nesting birds.

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.

2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

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

Less than Significant Impact. The City of Madera's General Plan includes various policies for the protection of biological resources. The proposed Project would not conflict with any of the adopted policies and any impacts would be considered *less than significant*.

Mitigation Measures: None are required.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less than Significant Impact. There are no local, regional, or state conservation plans that apply to the Project. As such, any impacts would be *less than significant*.

Mitigation Measures: None are required.

4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

4.5.1 Environmental Setting

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

The tribes which inhabited the Madera area generally lived a subsistence life-style that included hunting, fishing and collection of plant resources, particularly acorns. Some of these early inhabitants built a variety of structures including residential dwellings, ceremonial structures, and semi-subterranean sweat lodges. A common dwelling was a thatched house covered by brush, grass or tules.

A variety of flaked and ground stone tools (e.g., knives, arrow and spear points, and rough cobble and shaped pestles) were common among Native Americans in the area. Obsidian was a highly valued material for tool manufacture, and was generally imported. Some local tribes also engaged in trading relationships with surrounding groups for commodities such as salt, marine shells and basketry.

Euroamerican contact with Native American groups living in the Central Valley of California began during the last half of the 18th century. At this time, the attention of Spanish missionaries shifted away from the coast, and its dwindling Native American population, to the missionization of interior populations of Native Americans. The efforts of the Spanish to missionize the Native American population began a history of destructive Euroamerican interactions with Native Americans that eventually lead to the loss of traditional Native American culture.

The proposed Project site has been highly disturbed for many years with agricultural uses in varying portions of the site. A Phase I Cultural Resource Survey was performed on behalf of the proposed Project by Hudlow Cultural

Resources Associates in January of 2025. A records search was conducted at the Southern San Joaquin Valley Information Center (SSJVIC), California Historical Resources Information System (CHRIS) on November 14, 2024 (RS 24-503; See Appendix B). According to the SSJVIC records, there have been no previous cultural resource studies conducted within the Project area and three cultural resource studies (MA-01028, MA-01203, and MA-01234) have been completed within the one-half-mile radius. One cultural resource (P-20-002308), the Madera Canal is located one half-mile from the Project site and is considered a historic structure.

Additionally, between January 6 and 10, 2024, Scott M. Hudlow conducted a pedestrian archaeological survey of the entire proposed Project area. Hudlow surveyed in east/west transects across the entire parcel in 15-meter (33 feet) intervals. No cultural resources were identified; however, on the northern edge of the Project area is a large trash scatter that is primarily architectural material. The trash scatter has been located on the property for two to three years, as evidenced by historical aerial photographs, which do not display the scatter until 2022. Additionally, a portion of canal lateral 24, which runs along the south side of the Fresno River is adjacent to the northern edge of the Project area. The section of the lateral was constructed before 1947. It is an extension of an older lateral that pre-dates 1922 and was probably originally constructed by Miller and Lux, which had extensive landholdings in Madera County.

4.5.2 Impact Assessment

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

Less than Significant Impact with Mitigation. The records search conducted at the SSJVIC (Appendix B) indicated that there are no recorded resources within the Project area, and it is not known if any exist there. There are three recorded resources within the one-half mile radius. There are no recorded cultural resources within the Project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, for the California State Historic Landmarks.

Subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered historic resources. This is considered a potentially significant impact; however, implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that significant impacts remain ***less than significant with mitigation incorporation.***

Mitigation Measures:

CUL-1 The following measures shall be implemented:

- Before initiation of construction or ground-disturbing activities associated with the Project, the City shall require all construction personnel to be alerted to the possibility of buried cultural resources, including historic, archeological and paleontological resources;
- The general contractor and its supervisory staff shall be responsible for monitoring the construction Project for disturbance of cultural resources; and
- If a potentially significant historical, archaeological, or paleontological resource, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains or trash deposits are encountered during subsurface construction activities (i.e., trenching, grading), all construction activities within a 100-foot radius of the identified potential resource shall cease until a qualified archaeologist evaluates the item for its significance and records the item on the appropriate

State Department of Parks and Recreation (DPR) forms. The archaeologist shall determine whether the item requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the item is determined to be significant under California Environmental Quality Act, the archaeologist shall recommend feasible mitigation measures, which may include avoidance, preservation in place or other appropriate measure, as outlined in Public Resources Code section 21083.2. City of Madera shall implement said measures.

CUL-2 City of Madera will incorporate into the construction contract(s) a provision that in the event a fossil or fossil formations are discovered during any subsurface construction activities for the proposed Project (i.e., trenching, grading), all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at the City of Madera, who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures, which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code section 21083.2.

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

Less than Significant Impact with Mitigation. The possibility exists that subsurface construction activities may encounter undiscovered archaeological resources. This would be a potentially significant impact. Implementation of Mitigation Measure CUL-1 and CUL-2 would require inadvertently discovery practices to be implemented should previously undiscovered archeological resources be located. As such, impacts to undiscovered archeological resources would be *less than significant with mitigation incorporation.*

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact. Although unlikely given the highly disturbed nature of the site and the records search did not indicate the presence of such resources, subsurface construction activities associated with the proposed Project could potentially disturb previously undiscovered human burial sites. Accordingly, this is a potentially significant impact. The California Health and Safety Code Section 7050.5 states that if human remains are discovered on-site, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition. If the Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC. The NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resource Code Section 5097.98.

Although considered unlikely subsurface construction activities could cause a potentially significant impact to previously undiscovered human burial sites, however compliance with regulations would reduce this impact to *less than significant*.

Mitigation Measures: None are required.

4.6 Energy

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

4.6.1 Environmental Setting

California's total energy consumption is second-highest in the nation after Texas, but its per capita energy consumption ranked the fourth-lowest in the nation.[6] In 2023, California was the fourth-largest producer of electricity in the nation; it's also the nation's third-largest electricity consumer and imports more electricity than any other state.[7]

Energy usage is typically quantified using the British Thermal Unit (BTU). As a point of reference, the approximately amounts of energy contained in common energy sources are as follows[8]:

Energy Source/Fuel	BTUs
Motor Gasoline	120,429 per gallon
Natural Gas	1,037 per cubic foot
Electricity	3,412 per kilowatt-hour

California electrical consumption in 2022 was approximately 6,851.9 trillion BTU, as provided in Table 4-2,[9] while total electrical consumption by Madera County in 2022 was 6.1 trillion BTU.[10]

[6] U.S. Energy Information Administration. California State Profile and Energy Estimates. https://www.eia.gov/state/?sid=CA#tabs-2. Accessed March 2025.
[7] Ibid.
[8] U.S. Energy Information Administration. Energy Units and Calculators Explained. https://www.eia.gov/energyexplained/units-and-calculators/british-thermal-units.php. Accessed March 2025.
[9] California Profile Overview, U.S. Energy Information Administration. https://www.eia.gov/state/?sid=CA#tabs-2. Accessed March 2025.
[10] California Energy Commission. Electricity Consumption by County. http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed March 2025.

Table 4-2 2022 California Energy Consumption[11]

End User	BTU of energy consumed (in trillions)	Percentage of total consumption
Residential	1,203.9	17.6
Commercial	1,193.4	17.4
Industrial	1,539.8	22.5
Transportation	2,917.3	42.6
Total	6,854.4	--

Total electrical consumption by Madera County in 2022 was 1808.23 GWh[12], while total gas consumption was 48.54 million Therms.[13]

The California Department of Transportation (Caltrans) reports that approximately 35.73 million vehicles were registered in the state in 2023, while in 2021 a total estimated 315.3 billion annual vehicle miles were traveled (VMT).[14]

4.6.2 Impact Assessment

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

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Potentially Significant Impact. The only physical development proposed by the Project includes the 60-acre TSM, consisting of 345 residential lots. The Project would introduce energy usage on a site that is currently demanding minimal energy. However, full build-out of the Granite Creek Plan Area may reach a maximum of 1,542 dwelling units and approximately 612,235 square feet over approximately 204 acres. The Project would consume large amounts of energy in both the short-term during Project construction and in the long-term during Project operation. Therefore, this impact is ***potentially significant.*** This topic will be addressed in the Project's forthcoming EIR.

[11] California Profile Overview, U.S. Energy Information Administration. https://www.eia.gov/state/?sid=CA#tabs-2. Accessed March 2025.
[12] California Energy Commission. Electricity Consumption by County. http://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed March 2025
[13] California Energy Commission. Gas Consumption by County. http://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed March 2025.
[14] Caltrans Fact Booklet. June 2024. California Department of Transportation. https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/caltrans-fact-booklets/caltransfacts2024-a11y.pdf. Accessed March 2025.

4.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
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 direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐

4.7.1 Environmental Setting

The proposed Project site is located within the San Joaquin Valley, a broad structural trough bound by the Sierra Nevada and Coast Ranges of California. The San Joaquin Valley, which comprises the southern portion of the Great Valley of California, has been filled with several thousand feet of sedimentary deposits. Sediments in the eastern valley, derived from the erosion of the Sierra Nevada, have been deposited by major to minor west-flowing drainages and their tributaries. Near-surface sediments are dominated by sands and silty sands with lesser silts, minor clays, and gravel. The sedimentary deposits in the region form large coalescing alluvial fans with gentle slopes. According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service, the Project site is underlain by Hanford fine sandy loam, 0 to 1 percent slopes (34.7%); Pachappa fine sandy loam, 0 to 1 percent slopes (28%); Grangeville fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes (10.5%); Delhi sand, 3 to 8 percent slopes, MLRA 17 (8.1%); Tujunga loamy sand, 0 to 3 percent slopes (4.6%); Hanford sandy loam, moderately deep over sand, 0 to 3 percent slopes (4.4%); Hanford sandy loam, 0 to 3 percent slopes (2.4%); Delhi sand, 0 to 3 percent slopes, MLRA 17 (%); Traver loam, slightly saline-alkali, 0 to 1 percent slopes (1.8%); Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17 (1.6%); Traver loam, moderately saline-sodic, 0 to 1 percent slopes (0.9%); and Riverwash (0.8%).[15]

4.7.2 Impact Assessment

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

a-i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

a-ii) Strong seismic ground shaking?

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

a-iv) Landslides?

Less than Significant Impact. The proposed Project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. Additionally, according to the Fault Rupture Zones Map prepared by the California Department of Conservation in 2007, the Project area is not located within a Fault-Rupture Hazard Area.[16] Since no known surface expression of active faults are believed to cross the site, fault rupture through the site is not anticipated. The nearest active or potentially active earthquake fault zone is located approximately 22 miles to the southeast of the site along the Clovis Fault, and approximately 40 miles to the west/southwest of the site along the San Joaquin Fault.[17] According to the California Historical Earthquakes Online Database maintained by the California Geological Survey, there have been no historic earthquakes with a magnitude greater than or equal to 6.0 epicentered within 40 miles of the site.[18]

[15] Colibri Ecological Consulting. December 2024. See Appendix B.

[16] California Department of Conservation. CGS Information Warehouse. Regulatory Maps and Reports. https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/ . Accessed March 2025.

[17] Fault Activity Map, California Department of Conservation. https://maps.conservation.ca.gov/cgs/fam/ . Accessed March 2025.

[18] Historic Earthquake Online Database, California Department of Conservation. https://maps.conservation.ca.gov/cgs/historicearthquakes/ . Accessed March 2025.

Although the Project area occurs in an area with historically low to moderate level of seismicity, strong ground shaking could occur in the region; however, the Project would be designed to withstand strong ground shaking, in compliance with the California Building Code, to minimize the potential effects of ground shaking and other seismic activity.

Liquefaction is a phenomenon where earthquake-induced ground vibrations increase the pore pressure in saturated granular soils until it is equal to the confining, overburden pressure. When this occurs, the soil can completely lose its shear strength and enter a liquefied state. The possibility of liquefaction is dependent upon grain size, relative density, confining pressure, saturation of the soils, and intensity and duration of ground shaking. In order for liquefaction to occur, three criteria must be met: "low density", coarse-grained (sandy) soils, a groundwater depth of less than about 50 feet, and a potential for seismic shaking from nearby large-magnitude earthquake. The proposed Project site primarily consists primarily of sandy loam and loam soils which are not known to induce liquefaction. The Project's Valley location also has a low risk of liquefaction. The site is not located within a Liquefaction Zone.[19] No subsidence prone soils or oil or gas production is involved with the proposed Project.

The proposed Project site is located on relatively flat topography and is not located adjacent to any steep slopes or areas that would otherwise be subject to landslides. There are no cut or fill slopes that currently exist or are planned at the proposed Project site. In addition, there are no natural or manmade slopes in the vicinity of the site; therefore, the potential for landslides is negligible. The impact is ***less than significant***.

Mitigation Measures: None are required.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service, the Project site is underlain by Hanford fine sandy loam, 0 to 1 percent slopes (34.7%); Pachappa fine sandy loam, 0 to 1 percent slopes (28%); Grangeville fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes (10.5%); Delhi sand, 3 to 8 percent slopes, MLRA 17 (8.1%); Tujunga loamy sand, 0 to 3 percent slopes (4.6%); Hanford sandy loam, moderately deep over sand, 0 to 3 percent slopes (4.4%); Hanford sandy loam, 0 to 3 percent slopes (2.4%); Delhi sand, 0 to 3 percent slopes, MLRA 17 (%); Traver loam, slightly saline-alkali, 0 to 1 percent slopes (1.8%); Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17 (1.6%); Traver loam, moderately saline-sodic, 0 to 1 percent slopes (0.9%); and Riverwash (0.8%). These soil types are generally regarded to be well drained. The Project site has a generally flat topography and is in an established urban area. Runoff from the Project site during the construction period will be covered by the General Construction permit issued by the State of California Water Resources Control Board; the Contractor will be required to install and maintain all necessary Best Management Practices (BMPs) for stormwater runoff management and erosion control. Therefore, the impact is ***less than significant***.

Mitigation Measures: None are required.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. Per the Biological Resource Evaluation (see Appendix A), which included a reconnaissance survey, the proposed Project did not indicate any unusual conditions at the site that would entail

[19] California Department of Conservation. CGS Information Warehouse. Regulatory Maps and Reports. https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/. Accessed March 2025.

special design considerations or construction procedures. In addition, the site is not identified in an area of large historic subsidence within the California Central Valley. The soil on site would not become unstable as a result of the Project or result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. There is a *less than significant impact.*

Mitigation Measures: None are required.

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

Less than Significant Impact. Based on the United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, on-site soils are mapped as Hanford fine sandy loam, 0 to 1 percent slopes (34.7%); Pachappa fine sandy loam, 0 to 1 percent slopes (28%); Grangeville fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes (10.5%); Delhi sand, 3 to 8 percent slopes, MLRA 17 (8.1%); Tujunga loamy sand, 0 to 3 percent slopes (4.6%); Hanford sandy loam, moderately deep over sand, 0 to 3 percent slopes (4.4%); Hanford sandy loam, 0 to 3 percent slopes (2.4%); Delhi sand, 0 to 3 percent slopes, MLRA 17 (%); Traver loam, slightly saline-alkali, 0 to 1 percent slopes (1.8%); Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17 (1.6%); Traver loam, moderately saline-sodic, 0 to 1 percent slopes (0.9%); and Riverwash (0.8%). These soil types are not considered expansive; expansive types are typically clayey soils, or soils containing volcanic ash. The proposed development will be required to comply with the Uniform Building Code for the Project. The impact is *less than significant*.

Mitigation Measures: None are required.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed Project development will tie into the City's existing wastewater system and will not require installation of a septic tank or alternate wastewater disposal system. There is *no impact.*

Mitigation Measures: None are required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant Impact with Mitigation. There are no unique geological features or known fossil-bearing sediments in the vicinity of the proposed Project site. However, there remains the possibility for previously unknown, buried paleontological resources or unique geological sites to be uncovered during subsurface construction activities. Therefore, this would be a potentially significant impact. Mitigation is proposed requiring standard inadvertent discovery procedures to be implemented to reduce this impact to a level of *less than significant with mitigation incorporation*.

Mitigation Measures:

> CUL-2 City of Madera will incorporate into the construction contract(s) a provision that in the event a fossil or fossil formations are discovered during any subsurface construction activities for the proposed Project (i.e., trenching, grading), all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at City of Madera, who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the

City shall implement those measures, which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code section 21083.2.

4.8 Greenhouse Gas Emissions

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

4.8.1 Environmental Setting

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs are transparent to solar radiation, but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect. Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity.

Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO2), methane (CH4), ozone, Nitrous Oxide (NOx), and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors.

In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Global climate change is, indeed, a global issue. GHGs are global pollutants, unlike criteria pollutants and TACs (which are pollutants of regional and/or local concern). Global climate change, if it occurs, could potentially affect water resources in California. Rising temperatures could be anticipated to result in sea-level rise (as polar ice caps melt) and possibly change the timing and amount of precipitation, which could alter water quality. According to some, climate change could result in more extreme weather patterns; both heavier precipitation that could lead to flooding, as well as more extended drought periods. There is uncertainty regarding the timing, magnitude, and nature of the potential changes to water resources as a result of climate change; however, several trends are evident.

Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades, and snowpack represents approximately 35 percent of the state's useable annual water supply. The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended. As air temperatures increase due to climate

change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.

City of Madera adopted a Climate Action Plan (CAP) in September 2015, which is a long-range plan to reduce greenhouse gas (GHG) emissions from City government (municipal) and community-wide activities within the City of Madera and prepare for the anticipated effects of climate change.[20]

4.8.2 Impact Assessment

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

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

Potentially Significant Impact. Greenhouse gas emissions would generate from long-term area and mobile sources as well as indirectly from energy consumption. Mobile sources would include residential vehicle trips and area source emissions would result from consumption of natural gas and electricity. Potential impacts to greenhouse gas emissions are ***potentially significant*** and as such, will be analyzed in the forthcoming EIR.

[20] City of Madera Climate action Plan. September 2015. https://www.madera.gov/wp-content/uploads/2017/08/Final-Madera-CAP_September-2015.pdf. Accessed March 2025.

4.9 Hazards and Hazardous Materials

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

4.9.1 Environmental Setting

The proposed Project site is generally located east of Road 23 between Avenue 14-1/2 and the Fresno River in unincorporated Madera County. The Plan Area is bound by Avenue 14-1/2 to the south, Road 23 to the west, the Fresno River to the north, and Road 24 to the east. The Plan Area is directly west of the city limits of the City of

Madera and lies within the Urban Growth Boundary (UGB) and the Sphere of Influence (SOI) for the City of Madera.

The site is approximately 0.7 miles west of Lincoln Elementary School. Upon approval, the Granite Creek Precise Plan site intends to build an elementary school in the vicinity in the future. The Madera Municipal Airport is the closest airport to the proposed Project site, approximately 1.7 miles north.

4.9.2 Impact Assessment

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

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

Less than Significant Impact. This impact is associated with hazards caused by the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Proposed Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. In addition, the Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) permit program through the submission and implementation of a Stormwater Pollution Prevention Plan during construction activities to prevent contaminated runoff from leaving the Project site. Therefore, no significant impacts would occur during construction activities.

It is anticipated that the proposed Project would not be a large-quantity user of hazardous materials. The General Plan Amendment requested on behalf of the Project would convert the existing land use to residential, mixed use, neighborhood commercial, open space, and public uses. These land uses do not routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Small quantities of hazardous materials would be used onsite, including cleaning solvents (e.g., degreasers, paint thinners, and aerosol propellants), paints (both latex- and oil-based), acids and bases (such as many cleaners), disinfectants, and fertilizers. The potential risks posed by the use and storage of these hazardous materials are primarily limited to the immediate vicinity of the materials. As such, these materials are not expected to expose human health or the environment to undue risks associated with their use.

Any accumulated hazardous construction or operational wastes will be collected and transported away from the site in compliance with all federal, state and local regulations. The initial 60 residences proposed by the TSM are not a typical source of hazardous materials, nor are the structures associated with future build-out phases, thus it wouldn't create a significant hazard to the public involving release of hazardous materials. Therefore, the proposed Project will not create a significant hazard to the public or the environment and any impacts would be *less than significant*.

Mitigation Measures: None are required.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. The site is approximately 0.7 miles west of Lincoln Elementary School. As the proposed Project includes the development of residential, mixed use, neighborhood commercial, open space, and public uses, it is not reasonably foreseeable that the proposed Project will cause a significant impact by emitting hazardous waste or bringing hazardous materials near a proposed or existing school. The previously mentioned land uses do not generate, store, or dispose of significant quantities of hazardous materials. Such uses also do not normally involve dangerous activities that could expose persons onsite or in the surrounding areas to large quantities of hazardous materials. See also Responses IX(a) and IX(b) regarding hazardous material handling. The impact is ***less than significant.***

Mitigation Measures: None are required.

d) Would the project 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?

Less Than Significant Impact. A database search was conducted to identify recorded hazardous materials incidents in the Project area. The search included cleanup sites under Federal Superfund (National Priorities List), State Response, and other federal, state, and local agency lists. The proposed Project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Geotracker[21] and Envirostor[22] databases). There is ***no impact.***

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

Less Than Significant Impact. The Project site is approximately 1.7 miles south of Madera Municipal Airport. The proposed Project is outside any noise contour; a small portion of the upper right-hand corner of the Project site is within Safety Zone 6 (Traffic Pattern Zone).[23] The land uses being proposed by the Project are considered compatible with this Safety Zone. There are no private airstrips in the Project vicinity and as such, there is a ***less than significant impact***.

Mitigation Measures: None are required.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed Project involves the implementation of the Granite Creek Precise Plan, a mixed-use urban development. Construction activities will be temporary in nature and will not cause any road closures that could interfere with any adopted emergency response or evacuation plan. The construction contractor will be required to work with the City and County (public works, police/fire, etc.) if and when roadway diversions are required to ensure that adequate access is maintained for residents and emergency vehicles. As such, there will be ***less than significant impacts***.

Mitigation Measures: None are required.

---

[21] Geotracker Database, California State Water Resources Control Board. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Hanford. Accessed March 2025.

[22] EnviroStor Database, California Department of Toxic Control Substances. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Hanford. Accessed March 2025.

[23] Madera Countywide Airport Land Use Compatibility Plan, adopted September 9, 2015. Exhibit 5D, Factors Map: Noise and Safety. https://www.maderacounty.com/home/showpublisheddocument/2882/636480659963700000. Accessed March 2025.

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

No Impact. There are no wildlands on or near the Project site. The site is substantially surrounded by urban development. There is *no impact*.

Mitigation Measures: None are required.

4.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☒	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☒	☐	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☒	☐	☐	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☒	☐	☐	☐
iv) impede or redirect flood flows?	☒	☐	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☒	☐	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

4.10.1 Environmental Setting

The City of Madera will provide domestic water to the Project site through a network of groundwater wells and pumps and water distribution system. The sole source of water supply for the City of Madera is the Madera sub-basin of the San Joaquin Valley Groundwater Basin. The quality of the water from the aquifer is considered to be of good quality and does not require additional treatment at this time.

4.10.2 Impact Assessment

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

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

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

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

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

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv) impede or redirect flood flows?

d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundations?

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Potentially Significant Impact. The proposed Project includes the physical development of 345 residential lots in the 60-acre TSM, including associated roadways and infrastructure. Full build-out of the Granite Creek Plan Area could have a maximum of 1,542 dwelling units and approximately 612,235 square feet over approximately 204 annexed acres.

Per the City of Madera Water System Master Plan, the Project will install master planned water mains on Avenue 14 ½: a 12-inch between Road 23 ½ and Buena Posada Drive, and an 18-inch water main between Road 23 and Road 23 ½.An 18-inch water main will also be installed in the westerly boundary of the Project and will tie-in to the Villages at Almond Grove Development, located to the north.

The proposed Project will comply with the California Green Building Code standards, which requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside the building by 20 percent. The Project will be required to install ultra-low flow fixtures and appliances. All development within the Project area will be required to install water meters at all service connections. The City will assess service charges based on volumetric rates and/or tiered rates, which encourages reasonable water use.

Construction and operation of the proposed Project could affect ground water quality supply and recharge, as well as increase drainage and runoff. Potential impacts on hydrology and water quality are ***potentially significant*** and as such, will be analyzed in the forthcoming EIR.

4.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

4.11.1 Environmental Setting

The proposed Project site is generally located east of Road 23 between Avenue 14-1/2 and the Fresno River in unincorporated Madera County. The Plan Area is bound by Avenue 14-1/2 to the south, Road 23 to the west, the Fresno River to the north, and Road 24 to the east. The Plan Area is directly west of the city limits of the City of Madera and lies within the Urban Growth Boundary (UGB) and the Sphere of Influence (SOI) for the City of Madera. Surrounding land uses consist of:

Direction	Existing Use
North	Fresno River
East	Residential
South	Rural residential
West	Agricultural

4.11.2 Impact Assessment

a) Would the project physically divide an established community?

b) Would the project cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The site is currently outside the City limits, but within the Sphere of Influence of City of Madera. The Project site is immediately west of the urbanized City and south of an approved development plan. The proposed Project would not divide an established community but would be a natural extension of planned urbanization.

Project implementation will result in changes to the existing land use designations. The properties, currently in the City Sphere of Influence and Urban Growth Boundary are designated Village Reserve. Land uses within the plan area will change to residential uses, mixed uses, commercial uses, and Pubic/Semi Public uses as shown in Figure 2-4. Properties within the Project area will be rezoned to a zone district that is consistent with the Land Use Plan, as specified in the City of Madera General Plan and shown in Table 4-3.

Table 4-3 Land Use Designation and Zoning Consistency Table

Granite Creek Area Plan Land Use Designation	City of Madera Zone District
Low Density Residential	RA, R-1, PD-4500, PD-6000, PD-8000, PD-12000
Medium Density Residential	R-2, PD-4500, PD-3000
High Density Residential	R-3, PD-2000, PD-1500
Village Mixed Use	C-R, C-N, C-1, C-2, C-H, PO, PD
Commercial	C-R, C-N, C-1, C-2, C-H
Other Public and Semi-Public	Public Facilities (PF)
Open Space	Resource Conservation and Open Space (RCO)

Upon approval of the proposed entitlements, the Project will be in compliance with the General Plan and zoning ordinance. Therefore, construction and operation of the Project would not cause any land use changes in the surrounding vicinity nor would it divide an established community.

Mitigation Measures: None are required.

4.12 Mineral Resources

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

4.12.1 Environmental Setting

The California Geological Survey (CGS) is responsible for the classification and designation of areas within California containing or potentially containing significant mineral resources. The CGS classifies lands into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geologic Board, as mandated by the Surface Mining and Reclamation Act of 1975. These MRZs identify whether known or inferred significant mineral resources are presented in areas. Lead agencies are required to incorporate identified MRZs resource areas delineated by the State into their general plans resource. According to the findings of the City General Plan Update EIR and the Department of Conservation Division of Mine Reclamation, the City does not contain any State or locally designated mineral resources

4.12.2 Impact Assessment

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. According to the City of Madera General Plan, the proposed Project area is not included in a State classified mineral resource zones. Additionally, it is not delineated on a local general plan, specific plan, or other land use plan. Soil disturbance for the proposed Project would be limited site groundwork such as grading, foundations, and installation of infrastructure. Therefore, there is *no impact*.

Mitigation Measures: None are required.

4.13 Noise

Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b) Generation of excessive ground borne vibration or ground borne noise levels?	☒	☐	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐

4.13.1 Environmental Setting

The proposed Project site is generally located east of Road 23 between Avenue 14-1/2 and the Fresno River in unincorporated Madera County. The Plan Area is bound by Avenue 14-1/2 to the south, Road 23 to the west, the Fresno River to the north, and Road 24 to the east. The Plan Area is directly west of the city limits of the City of Madera and lies within the Urban Growth Boundary (UGB) and the Sphere of Influence (SOI) for the City of Madera. Tables 4-4 and 4-5 present the maximum 24-hour exterior noise levels for land designated by the City's General Plan relevant to the proposed Project.[24]

Table 4-4
Exterior Noise Compatibility Guidelines For Noise From All Sources,
Including Transportation Noise (24-Hour Day-Night Average [Cnel/Ldn])

Land Use Designations	Completely Compatible	Tentatively Compatible	Normally Incompatible	Completely Incompatible
All Residential (Single- and Multi-Family)	Less than 60 dBA	60-70 dBA	70-75 dBA	Greater than 75 dBA

[24] Ch. 9 Noise Element, City of Madera General Plan. Pg 9-14

Table 4-5
Exterior Noise Level Standards For Non-Transportation Noise, Measured As Dba Leq (30 Minutes)

Land Use Type	Time Period	Maximum Noise Level (dBA)
Single-Family Homes and Duplexes	10 p.m. to 7 a.m.	50
	7 a.m. to 10 p.m.	60
Multiple Residential 3 or More Units Per Building (Triplex +)	10 p.m. to 7 a.m.	55
	7 a.m. to 10 p.m.	60

Note: Leq (Equivalent Sound Level) is the average noise level during the time period of the sample.

4.13.2 Impact Assessment

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

b) Would the project result in generation of excessive ground borne vibration or ground borne noise levels?

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Potentially Significant Impacts.

Short-term (Construction) Noise Impacts

Proposed Project construction related activities will involve temporary noise sources. Typical construction related equipment includes graders, trenchers, small tractors and excavators. During the proposed Project construction, noise from construction related activities will contribute to the noise environment in the immediate vicinity. Table 4-6 indicates the anticipated noise levels of the typical construction-related equipment (i.e., graders, trenchers, tractors) based on a distance of 50-feet between the equipment and the sensitive noise receptor.[25]

[25] The Noise and Vibration Impact Assessment Manual, Federal Transit Administration, U.S. Department of Transportation. September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Table 7-1. Accessed March 2025.

Table 4-6
Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Dozer	85
Generator	82
Grader	85
Jack Hammer	88
Loader	85
Paver	85
Truck	84

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban environments. Most residents of urban areas recognize this reality and expect to hear construction activities on occasion.

Long-term (Operational) Noise Impacts

Operational noise impacts will primarily be from vehicles traveling on internal access roads and from traffic traveling along Avenue 14 ½ and Road 23. The Project will increase in traffic on some roadways in the Project area, resulting in an increase in ambient noise. Potential impacts regarding noise in the vicinity are ***potentially significant*** and as such, will be analyzed in the forthcoming EIR.

4.14 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

4.14.1 Environmental Setting

According to the most recent Department of Finance data, the City of Madera's population as of January 1, 2024 was 66,560. There were approximately 18,765 total housing units in the City, with approximately 3.38 persons per household.[26]

4.14.2 Impact Assessment

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

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

Less Than Significant Impact. According to the City's EIR, both the City of Madera and the Planning Area have experienced substantial population growth from 1990-2008[27]. City of Madera's population during the adoption of the General Plan in 2008 was 56,710[28], and the current population is 66,560. This represents an approximate

[26] State of California, Department of Finance. Demographics, Data. https://dof.ca.gov/forecasting/demographics/. Accessed March 2025.
[27] City of Madera General Plan Environmental Impact Report, May 2009. Page 7.0-2.
[28] Ibid.

increase of 17.37% over 15 years. Estimates for 2023 show that the City has 18,765 housing units with an average of 3.38 people per household.[29] There are 345 new single-family homes associated with the proposed Project's initial 60-acre TSM; however, Project buildout includes a total of 1,542 residential units. The site at full buildout would provide additional housing for approximately 5,212 people (1,542 housing units X 3.38 persons per household = 5,212 persons).

The site is directly west of the city limits of the City of Madera but lies within the Urban Growth Boundary and Sphere of Influence for the City of Madera and is currently in agricultural production. No residential units exist on site. The site has been designated as Village Reserve by the City's General Plan and as such, site development has been anticipated and accounted for in the City's long-term planning documents. As such, the proposed Project will not induce unplanned population growth, and no existing people or housing will be displaced as a result of Project implementation. Impacts are *less than significant.*

[29] Ibid.

4.15Public Services

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

4.15.1 Environmental Setting

Fire, emergency, medical, and police protection services for the Project Site are provided by the City. The City has a contract service with CalFire to provide management and staffing of the City's fire stations and equipment. Ambulance services are provided by a private contractor. The Project Site is located within the Madera Unified School District, which oversees pre-K through 12 education services. Parks are operated and maintained by the City.

4.15.2 Impact Assessment

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

Fire Protection:

Less than Significant Impact. The Madera City Fire Department is administered by the California Department of Forestry and Fire Protection (CDF) pursuant to a cooperative fire protection agreement. Services include fire

prevention and suppression, emergency medical assistance, rescue, public assistance, fire menace standby, safety inspections, and review of building plans for compliance with applicable codes and ordinances. According to the City's GP, there are two City fire stations, located at 317 North Lake and 200 South Schnoor, are staffed 24 hours a day. The Fire Department staffs two fire engines and one mini-pumper. One of the engines features a 50' tele-squirt aerial ladder. In addition to these stations, two County of Madera stations serve portions of the Planning Area. [30]

Upon approval of the Annexation, General Plan Amendment, Pre-Zone, Tentative Parcel Map, and Tentative Subdivision Map, the Project site will be serviced by the Fire Department. The Project would be required to comply with all applicable fire and building safety codes (California Building Code and Uniform Fire Code) to ensure fire safety elements are incorporated into final Project design, including the providing designated fire lanes marked as such. Proposed interior streets will be required to provide appropriate widths and turning radii to safely accommodate emergency response and the transport of emergency/public safety vehicles. The Project will also be designed to meet Fire Department requirements regarding water flow, water storage requirements, hydrant spacing, infrastructure sizing, and emergency access. As a result, appropriate fire safety considerations will be included as part of the final design of the Project. The proposed Project at full buildout will add to the number of "customers" served, however, the Fire Department has capacity for the additional service need. No additional fire equipment, personnel, or services are anticipated to be required by Project implementation. In addition, the Project applicant will be required to pay all associated impact fees related to public services, including fire. As such, any impacts are ***less than significant***.

Police Protection

Less than Significant Impact. Police services are provided by the Madera Police Department. The Police Department has two divisions—Administrative Services and Operations—that provide a wide variety of law enforcement services, ranging from investigations to traffic patrols to school liaison. According to the 2023 Annual Report, the Department had 65 sworn personnel and 31 nonsworn personnel.[31] Implementation of the proposed Project would result in an increase in demand for police services; however, this increase would be minimal compared to the number of officers currently employed by the Madera Police Department and would not trigger the need for new or physically altered police facilities. No additional police personnel or equipment is anticipated. In addition, each home will be assessed a public safety impact fee by the City that is used to make capital improvements for the Police Department. The proposed site has been designated by the General Plan and zoned for residential purposes. The impact is **less than significant.**

Schools

Less than Significant Impact. The proposed Project site is located within the Madera Unified School District. The site is approximately 0.7 miles west of the Lincoln Elementary School. Pursuant to California Education Code Section 17620(a)(1), the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district for the purpose of funding the construction or reconstruction of school facilities. The Project applicant would be required to pay such fees to reduce any impacts of new residential development of school services. Payment of the developer fees will offset the addition of school-age children within the district.

[30] Ch. 6 Health and Safety Element, City of Madera General Plan. October 2009. Pg 6-15.

[31] Annual Report 2023, City of Madera Police Department. https://www.madera.gov/wp-content/uploads/2024/05/Annual-Report-2023.pdf. Accessed March 2025.

Development of the Granite Creek Precise Plan will require the alteration of existing or construction of new school facilities as the development will contribute to the cumulative need for increased school facilities. The Granite Creek Precise Plan intends to include the development of a 20-acre K-8 school within the Project area, the environmental impacts of which are analyzed in this Initial Study. As such, any impacts would be ***less than significant.***

Parks

Less than Significant Impact. The City of Madera provides its residents several types of parks and recreational facilities. The Parks and Community Services Department team supervises and maintains area parks, the municipal golf course, and other local landscape. The City also coordinates a wide variety of recreation and leisure services for both youth and adults. According to the City's General Plan, there are more than 320 acres of parks and recreation areas within the City limits. The closest park to the proposed site is the Lions Town & Country Park, located approximately 1.6 miles to the southeast. The proposed TSM includes a 1.19-acre out lot which will be developed as a park; however, 9.74 acres of the Granite Creek Precise Plan area will be designated as Open Space and zoned RCO (Resource Conservation and Open Space). Additionally, the Project will be required to pay City Park facility impact fees to compensate for any service demand increase on existing parks within the Madera area. The Project applicant would be required to comply with the Municipal Code and Ordinances. As such, any impacts would remain ***less than significant.***

Other public facilities

Less than Significant Impact. The proposed Project is within growth projections identified in the City's General Plan and other infrastructure studies. As such, the Project would not result in increased demand on other public facilities such as library services that has not already been planned for. Any impacts would be ***less than significant***.

Mitigation Measures: None are required.

4.16 Recreation

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	☐	☐	☒	☐

4.16.1 Environmental Setting

The City of Madera provides its residents several types of parks and recreational facilities. According to the City's General Plan, there are more than 320 acres of parks and recreation areas within the City limits. The City's neighborhood parks are predominately located in the eastern half of the City.[32]

4.16.2 Impact Assessment

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?

Less Than Significant Impact. The City of Madera provides its residents several types of parks and recreational facilities. The Parks and Community Services Department team supervises and maintains area parks, the municipal golf course, and other local landscape. The Department also coordinates a wide variety of recreation and leisure services for both youth and adults. According to the City's General Plan, there are more than 320 acres of parks and recreation areas within the City limits. The closest park to the proposed site is the Lions Town & Country Park, located approximately 1.6 miles to the southeast.

Buildout of the Granite Creek Plan Area is limited to a maximum of 1,542 dwelling units and approximately 612,235 square feet over approximately 204 acres. The 60-acre TSM includes a 1.19-acre outlot for development as a park and other associated improvements; however, 9.74 acres of the Granite Creek Precise Plan area will be

[32] Ch. 11 Parks and Recreation Element, City of Madera General Plan. October 2009. Pg 11-2.

designated as Open Space and zoned RCO (Resource Conservation and Open Space). Additionally, the proposed Project includes the establishment of a 20-acre K-8 school site and an 8.8-acre dual use basin for water retention and recreational purposes.

The increase of approximately 5,119 persons resulting from the Project may have an impact on existing recreational facilities. In order to implement the goals and objectives of the City's General Plan, and to mitigate the impacts caused by future development in the City, park facilities must be constructed. The City Council has determined that a Park Facilities Fee is needed in order to finance these public facilities and to pay for each development's fair share of the construction and acquisition costs. The Project Applicant will be required to pay development impact fees as determined by the City of Park Facilities Fees. The Project will still be required to pay City park facility impact fees, as required. Therefore, impacts are considered *less than significant.*

Mitigation Measures: None are required.

4.17 Transportation

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

4.17.1 Environmental Setting

The Plan Area is directly west of the city limits of the City of Madera and lies within the Urban Growth Boundary (UGB) and the Sphere of Influence (SOI) for the City of Madera. The proposed Project site is located in a mix of urban and rural area, surrounded by residential housing and agricultural land. The site currently consists of almond orchards and grape vineyards. The Project area is surrounded primarily by agricultural uses to the north and west and single-family residential uses to the east. The south side of the Project area includes a combination of residential uses and agricultural uses. The site is bounded by Avenue 14 ½ to the south.

4.17.2 Impact Assessment

Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

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

Potentially Significant Impact.

Project related traffic generation could potentially have significant impacts to local and regional transportation systems. Additionally, VMT generation could potentially conflict with CEQA Guidelines section 15064.3 and as such, these impact areas will be analyzed in the forthcoming EIR.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed Project has been designed for ease of access, adequate circulation/movement, and is typical of residential developments in the City of Madera. On-site circulation patterns do not involve high speeds, sharp curves or dangerous intersections. Although there will be an increase in the volume of vehicles accessing the site and surrounding areas, the proposed Project will not present a substantial increase in hazards. Impacts would be *less than significant*.

d) Would the project result in inadequate emergency access?

Less Than Significant Impact. State and City Fire Codes establish standards by which emergency access may be determined. The proposed Project would have to provide adequate unobstructed space for fire trucks to turn around. The proposed Project site would have adequate internal circulation capacity including entrance and exit routes to provide adequate unobstructed space for fire trucks and other emergency vehicles to gain access and to turn around. The proposed Project does not involve a change to any emergency response plan and the site will remain accessible to emergency vehicles of all sizes. Any impacts are considered *less than significant*.

Mitigation Measures: None are required.

4.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	☐	☐	☐	☐
i) Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

4.18.1 Environmental Setting

The NAHC provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintains an inventory of sacred places.[33]

The NAHC performs a Sacred Lands File search for sites located on or near the Project site upon request. The NAHC also provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. The City sent letters to the

[33] Native American Heritage Commission, About the Native American Heritage Commission http://nahc.ca.gov/about/. Accessed March 2025.

tribal governments listed by the NAHC on April 10, 2025 as required by AB 52 and SB 32. The tribes had 90 days from the receipt of the letter to request consultation in writing.

4.18.2 Impact Assessment

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact. A Tribal Cultural Resource (TCR) is defined under Public Resources Code section 21074 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included and that is listed or eligible for inclusion in the California Register of Historic Resources or in a local register of historical resources, or if the MUSD, acting as the Lead Agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR. As discussed above, under Section V, Cultural Resources, criteria (b) and (d), no known archeological resources, ethnographic sites or Native American remains are located on the proposed Project site.

As discussed under criterion (b) implementation of standard protection measures outlined in the City's General Plan EIR would ensure that impacts to unknown archaeological deposits, including TCRs, remains at a less than significant level. As discussed under criterion (d), compliance with California Health and Safety Code Section 7050.5 would reduce the likelihood of disturbing or discovering human remains, including those of Native Americans. In addition, the City provided consultation letters to the Tribes on the NAHC list that was provided to the City. Any impacts to TCRs would be considered *less than significant*.

Mitigation Measures: No additional measures are required.

4.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☒	☐	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☒	☐	☐	☐

4.19.1 Environmental Setting

The proposed Project will be required to connect to water, sewer, stormwater and wastewater services provided by the City of Madera and may be subject to water use fees and/or development fees to be provided such service. In addition, the Project will require solid waste disposal services.

The City of Madera will provide domestic water to the Project site through a network of groundwater wells and pumps and water distribution system. The sole source of water supply for the City of Madera is the Madera sub-basin of the San Joaquin Valley Groundwater Basin.

The Madera County Integrated Water Management Plan (Madera IRWM) encourages all of the groundwater users in Madera County to cooperate in reducing the overdraft. The City has developed specific plans to reduce their use of groundwater through implementation of water meters to encourage conservation by users and the percolation of treated wastewater for extraction by the Madera Irrigation

District for farm irrigation uses. They have the potential to further reduce groundwater depletion through the implementation of a groundwater recharge program that uses surface water supplies from the San Joaquin River and the Fresno River.

The City of Madera will provide wastewater collection, treatment and disposal for the wastewater generated by the Project site. Wastewater collection is provided through a series of existing sanitary sewer mains and trunk sewers that convey wastewater from the Project and areas surrounding the Project to the existing wastewater treatment plant. Treatment and disposal are provided at the City's Wastewater Treatment Plant (WWTP) located at 13048 Road 21½, west of the City of Madera. This section discusses the capacity of the existing sanitary sewer collection system, the capacity of the WWTP, the expected demand from the Project, and the evaluation of the impacts and comparison of those impacts to thresholds of significance.

4.19.2 Impact Assessment

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

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

c) Would the project 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?

d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Potentially Significant Impact. Because the proposed Project is subject to annexation, it will be required to connect to existing water, wastewater, stormwater, electricity, natural gas, and telecommunications systems. The proposed Project will connect to the existing City water system. Per the City of Madera Water System Master Plan, the Project will install master planned water mains on Avenue 14 ½: a 12-inch between Road 23 ½ and Buena Posada Drive, and an 18-inch water main between Road 23 and Road 23 ½. An 18-inch water main will also be installed in the westerly boundary of the Project and will tie-in to the Villages at Almond Grove Development, located to the north.

The proposed Project is directly west of the city limits of the City of Madera and lies within the Urban Growth Boundary (UGB) and the Sphere of Influence (SOI) for the City of Madera. Site development has been accounted for in the City's infrastructure planning documents; however potential impacts utilities are ***potentially significant*** and as such, will be further analyzed in the forthcoming EIR.

4.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

4.20.1 Environmental Setting

The Project Site is located on a relatively flat property within the City's Urban Growth Area planned for urban uses. Further, the Project Site is not identified by the California Department of Forestry and Fire Protection (CalFire) or the City as a Very High Fire Hazard Severity Zone (VHFHSZ)[34]; rather, the site is within an "area of local responsibility" as defined by CalFire and is considered an area of low fire risk.

4.20.2 Impact Assessment

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

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

[34] Cal Fire. Fire Hazard Severity Zones in SRA – Madera County. https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed March 2025.

b) Due to slope, prevailing winds, and other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

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

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. The proposed Project is located in an area developed with residential and agricultural uses, which precludes the risk of wildfire. The area is flat in nature which would limit the risk of downslope flooding and landslides, and limit any wildfire spread.

To receive building permits, the proposed Project would be required to be in compliance with the adopted emergency response plan and latest Building Codes. As such, any wildfire risk to the Project structures or people would be *less than significant.*

Mitigation Measures: None are required.

4.21 CEQA Mandatory Findings of Significance

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

4.21.1 Environmental Setting

4.21.2 Impact Assessment

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

Less Than Significant Impact With Mitigation. The analyses of environmental issues contained in this Initial Study indicate that the proposed Project may have substantial impact on the environment or on any resources identified in the Initial Study. Mitigation measures have been incorporated in the Project design; however, some impacts remain ***potentially significant***. Therefore, an EIR will be prepared for those impact areas.

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

Potentially Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. The proposed Project may contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc). Mitigation measures have been incorporated in the Project design; however, some impacts remain *potentially significant*. Therefore, an EIR will be prepared to further analyze those impact areas.

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

Potentially Significant Impact. The analyses of environmental issues contained in this Initial Study indicate that the Project may have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the project design; however, some impacts remain *potentially significant*. Therefore, an EIR will be prepared to further analyze those impact areas.

Appendix A

Biological Resource Evaluation Report

Colibri
Ecological Consulting

Biological Resource Evaluation

December 2024

Madera Granite Hills Precise Plan Project
Madera County, CA

Prepared for:
Crawford & Bowen Planning, Inc.
113 N. Church Street, Suite 310
Visalia, CA 93291

Prepared by:
Colibri Ecological Consulting, LLC
9493 N Fort Washington Road, Suite 108
Fresno, CA 93730
colibri-ecology.com

Executive Summary

The project applicant is seeking approval of a master planned community development immediately west of the City of Madera limits in Madera County, California. The proposed master planned community development project (Project) will involve pre-zoning, a General Plan amendment, Tentative and Final Tract Maps, a Master Plan, Precise Plan, and annexation into the City of Madera on approximately 199 acres that currently support a vineyard and an orchard.

To evaluate whether the Project may affect biological resources under California Environmental Quality Act (CEQA) purview, we (1) obtained lists of special-status species from the United States Fish and Wildlife Service, the California Department of Fish and Wildlife, and the California Native Plant Society; (2) reviewed other relevant background information such as satellite imagery and topographic maps; and (3) conducted a field reconnaissance survey at the Project site.

This biological resource evaluation summarizes (1) existing biological conditions on the Project site, (2) the potential for special-status species and regulated habitats to occur on or near the Project site, (3) the potential impacts of the proposed Project on biological resources and regulated habitats, and (4) measures to reduce those potential impacts to less-than-significant levels under CEQA.

We concluded the Project could affect the state candidate for listing at threatened or endangered burrowing owl (*Athene cunicularia*) and nesting migratory birds. However, effects can be reduced to less-than-significant levels with mitigation.

Contents

Figures

Tables

Appendices

Abbreviations

Abbreviation	Definition
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
FE	Federally listed as Endangered
FESA	Federal Endangered Species Act
FP	State Fully Protected
FPT	Federally Proposed as Threatened
FT	Federally listed as Threatened
MBTA	Migratory Bird Treaty Act
NRCS	Natural Resources Conservation Service
SC	State Candidate for listing under the CESA
SE	State listed as Endangered
SSSC	State Species of Special Concern
ST	State listed as Threatened
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 Introduction

1.1 Background

The project applicant is seeking approval of a master planned community development (the Project) on approximately 199 acres immediately west of the City of Madera limits in Madera County, California. The Project site currently supports an almond orchard and a vineyard.

The purpose of this biological resource evaluation is to assess whether the Project will affect protected biological resources pursuant to California Environmental Quality Act (CEQA) guidelines. Such resources include species of plants or animals listed or proposed for listing under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA) as well as those covered under the Migratory Bird Treaty Act (MBTA), the California Native Plant Protection Act, and various other sections of California Fish and Game Code (CFGC). This biological resource evaluation also addresses Project-related impacts to regulated habitats, which are those under the jurisdiction of the United States Army Corps of Engineers (USACE), State Water Resources Control Board (SWRCB), or California Department of Fish and Wildlife (CDFW).

1.2 Project Description

The proposed Project will involve a master planned community development on approximately 199 acres. The Project will include pre-zoning, a General Plan amendment, Tentative and Final Tract Maps, a Master Plan, Precise Plan, and annexation into the City of Madera.

1.3 Project Location

The approximately 199-acre Project site is north of Avenue 14 ½ between Road 23 and Road 24 and south of the Fresno River, immediately west of the City of Madera limits in Madera County, California (Figures 1 and 2).

Figure 1. Project site vicinity map.

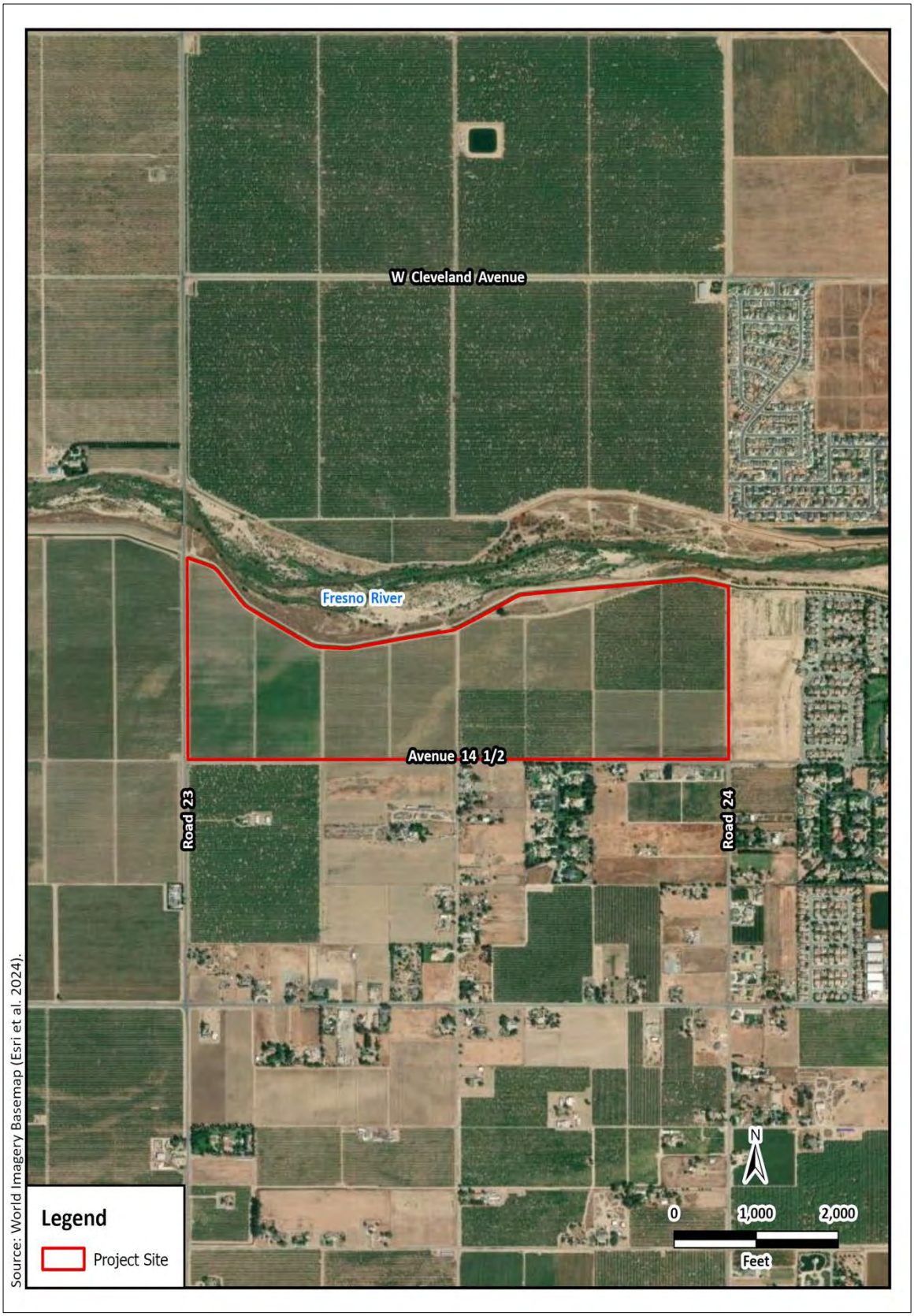


Figure 2. Project site map.

1.4 Regulatory Framework

The relevant regulatory requirements and policies that guide the impact analysis of the Project are summarized below.

1.4.1 State Requirements

California Department of Fish and Wildlife Jurisdiction. The CDFW has regulatory jurisdiction over lakes and streams in California. Activities that divert or obstruct the natural flow of a stream; substantially change its bed, channel, or bank; or use any materials (including vegetation) from the streambed may require that the project applicant enter into a Lake and Streambed Alteration Agreement with the CDFW in accordance with California Fish and Game Code [CFGC] Section 1602.

California Endangered Species Act. The CESA of 1970 (CFGC Section 2050 et seq. and California Code of Regulations (CCR) Title 14, Subsections 670.2 and 670.51) prohibits the take of species listed under CESA (14 CCR Subsections 670.2 and 670.5). Take is defined as hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill. Under CESA, state agencies are required to consult with the CDFW when preparing CEQA documents. Consultation ensures that proposed projects or actions do not adversely affect state listed species. During consultation, CDFW determines whether take would occur and identifies "reasonable and prudent alternatives" for the project and conservation of special-status species. CDFW can authorize take of state listed species under Sections 2080.1 and 2081(b) of the CFGC in those cases where it is demonstrated the impacts are minimized and mitigated. Take authorized under section 2081(b) must be minimized and fully mitigated. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Under CESA, CDFW is responsible for maintaining a list of threatened and endangered species designated under state law (CFGC Section 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to the requirements of CESA, a state or local agency reviewing a proposed project within its jurisdiction must determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation. Impacts to species of concern or fully protected species would be considered significant under certain circumstances.

California Environmental Quality Act. The California Environmental Quality Act (CEQA) of 1970 (Subsections 21000–21178) requires that CDFW be consulted

during the CEQA review process regarding impacts of proposed projects on special-status species. Special-status species are defined under CEQA Guidelines subsection 15380(b) and (d) as those listed under FESA and CESA and species that are not currently protected by statute or regulation but would be considered rare, threatened, or endangered under these criteria or by the scientific community. Therefore, species considered rare or endangered are addressed in this biological resource evaluation regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity (CNPS 2024). Plants with Rare Plant Ranks 1A, 1B, 2A, or 2B are considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in the FESA and the section of the CFGC dealing with rare and endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the United States Fish and Wildlife Service (USFWS) or CDFW (i.e., candidate species) would occur. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agency has an opportunity to designate the species as protected, if warranted.

California Native Plant Protection Act. The California Native Plant Protection Act of 1977 (CFGC Sections 1900–1913) requires all state agencies to use their authority to carry out programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require the project proponent to notify CDFW at least 10 days in advance of any change in land use, which allows CDFW to salvage listed plants that would otherwise be destroyed.

Nesting birds. CFGC Sections 3503, 3503.5, and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs. CFGC Section 3511 lists birds that are “Fully Protected” as those that may not be taken or possessed except under specific permit.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et. sec.) was established in 1969 and entrusts the SWRCB and nine Regional Water Quality Control Boards (collectively Water Boards) with the responsibility to preserve and enhance all

beneficial uses of California's diverse waters. The Act grants the Water Boards authority to establish water quality objectives and regulate point- and nonpoint-source pollution discharge to the state's surface and ground waters. Under the auspices of the United States Environmental Protection Agency, the Water Boards are responsible for certifying, under Section 401 of the federal Clean Water Act, that activities affecting waters of the United States comply with California water quality standards. The Porter-Cologne Water Quality Control Act addresses all "waters of the State," which are more broadly defined than waters of the Unites States. Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state. They include artificial as well as natural water bodies and federally jurisdictional and federally non-jurisdictional waters. The Water Boards may issue a Waste Discharge Requirement permit for projects that will affect only federally non-jurisdictional waters of the State.

1.4.2 Federal Requirements

Federal Endangered Species Act. The USFWS and the National Oceanographic and Atmospheric Administration's National Marine Fisheries Service enforce the provisions stipulated in the FESA of 1973 (FESA, 16 United States Code [USC] Section 1531 et seq.). Threatened and endangered species on the federal list (50 Code of Federal Regulations [CFR] 17.11 and 17.12) are protected from take unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct. Pursuant to the requirements of the FESA, an agency reviewing a proposed action within its jurisdiction must determine whether any federally listed species may be present in the proposed action area and determine whether the proposed action may affect such species. Under the FESA, habitat loss is considered an effect to a species. In addition, the agency is required to determine whether the proposed action is likely to jeopardize the continued existence of any species that is listed or proposed for listing under the FESA (16 USC Section 1536[3], [4]). Therefore, proposed action-related effects to these species or their habitats would be considered significant and would require mitigation.

Migratory Bird Treaty Act. The federal MBTA (16 USC Section 703, Supp. I, 1989) prohibits killing, possessing, trading, or other forms of take of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. "Take" is defined as the pursuing, hunting, shooting, capturing, collecting, or killing of birds, their nests, eggs, or young (16 USC Section 703 and Section 715n).

This act encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA specifically protects migratory bird nests from possession, sale, purchase, barter transport, import, and export, and take. For nests, the definition of take per 50 CFR 10.12 is to collect. The MBTA does not include a definition of an "active nest." However, the "Migratory Bird Permit Memorandum" issued by the USFWS in 2003 and updated in 2018 clarifies the MBTA in that regard and states that the removal of nests, without eggs or birds, is legal under the MBTA, provided no possession (which is interpreted as holding the nest with the intent of retaining it) occurs during the destruction (USFWS 2018).

United States Army Corps of Engineers Jurisdiction. Areas meeting the regulatory definition of "waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, the territorial seas, all interstate waters, all impoundments of waters otherwise defined as waters of the United States, tributaries of waters otherwise defined as waters of the United States that are relatively permanent, standing, or continuously flowing bodies of water, and relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to waters of the United States (33 CFR part 328.3). Waters of the United States do not include prior converted cropland, waste treatment systems, ditches, artificially irrigated areas, artificial lakes or ponds, artificial reflecting pools or swimming pools, waterfilled depressions, and swales and erosional features. Under the 2006 Supreme Court ruling *Rapanos v. United States*, waters of the United States include non-navigable tributaries of traditional navigable waters that are relatively permanent. The 2023 Supreme Court ruling *Sackett v. Environmental Protection Agency* removed the significant nexus standard for tributaries and adjacent waters of the United States and requires tributaries and adjacent waters to have a continuous surface connection to a water of the United States. Wetlands on non-agricultural lands are identified using the *Corps of Engineers Wetlands Delineation Manual and related Regional Supplement* (USACE 1987 and 2008). Construction activities, including direct removal, filling, hydrologic disruption, or other means in jurisdictional waters are regulated by the USACE. The placement of dredged or fill material into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. The State Water Resources Control Board is the state agency, together with the Regional Water Quality Control Boards, charged with implementing water quality certification in California.

2.0 Methods

2.1 Desktop Review

As a framework for the evaluation and reconnaissance survey, we obtained a USFWS species list for the Project (USFWS 2024a, Appendix A). In addition, we searched the California Natural Diversity Database (CNDDB, CDFW 2024, Appendix B) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2024, Appendix C) for records of special-status plant and animal species from the vicinity of the Project site. Regional lists of special-status species were compiled using CNDDB and CNPS database searches confined to the Madera 7.5-minute United States Geological Survey (USGS) topographic quadrangle, which encompasses the Project site, and the eight surrounding quadrangles (Berenda, Biola, Bonita Ranch, Daulton, Gravelly Ford, Gregg, Herndon, and Kismet). A local list of special-status species was compiled using CNDDB records from within 5 miles of the Project site. Species that lacked a CEQA-recognized special-status designation by state or federal regulatory agencies or public interest groups were omitted from the final list. Species for which the Project site does not provide habitat were eliminated from further consideration. We also reviewed aerial imagery from Google Earth (Google 2024) and other sources, USGS topographic maps, the Web Soil Survey (NRCS 2024), the National Wetlands Inventory (USFWS 2024b), and relevant literature.

2.2 Reconnaissance Survey

Colibri Senior Scientist Amy Hernandez and Staff Scientist Brandon Dunnahoo conducted a field reconnaissance survey at the Project site on 17 December 2024. The Project site and a 50-foot buffer (Figure 3) surrounding the Project site were walked and thoroughly inspected to evaluate and document the potential for the area to support state or federally protected resources. All plants except those under cultivation or planted in residential areas and all vertebrate wildlife species observed within the survey area were identified and documented. The survey area was evaluated for the presence of regulated habitats, including lakes, streams, and other waters as defined by the USACE, CDFW, and under the Porter-Cologne Water Quality Control Act. An additional buffer of 0.5 miles around the Project site was inspected for potential nesting habitat for special-status raptors. The 0.5-mile buffer was surveyed by driving public roads and identifying the presence of large trees or other potentially suitable substrates for nesting raptors as well as open areas that could provide foraging habitat.

2.3 Significance Criteria

CEQA defines "significant effect on the environment" as "a substantial, or potentially substantial, adverse change in the environment" (California Public Resource Code § 21068). Under CEQA Guidelines Section 15065, a Project's effects on biological resources are deemed significant where the Project would do the following:

a) Substantially reduce the habitat of a fish or wildlife species,
b) Cause a fish or wildlife population to drop below self-sustaining levels,
c) Threaten to eliminate a plant or animal community, or
d) Substantially reduce the number or restrict the range of a rare or endangered plant or animal.

In addition to the Section 15065 criteria, Appendix E within the CEQA Guidelines includes six additional impacts to consider when analyzing the effects of a project. Under Appendix E, a project's effects on biological resources are deemed significant where the project would do any of the following:

e) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
f) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
g) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
h) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
i) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
j) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These criteria were used to determine whether the potential effects of the Project on biological resources qualify as significant.

Figure 3. Reconnaissance survey area map.

3.0 Results

3.1 Desktop Review

The USFWS species list for the Project included 10 species listed as threatened, endangered, or proposed for listing under the FESA (USFWS 2024a, Table 1, Appendix A). None of those species could occur on or near the Project site due to the lack of habitat or because the Project site is outside the known range of the species (Table 1). As stated in the species list, the Project site occurs outside any proposed or designated USFWS critical habitat (USFWS 2024a, Appendix A).

Searching the CNDDB for records of special-status species from the Madera 7.5-minute USGS topographic quadrangle and the eight surrounding quadrangles produced 225 records of 34 species (Table 1, Appendix B) and two sensitive natural communities. Of the 34 species, five were not considered further because they are not CEQA-recognized as special-status species by state or federal regulatory agencies or public interest groups or are considered extirpated in California (Appendix B). Of the remaining 29 species, nine are known from within 5 miles of the Project site (Table 1, Figure 4). Of those species, only the state candidate for listing as threatened burrowing owl (*Athene cunicularia*) could occur on or near the Project site (Table 1). None of the other species nor the sensitive natural communities identified in the nine-quad search could occur on or near the Project site (Table 1) due to the lack of habitat.

Searching the CNPS inventory of rare and endangered plants of California yielded 17 species (CNPS 2024, Appendix C), 16 of which have a CRPR of 1 or 2 and four of which are also state or federally listed (Table 1). Of those 16 plant species, none could occur on or near the Project site due to the lack of habitat (Table 1).

The Project site is underlain by Hanford fine sandy loam, 0 to 1 percent slopes (34.7%); Pachappa fine sandy loam, 0 to 1 percent slopes (28%); Grangeville fine sandy loam, slightly saline-alkali, 0 to 1 percent slopes (10.5%); Delhi sand, 3 to 8 percent slopes, MLRA 17 (8.1%); Tujunga loamy sand, 0 to 3 percent slopes (4.6%); Hanford sandy loam, moderately deep over sand, 0 to 3 percent slopes (4.4%); Hanford sandy loam, 0 to 3 percent slopes (2.4%); Delhi sand, 0 to 3 percent slopes, MLRA 17 (%); Traver loam, slightly saline-alkali, 0 to 1 percent slopes (1.8%); Grangeville fine sandy loam, 0 to 1 percent slopes, MLRA 17 (1.6%); Traver loam, moderately saline-sodic, 0 to 1 percent slopes (0.9%); and Riverwash

(0.8%) (NCRS 2024). The Project site has little topographic relief and is at an elevation of 238–250 feet above mean sea level (Google 2024).

Table 1. Special-status species, their listing status, habitats, and potential to occur on or near the Project site.

Species	Status[1]	Habitat	Potential to Occur[2]
Federally and State-Listed Endangered or Threatened Species			
Greene's tuctoria (*Tuctoria greenei*)	FE, SR, 1B.1	Vernal pools in open grasslands below 3445 feet elevation.	**None.** Habitat lacking; no vernal pools were in the survey area.
Hairy Orcutt grass (*Orcuttia pilosa*)	FE, SE, 1B.1	Vernal pools below 650 feet elevation.	**None.** Habitat lacking; no vernal pools were in the survey area.
San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*)	FT, SE, 1B.1	Vernal pools at or below 2700 feet elevation.	**None.** Habitat lacking; no vernal pools were in the survey area.
Succulent owl's clover (*Castilleja campestris* var. *succulenta*)	FT, SE, 1B.2	Vernal pools with heavy clay soils at or below 2500 feet elevation.	**None.** Habitat lacking; no vernal pools were in the survey area.
Monarch California overwintering population (*Danaus plexippus*)	FPT	Groves of trees within 1.5 miles of the ocean that produce suitable micro-climates for overwintering such as high humidity, dappled sunlight, access to water and nectar, and protection from wind.	**None.** Habitat lacking; the Project site is not within 1.5 miles of the ocean.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	Elderberry (*Sambucus* sp.) plants having basal stem diameter greater than 1" at ground level.	**None.** No elderberry shrubs were found in the survey area.

Species	Status[1]	Habitat	Potential to Occur[2]
Vernal pool fairy shrimp[3] (*Branchinecta lynchi*)	FT	Vernal pools; some artificial depressions, ditches, stock ponds, vernal swales, ephemeral drainages, and seasonal wetlands.	**None.** Habitat lacking; no vernal pools or other suitable aquatic features were in the survey area; the canal north of the Project site is too frequently maintained and too frequently inundated to provide habitat for this species.
California tiger salamander[3] (*Ambystoma californiense*)	FT, ST	Vernal pools or seasonal ponds for breeding; small mammal burrows for upland refugia in natural grasslands.	**None.** Habitat lacking; an agricultural water storage pond was north of the Project site within the 1.24-mile dispersal distance of this species. According to historic Google Earth imagery (Google 2024), the agricultural storage pond is usually dry during the California tiger salamander breeding and larval period. Also, the Fresno River riparian area is a dispersal barrier to potential upland refugia on the Project site.
Western spadefoot[3] (*Spea hammondii*)	FPT; SSSC	Open areas with sandy or gravelly soil that allow rain pools to gather for breeding.	**None.** Habitat lacking; no vernal pool or other potential habitat was present in the survey area.
Blunt-nosed leopard lizard[3] (*Gambelia sila*)	FE, SE, FP	Upland scrub and sparsely vegetated grassland with small mammal burrows.	**None.** Habitat lacking; the Project site lacked grassland and upland scrub.

Species	Status[1]	Habitat	Potential to Occur[2]
Northwestern pond turtle (*Actinemys marmorata*)	FPT, SSSC	Ponds, rivers, marshes, streams, and irrigation ditches, usually with aquatic vegetation. Basking sites and suitable upland areas for egg laying.	**None.** Habitat lacking; the canal north of the Project site is too frequently maintained to provide habitat for this species.
Burrowing owl[3] (*Athene cunicularia*)	SC	Grassland and upland scrub with friable soil; some agricultural or other developed and disturbed areas with ground squirrel burrows.	**Low.** The Project site contained numerous ground squirrel burrows. However, the Project site is routinely disturbed, and no sign was detected in the survey area during the 17 December 2024 reconnaissance survey.
Swainson's hawk[3] (*Buteo swainsoni*)	ST	Large trees for nesting with adjacent grasslands, alfalfa fields, or grain fields for foraging.	**None.** Habitat lacking; potential nest trees were within the 0.5-mile survey area; however, the surrounding land cover within the 0.5-mile survey area was dominated by incompatible orchards and residential development.
Tricolored blackbird (*Agelaius tricolor*)	ST, SSSC	Freshwater emergent wetlands, some agricultural fields, grassland, and silage fields near dairies.	**None.** Habitat lacking; the Project site lacked freshwater emergent wetlands, agricultural fields, grassland, and silage fields.
Fresno kangaroo rat[3] (*Dipodomys nitratoides exilis*)	FE, SE	Sandy, alkaline, saline, and clay-based soils in upland scrub and grassland.	**None.** Habitat lacking; the Project site is outside the current known range of this species.

Species	Status[1]	Habitat	Potential to Occur[2]
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, ST	Grassland and upland scrub and fallowed agricultural lands adjacent to natural grasslands or upland scrub.	**None.** Habitat lacking; the Project site is outside the current known range of this species.
State Species of Special Concern			
Coast horned lizard (*Phrynosoma blainvillii*)	SSSC	Open, generally sandy areas, washes, and flood plains in a variety of habitats.	**None.** Habitat lacking; no open, generally sandy areas, washes, or flood plains were present in the survey area.
American badger (*Taxidea taxus*)	SSSC	Variable. Open, dry areas with friable soils and small mammal populations in grassland, conifer forest, and desert.	**None.** Habitat lacking; the Project site lacked open, dry areas with friable soils and small mammal populations in grassland, conifer forest, or desert.
California Rare Plants			
Alkali sink goldfields (*Lasthenia chrysantha*)	1B.1	Vernal pools and wet saline flats below 320 feet elevation.	**None.** No vernal pool or wet saline flat habitats were present in the survey area.
California alkali grass (*Puccinellia simplex*)	1B.2	Saline flats and mineral springs below 3000 feet elevation.	**None.** Habitat lacking; the survey area lacked saline flats and mineral springs.
Heartscale (*Atriplex cordulata* var. *cordulata*)	1B.2	Saline or alkaline soils in grassland, meadows and seeps, and chenopod scrub communities below 230 feet elevation.	**None.** Habitat lacking; the survey area lacked saline or alkaline soils in grassland, meadows and seeps, and chenopod scrub communities.

Species	Status[1]	Habitat	Potential to Occur[2]
Lesser saltscale (*Atriplex minuscula*)	1B.1	Sandy, alkaline soils in chenopod scrub, playa, and grassland in the San Joaquin Valley below 328 feet elevation.	**None.** Habitat lacking; the survey area lacked sandy, alkaline soils in chenopod scrub, playa, or grassland.
Madera leptosiphon[3] (*Leptosiphon serrulatus*)	1B.2	Openings in chaparral, cismontane woodland, and low elevation conifer forest at 980–4300 feet elevation.	**None.** Habitat lacking; the Project site is below the known elevational range of this species.
Munz's tidy tips[3] (*Layia munzii*)	1B.2	Alkaline clay soils in chenopod scrub and valley and foothill grassland at 300–2100 feet elevation.	**None.** Habitat lacking; the Project site is below the known elevational range of this species.
Recurved larkspur (*Delphinium recurvatum*)	1B.2	Poorly drained, fine, alkaline soils in grassland and saltbush scrub at 98–1969 feet elevation.	**None.** Habitat lacking; the Project site lacked poorly drained, fine, alkaline soils in grassland.
Sanford's arrowhead (*Sagittaria sanfordii*)	1B.2	Ponds, sloughs, and ditches at sea level to 650 feet elevation.	**None.** Habitat lacking; the canal north of the Project site is too frequently maintained to provide habitat for this species.
Shining navarretia (*Navarretia nigelliformis* ssp. *radians*)	1B.2	Clay depressions in vernal pools at 490-3280 feet elevation.	**None.** No vernal pool habitat was present on the Project site.

Species	Status[1]	Habitat	Potential to Occur[2]
Spiny-sepaled button-celery (*Eryngium spinosepalum*)	1B.2	Vernal pools, swales, and roadside ditches in valley and foothill grassland.	**None.** No vernal pool habitat was present on the Project site.
Subtle orache (*Atriplex subtilis*)	1B.2	Saline depressions below 230 feet elevation.	**None.** Habitat lacking; the Project site lacked saline depressions and is above the known elevational range of this species.
Vernal pool smallscale (*Atriplex persistens*)	1B.2	Alkaline vernal pools below 380 feet elevation.	**None.** Habitat lacking; the Project site lacked alkaline vernal pools.

CDFW (2024), CNPS (2024), USFWS (2024a).

Status[1]

FC = Federal Candidate for listing

FE = Federally listed as Endangered

FT = Federally listed as Threatened

FPT = Federally Proposed Threatened

FP = State Fully Protected

SC = State Candidate for listing

SE = State listed as Endangered

ST = State listed as Threatened

SSSC = State Species of Special Concern

Potential to Occur[2]

None:	Species or sign not observed; conditions unsuitable for occurrence.
Low:	Neither species nor sign observed; conditions marginal for occurrence.
Moderate:	Neither species nor sign observed; conditions suitable for occurrence.
High:	Neither species nor sign observed; conditions highly suitable for occurrence.
Present:	Species or sign observed; conditions suitable for occurrence.

CNPS California Rare Plant Rank[1]:

1B – plants rare, threatened, or endangered in California and elsewhere.

2B – plants rare, threatened, or endangered in California but more common elsewhere.

3 – plants about which more information is needed.

Threat Ranks[1]:

0.1 – seriously threatened in California (> 80% of occurrences).

0.2 – moderately threatened in California (20-80% of occurrences).

0.3 – not very threatened in California (<20% of occurrences).

CNPS California Rare Plant Rank[1]:	Threat Ranks[1]:
4 – plants have limited distribution in California.	

[3]Record from within 5 miles of the Project site.

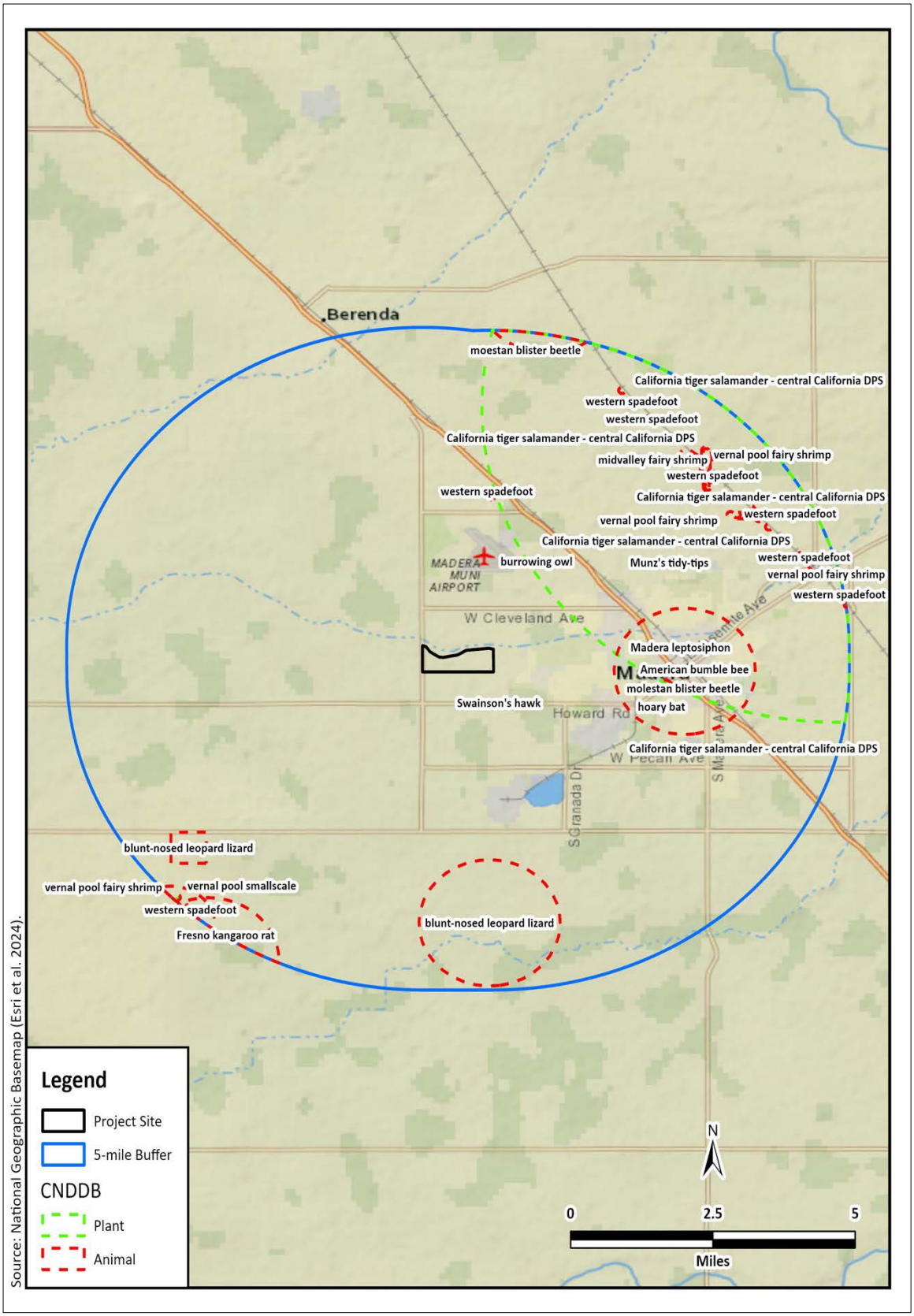


Figure 4. CNDDB occurrence map.

3.2 Reconnaissance Survey

3.2.1 Land Use and Habitats

The Project site consisted of an irrigated, maintained almond orchard and vineyard and an area of disturbed land in the north-central portion (Figures 5–7). Ruderal herbaceous vegetation was distributed throughout the Project site. The disturbed area in the north-central portion of the Project site contained piles of tree limbs, a felled tree, and bricks and other debris (Figure 8). California ground squirrel (*Otospermophilus beecheyi*) and other small mammal burrows were present throughout the north-central and northeastern portions of the Project site and along the canal in the survey area (Figures 9 and 10).

The site was bordered by a Madera Irrigation District canal and the Fresno River to the north (Figure 11), rural residential development and idle agricultural lands to the south, an orchard to the west, and a residential development under construction to the east. Aerial imagery indicates the Project site has been used for agricultural production since at least 1985 (Google 2024).

Figure 5. Photograph from the north-central portion of the Project site, looking southwest, showing a vineyard and irrigation equipment.

Figure 6. Photograph from the southeast portion of the Project site, looking northwest, showing a vineyard and an almond orchard.

Figure 7. Photograph from the south-central portion of the Project site, looking northwest, showing a vineyard and an almond orchard.

Figure 8. Photograph of debris in the north-central portion of the Project site, looking southwest.

Figure 9. Photograph showing ground squirrel burrows along the canal in the north-central portion of the Project site, looking north.

Figure 10. Photograph showing ground squirrel burrows in the almond orchard in the northeastern portion of the Project site, looking southeast.

Figure 11. Photograph of a Madera Irrigation District canal and the Fresno River (top right) north of the Project site, looking northwest.

3.2.2 Plant and Animal Species Observed

A total of 26 plant species (nine native and 17 nonnative), 19 bird species, and two mammal species were observed during the survey (Table 2).

Table 2. Plant and animal species observed during the reconnaissance survey.

Common Name	Scientific Name	Status
Plants		
Family Amaranthaceae		
Pigweed amaranth	*Amaranthus albus*	Nonnative
Prostrate pigweed	*Amaranthus blitoides*	Native
Family Asteraceae		
Common sow thistle	*Sonchus oleraceus*	Nonnative
Canada horseweed	*Erigeron canadensis*	Native
Flax-leaved horseweed	*Erigeron bonariensis*	Nonnative
Telegraph weed	*Heterotheca grandiflora*	Native
Family Boraginaceae		
Common fiddleneck	*Amsinckia menziesii*	Native
Family Brassicaceae		
Lesser swine cress	*Lepidium didymum*	Nonnative
Shepherd's purse	*Capsella bursa-pastoris*	Nonnative
Short pod mustard	*Hirschfeldia incana*	Nonnative
Family Caryophyllaceae		
Common chickweed	*Stellaria neglecta*	Nonnative
Family Chenopodiaceae		
Russian thistle	*Salsola tragus*	Nonnative
Family Geraniaceae		
Musky stork's bill	*Erodium moschatum*	Nonnative
Family Laminaceae		
Henbit deadnettle	*Lamium amplexicaule*	Nonnative
Family Malvaceae		

Common Name	Scientific Name	Status
Cheeseweed mallow	*Malva parviflora*	Nonnative
Family Onagraceae		
Panicled willow herb	*Epilobium brachycarpum*	Native
Family Phrymaceae		
Seep monkeyflower	*Mimulus guttatus*	Native
Family Poaceae		
Annual meadow grass	*Poa annua*	Nonnative
Barnyard grass	*Echinochloa crus-galli*	Nonnative
Bermuda grass	*Cynodon dactylon*	Nonnative
Foxtail barley	*Hordeum murinum*	Nonnative
Jungle rice	*Echinochloa colona*	Nonnative
Saltgrass	*Distichlis spicata*	Native
Family Polygonaceae		
Prostrate knotweed	*Polygonum aviculare*	Nonnative
Family Solanaceae		
Sacred datura	*Datura wrightii*	Native
White nightshade	*Solanum americanum*	Native
Birds		
Family Accipitridae		
Cooper's hawk	*Accipiter cooperii*	MBTA, CFGC
Red-tailed hawk	*Buteo jamaicensis*	MBTA, CFGC
Family Anatidae		
Canada goose	*Branta canadensis*	MBTA, CFGC
Family Cathartidae		
Turkey vulture	*Cathartes aura*	MBTA, CFGC
Family Charadriidae		
Killdeer	*Charadrius vociferus*	MBTA, CFGC
Family Columbidae		

Common Name	Scientific Name	Status
Mourning dove	*Zenaida macroura*	MBTA, CFGC
Family Corvidae		
American crow	*Corvus brachyrhynchos*	MBTA, CFGC
California scrub-jay	*Aphelocoma californica*	MBTA, CFGC
Family Emberizidae		
White-crowned sparrow	*Zonotrichia leucophrys*	MBTA, CFGC
Family Falconidae		
American kestrel	*Falco sparverius*	MBTA, CFGC
Family Fringillidae		
American goldfinch	*Spinus tristis*	MBTA, CFGC
House finch	*Haemorhous mexicanus*	MBTA, CFGC
Family Mimidae		
Northern mockingbird	*Mimus polyglottos*	MBTA, CFGC
Family Parulidae		
Yellow-rumped warbler	*Setophaga coronata*	MBTA, CFGC
Family Picidae		
Northern flicker	*Colaptes auratus*	MBTA, CFGC
Family Polioptilidae		
Blue-gray gnatcatcher	*Polioptila caerulea*	MBTA, CFGC
Family Sturnidae		
European starling	*Sturnus vulgaris*	Nonnative
Family Trochilidae		
Anna's hummingbird	*Calypte anna*	MBTA, CFGC
Family Tyrannidae		
Black phoebe	*Sayornis nigricans*	MBTA, CFGC
Mammals		
Family Leporidae		
Desert cottontail	*Sylvilagus audubonii*	--

Common Name	Scientific Name	Status
Family Sciuridae		
California ground squirrel	*Otospermophilus beecheyi*	--

MBTA = Protected under the MBTA (16 USC § 703 et seq.); CFGC = Protected under CFGC §§ 3503 and 3513

3.2.3 Nesting Birds

Migratory birds could nest on or near the Project site. Bird species that may nest on or near the property include, but are not limited to, killdeer (*Charadrius vociferus*) and house finch (*Haemorhous mexicanus*). Large trees within 0.5 miles of the Project site could provide nesting substrates for raptors.

3.2.4 Regulated Habitats

A Madera Irrigation District canal bordered the northern boundary of the Project site (Figure 10). The canal is listed in the National Wetlands Inventory as riverine with a classification of R4SBCx, which means unknown intermittent, streambed, seasonally flooded, and excavated (USFWS 2024b). The canal contained discontinuous, standing water during the 17 December 2024 reconnaissance survey (Figure 11). As the canal evidently lacks a continuous surface connection to a water of the United States, it is not likely regulated by the USACE. However, as it contained surface water and would be classified as a stream, it is likely under the regulatory jurisdiction of the SWRCB and the CDFW, respectively. Regardless, the Project is not expected to impact the canal.

3.3 Special-Status Species

The following special-status species could occur on or near the Project site based on the presence of habitat:

3.3.1 Burrowing Owl

Burrowing owl is a member of the family Strigidae recognized as a state candidate for listing as threatened or endangered by the CDFW (2023). It occurs primarily in grassland but can persist and even thrive in agricultural or other developed and disturbed areas (Shuford and Gardali 2008, Rosenberg and Haley 2004). Burrowing owl depends on burrow systems excavated by other species such as California ground squirrel and American badger (*Taxidea taxus*) (Poulin et al. 2020). Burrowing owl uses burrows for protection from predators, weather, as roosting sites, and dwellings to raise young (Poulin et al. 2020). It commonly

perches outside burrows on mounds of soil or nearby fence posts. Prey types include insects, especially grasshoppers and crickets, small mammals, frogs, toads, and lizards (Poulin et al. 2020). The nesting season begins in March, and incubation lasts 28–30 days. The female incubates the eggs while the male forages and delivers food items to the burrow-nest; young then fledge between 44 and 53 days after hatching (Poulin et al. 2020). Adults can live up to eight years in the wild.

There is one CNDDB occurrence record of burrowing owl from within 5 miles of the Project site. Two additional CNDDB occurrence records were found in the nine-quad search (CDFW 2024). California ground squirrel burrows on the Project site could support the species. However, the Project site is routinely disturbed, and no sign of burrowing owl was detected during the 17 December 2024 reconnaissance survey. Therefore, the potential for this species to occur on or near the Project site is low.

4.0 Environmental Impacts

4.1 Significance Determinations

This Project, which will result in permanent impacts to orchard and vineyard, will not: (1) substantially reduce the habitat of a fish or wildlife species (criterion a) as no such habitat is present on the Project site; (2) cause a fish or wildlife population to drop below self-sustaining levels (criterion b) as no such potentially vulnerable population is known from the area; (3) threaten to eliminate a plant or animal community (criterion c) as no such potentially vulnerable communities are known from the area; (4) substantially reduce the number or restrict the range of a rare or endangered plant or animal (criterion d) as no such potentially vulnerable species are known from the area; (5) have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS (criterion f) as no riparian habitat or other sensitive natural community was present in the survey area; (6) have a substantial adverse effect on state or federally protected wetlands (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (criterion g) as no impacts to wetlands will occur; (7) conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (criterion i) as no such ordinances are pertinent to the Project; or (8) conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan (criterion j) as no such plan has been adopted. Thus, these significance criteria are not analyzed further.

The remaining statutorily defined criteria provide the framework for Criterion BIO1 and Criterion BIO2 below. These criteria are used to assess the impacts to biological resources stemming from the Project and provide the basis for determinations of significance:

- Criterion BIO1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (significance criterion e).

- Criterion BIO2: 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 (significance criterion h).

4.1.1 Direct and Indirect Effects

4.1.1.1 Potential Effect #1: Have a Substantial Effect on Any Special-Status Species (Criterion BIO1)

The Project could adversely affect, either directly or through habitat modifications, one special-status animal species that occurs or may occur on or near the Project site. Construction activities such as excavating, trenching, or using other heavy equipment that disturbs or harms a special-status species or substantially modifies its habitat could constitute a significant impact. We recommend that Mitigation Measure BIO1 (below) be included in the conditions of approval to reduce the potential impacts to less-than-significant levels.

Mitigation Measure BIO1. Protect burrowing owl.

1. A pre-construction clearance survey shall be conducted by a qualified biologist to ensure that no burrowing owl will be disturbed during the implementation of the Project. A pre-construction clearance survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential burrowing owl habitat in and immediately adjacent to the impact areas.
2. If a burrowing owl or sign of burrowing owl use (e.g., feathers, guano, pellets) is detected on or within 500 feet of the Project site, and the qualified biologist determines that Project activities would disrupt the owl(s), a construction-free buffer, limited operating period, or passive relocation shall be implemented in consultation with the CDFW.

4.1.1.2 Potential Effect #2: Interfere Substantially with Native Wildlife Movements, Corridors, or Nursery Sites (Criterion BIO2)

The Project has the potential to impede the use of nursery sites for native birds protected under the MBTA and CFGC. Migratory birds are expected to nest on and near the Project site. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment or loss of reproductive effort can be considered take under the MBTA and CFGC. Loss of fertile eggs or nesting birds, or any

activities resulting in nest abandonment, could constitute a significant effect if the species is particularly rare in the region. Construction activities such as excavating, trenching, and grading that disturb a nesting bird on the Project site or immediately adjacent to the construction zone could constitute a significant effect. We recommend that the mitigation measure BIO2 (below) be included in the conditions of approval to reduce the potential effect to a less-than-significant level.

Mitigation Measure BIO2. Protect nesting birds.

1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August.

2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.

5.0 Literature Cited

Bechard, M. J., C. S. Houston, J. H. Saransola, and A. S. England. 2020. Swainson's Hawk (*Buteo swainsoni*), version 1.0. *In* Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.swahaw.01.

California Department of Fish and Wildlife (CDFW). 2024. California Natural Diversity Database (CNDDB) RareFind 5. https://apps.wildlife.ca.gov. Accessed 9 February 2024.

California Native Plant Society, Rare Plant Program (CNPS). 2024. Inventory of Rare and Endangered Plants (online edition, v9.5). California Native Plant Society, Sacramento, CA. http://www.rareplants.cnps.org. Accessed 9 February 2024.

Google. 2024. Google Earth Pro. Version 7.3.6.9750 (https://www.google.com/earth/download/gep/agree.html). Accessed December 2024.

Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture. 2024. Web Soil Survey, National Cooperative Soil Survey: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed December 2024.

Poulin, R. G., L. D. Todd, E. A. Haug, B. A. Millsap, and M. S. Martell. 2020. Burrowing Owl (*Athene cunicularia*), version 1.0. In Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.burowl.01.

Rosenberg, D. K., and Haley, K. L. 2004. The ecology of Burrowing Owls in the agroecosystem of the Imperial Valley, California. Studies in Avian Biology 27:120–135.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

United States Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation Manual. Wetland Research Program Technical Report Y-87-1.

_____. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). ERDC/EL TR-08-28. https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046489.pdf. Accessed December 2024.

United States Fish and Wildlife Service (USFWS). 2018. Migratory Bird Permit Memorandum: Destruction and Relocation of Migratory Bird Nest Contents. FWS/DMBM/AMB/068029, 4 pages.

_____. 2024a. IPaC: Information for Planning and Conservation. https://ecos.fws.gov/ipac/. Accessed 23 December 2024.

_____. 2024b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/. Accessed December 2024.

Appendix A. USFWS list of threatened and endangered species.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Madera County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Fresno Kangaroo Rat Dipodomys nitratoides exilis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5150	Endangered
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard Gambelia silus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/625	Endangered
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Amphibians

NAME	STATUS
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Western Spadefoot Spea hammondii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Hairy Orcutt Grass Orcuttia pilosa Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2262	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Bald and Golden Eagle information is not available at this time

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project

intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Migratory bird information is not available at this time

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of

presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R4SBCx

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should

seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix B. CNDDB occurrence records.

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Madera (3612081) OR Bonita Ranch (3612082) OR Berenda (3712012) OR Kismet (3712011) OR Daulton (3711918) OR Gregg (3611988) OR Herndon (3611978) OR Biola (3612071) OR Gravelly Ford (3612072))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali-sink goldfields *Lasthenia chrysantha*	PDAST5L030	None	None	G2	S2	1B.1
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
American bumble bee *Bombus pensylvanicus*	IIHYM24260	None	None	G3G4	S2	
blunt-nosed leopard lizard *Gambelia sila*	ARACF07010	Endangered	Endangered	G1	S2	FP
burrowing owl *Athene cunicularia*	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
California alkali grass *Puccinellia simplex*	PMPOA53110	None	None	G2	S2	1B.2
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G4	S4	SSC
Fresno kangaroo rat *Dipodomys nitratoides exilis*	AMAFD03151	Endangered	Endangered	G2TH	SH	
Greene's tuctoria *Tuctoria greenei*	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
hairy Orcutt grass *Orcuttia pilosa*	PMPOA4G040	Endangered	Endangered	G1	S1	1B.1
heartscale *Atriplex cordulata var. cordulata*	PDCHE040B0	None	None	G3T2	S2	1B.2
hoary bat *Lasiurus cinereus*	AMACC05032	None	None	G3G4	S4	
lesser saltscale *Atriplex minuscula*	PDCHE042M0	None	None	G2	S2	1B.1
Madera leptosiphon *Leptosiphon serrulatus*	PDPLM09130	None	None	G3	S3	1B.2
midvalley fairy shrimp *Branchinecta mesovallensis*	ICBRA03150	None	None	G2	S2S3	
moestan blister beetle *Lytta moesta*	IICOL4C020	None	None	G2	S2	
molestan blister beetle *Lytta molesta*	IICOL4C030	None	None	G2	S2	

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Munz's tidy-tips *Layia munzii*	PDAST5N0B0	None	None	G2	S2	1B.2
Northern Hardpan Vernal Pool *Northern Hardpan Vernal Pool*	CTT44110CA	None	None	G3	S3.1	
recurved larkspur *Delphinium recurvatum*	PDRAN0B1J0	None	None	G2?	S2	1B.2
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S3	
San Joaquin pocket mouse *Perognathus inornatus*	AMAFD01060	None	None	G2G3	S2S3	
San Joaquin Valley Orcutt grass *Orcuttia inaequalis*	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0	None	None	G3	S3	1B.2
shining navarretia *Navarretia nigelliformis ssp. radians*	PDPLM0C0J2	None	None	G4T2T3	S2S3	1B.2
spiny-sepaled button-celery *Eryngium spinosepalum*	PDAPI0Z0Y0	None	None	G2	S2	1B.2
subtle orache *Atriplex subtilis*	PDCHE042T0	None	None	G1	S1	1B.2
succulent owl's-clover *Castilleja campestris var. succulenta*	PDSCR0D3Z1	Threatened	Endangered	G4?T2T3	S2S3	1B.2
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S4	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S2	SSC
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened	None	G3T3	S3	
Valley Sacaton Grassland *Valley Sacaton Grassland*	CTT42120CA	None	None	G1	S1.1	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool smallscale *Atriplex persistens*	PDCHE042P0	None	None	G2	S2	1B.2
western spadefoot *Spea hammondii*	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC

Record Count: 37

Appendix C. CNPS plant list.

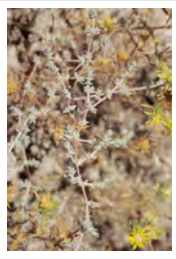
CALIFORNIA NATIVE PLANT SOCIETY

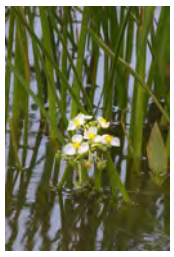
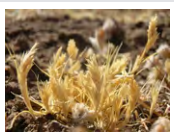
CNPS Rare Plant Inventory

Search Results

17 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [3711918:3611988:3611978:3612072:3612071:3612082:3612081:3712012:3712011]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Atriplex cordulata var. *cordulata*	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	Yes	1988-01-01	 © 1994 Robert E. Preston, Ph.D.
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun-Oct	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	(Apr)Jun-Sep(Oct)	None	None	G1	S1	1B.2	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
Castilleja campestris var. *succulenta*	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	FT	CE	G4? T2T3	S2S3	1B.2	Yes	1984-01-01	No Photo Available
Delphinium hansenii ssp. *ewanianum*	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	None	None	G4T3	S3	4.2	Yes	1994-01-01	No Photo Available

Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2	1B.2	Yes	1988-01-01	No Photo Available
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	1980-01-01	No Photo Available
Lasthenia chrysantha	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30	 © 2009 California State University, Stanislaus
Layia munzii	Munz's tidy-tips	Asteraceae	annual herb	Mar-Apr	None	None	G2	S2	1B.2	Yes	1988-01-01	 © 2017 Neal Kramer
Leptosiphon serrulatus	Madera leptosiphon	Polemoniaceae	annual herb	Apr-May	None	None	G3	S3	1B.2	Yes	1980-01-01	 © 2008 Chris Winchell
Navarretia nigelliformis ssp. *radians*	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	None	None	G4T2T3	S2S3	1B.2	Yes	1994-01-01	No Photo Available
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	FT	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
Orcuttia pilosa	hairy Orcutt grass	Poaceae	annual herb	May-Sep	FE	CE	G1	S1	1B.1	Yes	1980-01-01	 © 2003 George W. Hartwell
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G2	S2	1B.2		2015-10-15	 © 2017 Chris Winchell
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01	 ©2013 Debra L. Cook
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	FE	CR	G1	S1	1B.1	Yes	1974-01-01	 ©2008 F. Gauna

Showing 1 to 17 of 17 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 23 December 2024].

Appendix B

Cultural Resources Assessment

A
PHASE I CULTURAL RESOURCE SURVEY
FOR GRANITE CREEK ANNEXATION,
MADERA, MADERA COUNTY, CALIFORNIA

Submitted to:

Crawford and Bowen Planning, Inc.
113 N. Church Street, Suite #302
Visalia, California 93291

Keywords:
Madera and Bonita Ranch 7.5' Quadrangles, Madera County,
California Environmental Quality Act

Submitted by:
Hudlow Cultural Resource Associates
1405 Sutter Lane
Bakersfield, California 93309

Author:
Scott M. Hudlow

January 2025

Management Summary

At the request of Crawford and Bowen Planning, Inc., a Phase I Cultural Resource Survey was conducted on an approximate 200-acre parcel, located at the northeast corner of Avenue 14 ½ and Road 23, in Madera, Madera County, California. The Phase I Cultural Resource Survey consisted of an archaeological survey and a cultural resource record search.

No cultural resources were identified. No further work is required. If archaeological resources are encountered during the course of construction, a qualified archaeologist should be consulted for further evaluation.

If human remains or potential human remains are observed during construction, work in the vicinity of the remains will cease, and they will be treated in accordance with the provisions of State Health and Safety Code Section 7050.5. The protection of human remains follows California Public Resources Codes, Sections 5097.94, 5097.98, and 5097.99.

Table of Contents

List of Figures

1.0 Introduction

At the request of Crawford and Bowen Planning, *Hudlow Cultural Resource Associates* conducted a Phase I Cultural Resource Survey in accordance with the California Environmental Quality Act for a proposed annexation from Madera County into the city of Madera to create a master planned development, Granite Creek. The development is proposed to have a mixture of open space, commercial, low density to high density residential, and a school site. The 200-acre property lies at the northeast corner of Avenue 14 1/2 and Road 23, in Madera, Madera County, California. This project is being undertaken in accordance with the California Environmental Quality Act (CEQA) with the City of Madera responsible as Lead Agency to implement CEQA. The Phase I Cultural Resource Survey consisted of a pedestrian survey and a cultural resource record search.

CEQA is a California statute passed in 1970. Governor Ronald Reagan signed it into law, after the federal government passed the National Environmental Policy Act (NEPA). CEQA institutes a statewide policy of environmental protection. CEQA does not directly regulate land uses, but instead requires state and local agencies within California to follow a protocol of analysis and public disclosure of environmental impacts of proposed projects and, in a departure from NEPA, adopt all feasible measures to mitigate those impacts. CEQA makes environmental protection a mandatory part of every California state and local agency's decision making process.

CEQA was signed into law in 1970, in a time of increasing public concern for the environment. The statute required that for any public project, the government must conduct an environmental study to examine what impacts the project might have on things like air/water quality, noise, transportation, biological resources, or cultural resources, and generate an Environmental Impact Report (EIR) documenting the impacts as well as any potential and planned mitigations. In 1972, state courts interpreted a public project as a development project that needed government approval.

In 1969, NEPA passed into law. It is similar to CEQA in that both statutes set forth a policy of environmental protection, and a protocol by which all agencies in their respective jurisdictions make environmental protection part of their decision making process. NEPA is narrower in scope than CEQA. NEPA applies only to projects receiving federal funding or approval by federal agencies, while CEQA applies to projects receiving any form of state or local approval, permit, or oversight. Thus, development projects in California funded only by private sources and not requiring approval by a federal agency would be exempt from NEPA; but would likely be subject to CEQA.

The CEQA statute, California Public Resources Code § 21000 et seq., codifies a statewide policy of environmental protection. According to CEQA, state and local agencies must give consideration to environmental protection

in regulating public and private activities and should not approve projects for which feasible and environmentally superior mitigation measures or alternatives exist.

CEQA mandates actions that all state and local agencies must do to advance this policy. Specifically, for any project under CEQA's jurisdiction with potentially significant environmental impacts, agencies must identify mitigation measures and alternatives by preparing an Environmental Impact Report and must approve projects with feasible mitigation measures and the environmentally superior alternative. The California Natural Resources Agency promulgates the CEQA Guidelines, California Code of Regulations Title 14 § 15000 et seq., which detail the protocol by which state and local agencies must comply with CEQA requirements. CEQA originally applied to only public projects, but California Supreme Court interpretation of the statute, as well as later revisions, expanded CEQA's jurisdiction to nearly all projects within California, including those proposed by private businesses and individuals. § 21002.1 states "Each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so." For private projects, CEQA applies when a discretionary government permit or other entitlement for use is necessary.

The term "historical resources" shall include the following: **(1)** A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 14 CCR, Section 4850 et seq.). **(2)** A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant. **(3)** Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

The lead agency, the City of Madera, is responsible for conducting the CEQA review and has final approval of the project. The City of Madera is also responsible for coordinating with the project applicant, public, and associated agencies during the CEQA process.

2.0 Project Location

The project area is in Madera, California. It is the remaining portion below the Fresno River in the N ½ of Section 21, T.12S., R.17E., Mount Diablo Baseline and Meridian, as displayed on the United States Geological Survey (USGS) Madera and Bonita Ranch 7.5-minute quadrangle maps (Figure 1). The proposed master-planned development, Granite Creek, is located at the northeast corner of Road 23 and Avenue 14 1/2 in Madera, Madera County, California.

3.0 Record Search

A record search of the project area and the environs within one half-mile was conducted at the Southern San Joaquin Valley Information Center. Scott M. Hudlow conducted the record search, RS# 24-503, on November 14, 2024. The record search revealed that three cultural resource surveys have been conducted within one half-mile of the project area. No surveys have previously addressed the parcel in question. One cultural resource, the Madera Canal, is located within one half-mile of the current project area (Appendix II). No cultural resources have been previously identified within the current project area.

4.0 Environmental Background

The project area is located at elevations between 242 and 250 feet above mean sea level in the Great Central Valley, which is composed of two valleys-the Sacramento Valley and the San Joaquin Valley. The parcel is located directly south of the Fresno River. The agricultural parcel is a series of both grape vineyards and almond orchards. The farm has not been managed; wet, thick weeds and grasses choke the rows between the grapes and the almonds. No native vegetation survives (Figures 2 and 3).

5.0 Prehistoric Archaeological Context

A limited amount of archaeological research has been conducted in the southern San Joaquin Valley. Thus, consensus on a generally agreed upon

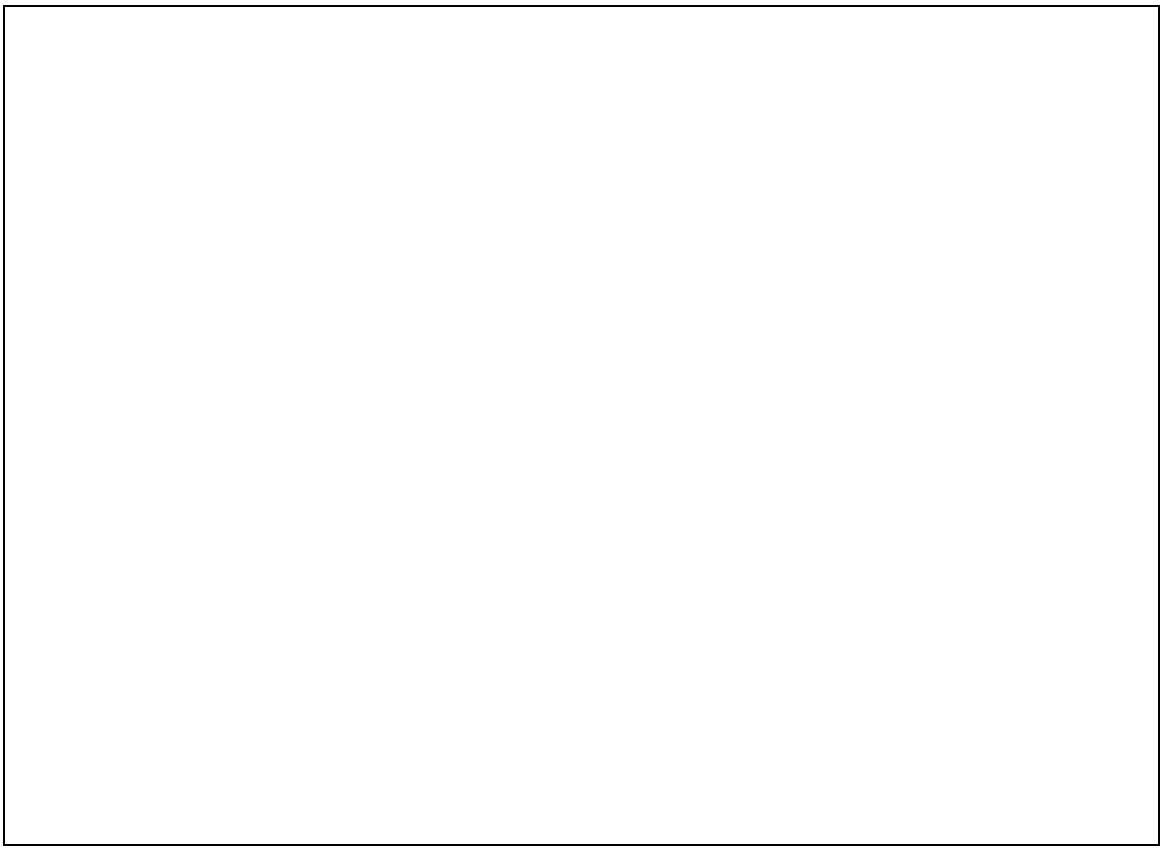


Figure 1
Project Area Location Map

regional cultural chronology has yet to be developed. Most cultural sequences can be summarized into several distinct time periods: Early, Middle, and Late. Sequences differ in their inclusion of various "horizons," "technologies," or "stages." A prehistoric archaeological summary of the southern San Joaquin Valley is available in Moratto (Moratto 1984).

Despite the preoccupation with chronological issues in most of the previous research, most suggested chronological sequences are borrowed from other regions with minor modifications based on sparse local data.

The following chronology is based on Parr and Osborne's Paleo-Indian, Proto-Archaic, Archaic, Post-Archaic periods (Parr and Osborne 1992:44-47). Most existing chronologies focus on stylistic changes of time-sensitive artifacts such as projectile points and beads rather than addressing the socioeconomic factors, which produced the myriad variations. In doing so, these attempts have encountered similar difficulties. These cultural changes are implied as environmentally determined, rather than economically driven.

Paleo-Indians, who roamed the region approximately 12,000 years ago, were highly mobile individuals. Their subsistence is assumed to have been primarily big game, which was more plentiful 12,000 years ago than in the late twentieth century. However, in the Great Basin and California, Paleo people were also foragers who exploited a wide range of resources. Berries, seeds, and small game were also consumed. Their technology was portable, including manos (Parr and Osborne 1992:44). The paleo period is characterized by fluted Clovis and Folsom points, which have been identified throughout North America. The Tulare Lake region in Kings County has yielded several Paleo-Indian sites, which have included fluted points, scrapers, chipped crescents, and Lake Mojave-type points (Morratto 1984:81-2).

The Proto-Archaic period, which dates from approximately 11,000 to 8,000 years ago, was characterized by a reduction in mobility and conversely an increase in sedentism. This period is classified as the Western Pluvial Lake Tradition or the Proto-Archaic, of which the San Dieguito complex is a major aspect (Moratto 1984: 90-99; Warren 1967). An archaeological site along Buena Vista Lake in southwestern Kern County displays a similar assemblage to the San Dieguito type site. Claude Warren proposes that a majority of Proto-Archaic southern California could be culturally classified as the San Dieguito Complex (Warren 1967). The Buena Vista Lake site yielded manos, millingstones, large stemmed and foliate points, a mortar, and red ochre. During this period, subsistence patterns began to change. Hunting focused on smaller game and plant collecting became more integral. Large stemmed, lancelote (foliate) projectile points represents lithic technology. Millingstones become more prevalent. The increased sedentism possibly began to create regional stylistic and cultural differences not evident in the paleo period.

The Archaic period persisted in California for the next 4000 years. In 1959, Warren and McKusiak proposed a three-phase chronological sequence based

Figure 2
Project Area, View to the Southeast

Figure 3
Project Area, View to the North

on a small sample of burial data for the Archaic period (Moratto 1984:189; Parr and Osborne 1992:47). It is distinguished by increased sedentism and extensive seed and plant exploitation. Millingstones, shaped through use, were abundant. Bedrock manos and metates were the most prevalent types of millingstones (Parr and Osborne 1992:45). The central valley began to develop distinct cultural variations, which can be distinguished by different regions throughout the valley, including Madera County.

In the Post-Archaic period enormous cultural variations began manifesting themselves throughout the entire San Joaquin Valley. This period extends into the contact period in the seventeenth, eighteenth and nineteenth centuries. Sedentary village life was emblematic of the Post-Archaic period, although hunting and gathering continued as the primary subsistence strategy. Agriculture was absent in California, partially due to the dense, predictable, and easily exploitable natural resources. The ancestral Yokuts have possibly been in the valley for the last three thousand years, and by the eighteenth century were the largest pre-contact population, approximately 40,000 individuals, in California (Moratto 1984).

6.0 Ethnographic Background

The Yokuts are a Penutian-speaking, non-political cultural group. Penutian speakers inhabit the San Joaquin Valley, the Bay Area, and the Central Sierra Nevada Mountains. The Yokuts are split into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts.

The San Joaquin Valley in the Madera area was home to the Yokuts tribelet, Heuche. The tribelet had approximately 550 people, had a special name for themselves, and spoke a unique dialect of the Yokuts language. Land was owned collectively, and every group member enjoyed the right to utilize food resources. The Heuche occupied the area on the north side of the Fresno River, east of the San Joaquin River (Latta 1999).

The Southern Valley Yokuts had a mixed economy emphasizing fishing, hunting, fowling, and collecting shellfish, roots, and seeds. Fish were the most prevalent resource and was a productive activity throughout the entire year. Fish were caught in many different manners, including nets, conical basket traps, catching with bare hands, shooting with bows and arrows, and stunning fish with mild floral toxins. Geese, ducks, mud hens and other waterfowl were caught in snares, long-handled nets, stuffed decoys, and brushing brush to trick the birds to fly low into waiting hunters. Mussels were gathered and steamed on beds of tule. Turtles and dogs were consumed (Wallace 1978:449-450).

Wild seeds and roots provided a large portion of the Yokuts' diet. Tule seeds, grass seeds, fiddleneck, alfilaria were also consumed. Acorns, the staple crop for many California native cultures, were not common in the San Joaquin Valley. Acorns were traded into the area. Land mammals, such as rabbits,

ground squirrels, antelope and tule elk, were not taken often (Wallace 1978:450).

The Yokuts occupied permanent structures in permanent villages for most of the year. During the late and early summer, families left for several months to gather seeds and plant foods, shifting camp locations when changing crops. Several different types of fiber-covered structures were common in Yokuts settlements. The largest was a communal tule mat-covered, wedge-shaped structure, which could house upward of ten individuals. These structures were established in a row, with the village chief's house in the middle and his messenger's houses were located at the ends of the house row. Dance houses and assembly buildings were located outside the village living area (Nabokov and Easton 1989:301).

The Yokuts also built smaller, oval, single-family tule dwellings. These houses were covered with tall mohya stalks or with sewn tule mats. Bent-pole ribs that met a ridgepole held by two crotched poles framed these small houses. The Yokuts also built a cone-shaped dwelling, which was framed with poles tied together with a hoop and then covered with tule or grass. These cone-shaped dwellings were large enough to contain multiple fireplaces (Nabokov and Easton 1989:301). Other structures included mat-covered granaries for storing food supplies, and a dirt-covered, communally owned sweathouse.

Clothing was minimal, men wore a breechclout or were naked. Women wore a narrow-fringed apron. Cold temperatures brought out rabbitskin or mud hen blankets. Moccasins were worn in certain places; however, most people went barefoot. Men wore no head coverings, but women wore basketry caps when they carried burden baskets on their heads. Hair was worn long. Women wore tattoos from the corners of the mouth to the chin; both men and women had ear and nose piercings. Bone, wood or shell ornaments were inserted (Wallace 1978:450-451).

Tule dominated the Yokut's material culture. It was used for many purposes, including sleeping mats, wall coverings, cradles, and basketry. Ceramics are uncommon to Yokuts culture as is true throughout most California native cultures. Basketry was common to Yokuts culture. Yokuts made cooking containers, conical burden baskets, flat winnowing trays, seed beaters, and necked water bottles. Yokuts also manufactured wooden digging sticks, fire drills, mush stirrers, and sinew-backed bows. Knives, projectile points, and scraping tools were chipped from imported lithic materials including obsidian, chert, and chalcedony. Stone mortars and pestles were secured in trade. Cordage was manufactured from milkweed fibers, animal skins were tanned, and awls were made from bone. Marine shells, particularly olivella shells, were used in the manufacture of money and articles of personal adornment. Shells were acquired from the Chumash along the coast (Wallace 1978:451-453).

The basic social and economic unit was the nuclear family. Lineages were organized along patrilineal lines. Yokuts fathers transmitted totems, particular to each paternal lineage, to each of his children. The totem was an animal or bird that no member would kill or eat and that was dreamed of and prayed to. The mother's totem was not passed to her offspring; but was treated with respect. Families sharing the same totem formed an exogamous lineage. The lineage had no formal leader nor did it own land. The lineage was a mechanism for transmitting offices and performing ceremonial functions. The lineages formed two moieties, East and West, which consisted of several different lineages. Moieties were customarily exogamous. Children followed the paternal moiety. Certain official positions within the villages were associated with certain totems. The most important was the Eagle lineage from which the village chief was appointed. A member of the Dove lineage acted as the chief's assistant. He supervised food distribution and gave commands during ceremonies. Another hereditary position was common to the Magpie lineage, was that of spokesman or crier.

7.0 Historical Overview

Merced County was formed in 1855 from parts of Mariposa County. Fresno County was created from Merced County in 1856, and Madera County ceded from Fresno County in 1893. Madera County was settled in the 1850s, soon after California joined the United States after the passage of the Compromise of 1850. The Compromise of 1850 allowed California to join the Union as a free state even though a major portion of the state lied beneath the Missouri Compromise line; and was potentially subject to southern settlement and slavery. Americans had long been visiting and working in California prior to the admission of California into the Union.

The Spanish moving north from Baja California into Alta California began European settlement of California in 1769. Father Junipero Serra, a Franciscan friar founded Mission San Diego de Alcala, which began California's active European settlement. However, Spanish mission efforts were focused on California's coastal regions. Spanish exploration of the San Joaquin Valley region began in the 1770s. In 1772, Pedro Fages arrived in the San Joaquin Valley searching for army deserters. Father Francisco Garces, a Franciscan priest, soon visited the vicinity in 1776. The Spanish empire collapsed in 1820, all of Spain's former Central and South American colonies became independent nations. As a result, California became Mexican territory. California stayed in Mexican hands until the Mexican-American War. Mexican California remained a coastal society; California's hot, dry interior valleys held little interest.

Madera County derives its name from the Spanish word for lumber; the eastern portion of Madera County extends across the crest of the Sierra Nevada mountains. American exploration of the San Joaquin Valley begins in the 1820s with Jedediah Smith, Kit Carson, and Joseph Walker looking for commercial opportunities. The United States government began exploring California in the

1830s. The Americans were, soon, searching for intercontinental railroad routes to link the eastern and western halves of the continent.

The defeat of the Mexicans during the Mexican-American War in 1848 and the subsequent discovery of gold in 1848 drastically altered the complicated political realities of the west. The Mexican-American War was ostensible fought to settle a boundary dispute with the Mexicans over the western boundary of the newly-annexed state of Texas, which had fought a successful rebellion against the Mexican government in the mid 1830s. The Republic of Texas was an independent country for nine years, until the United States annexed Texas in 1845. One major outcome of the Mexican-American War was that Mexico rescinded its claims to much of the American southwest. In 1848, these territories were folded into the United States, including California.

In January 1848, the discovery of gold in Coloma, California changed the settlement of California, forever. In the summer of 1848, when the gold strike was publicly announced, the overnight settlement of California began. The Mexican population of California was small and limited to the coasts and a few of southern California's interior valleys. A sizable native population settled the remainder of California; Madera County was Yokuts territory. The Gold Rush tipped the balance of native communities throughout California,; California's native population was decimated.

In 1893, Madera County was created from the northern half of Fresno County. The county seat was at the city of Madera. The Central Pacific (CP) Railroad came through the northern half of Fresno County in the 1860s, after the Civil War. However, the CP, now the Southern Pacific (SP), did not build a station. The Madera area did not fit into SP's plans to develop along the railroad's right-of-way. Instead, the California Lumber Company saw the area as a terminus for its lumber, and a junction with the railroad. The Company laid out the town of Madera in 1876 along the railroad right-of-way. Madera city began growing immediately behind the twin economic forces of the railroad and the lumber company. The lumber company due to the enormous expense of hauling lumber from the Sierra Nevada Mountains, instead built a fifty-four-mile long lug flume to bring lumber into Madera from the Sierra Nevada Mountains. The California Lumber Company and its various corporate incarnations flourished until the Great Depression.

Madera city became the Madera County seat in 1896 and incorporated in 1907. Although the lumber industry dominated Madera's local economy, agriculture in the valley portion of Madera County began to grow, giving the area economic stability. The agricultural economy was dominated by permanent crops, such as almonds and fruits, such as table grapes, which continue into the twenty-first century.

8.0 Field Procedures and Methods

Between January 6 and 10, 2024, Scott M. Hudlow (for qualifications see Appendix I) conducted a pedestrian archaeological survey of the entire proposed project area. Hudlow surveyed in east/west transects across the entire parcel in 15-meter (33 feet) intervals.

9.0 Report of Archaeological Findings

No cultural resources were identified; however, on the northern edge of the project area is a large trash scatter that is primarily architectural material. The trash scatter has been located on the property for two to three years, as evidenced by historical aerial photographs, which do not display the scatter until 2022. Additionally, a portion of canal lateral 24, which runs along the south side of the Fresno River is adjacent to the northern edge of the project area. The section of the lateral was constructed before 1947. It is an extension of an older lateral that pre-dates 1922 and was probably originally constructed by Miller and Lux, which had extensive landholdings in Madera County.

10.0 Management Recommendations

At the request of Crawford and Bowen Planning, Inc., a Phase I Cultural Resource Survey was conducted on an approximate 200-acre parcel, located at the northeast corner of Avenue 14 ½ and Road 23, in Madera, Madera County, California. The Phase I Cultural Resource Survey consisted of an archaeological survey and a cultural resource record search.

No cultural resources were identified. No further work is required. If archaeological resources are encountered during the course of construction, a qualified archaeologist should be consulted for further evaluation.

If human remains or potential human remains are observed during construction, work in the vicinity of the remains will cease, and they will be treated in accordance with the provisions of State Health and Safety Code Section 7050.5. The protection of human remains follows California Public Resources Codes, Sections 5097.94, 5097.98, and 5097.99.

11.0 References

Latta, Frank F.
1999 *Handbook of Yokuts Indians*. Coyote Press, Salinas, California.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press, Orlando, Florida.

Nabokov, Peter and Robert Easton
1989 *Native American Architecture*. Oxford University Press, New York, New York.

Parr, Robert E. and Richard Osborne
1992 *Route Adoption Study for Highway 58, Kern County, California.* Report on file, Southern San Joaquin Archaeological Information Center, California State University, Bakersfield, Bakersfield, California.

Wallace, William J.
1978 "Southern Valley Yokuts" in *Handbook of North American Indians*. Vol. 8, California, Robert F. Heizer, ed. Washington, D.C.: Smithsonian Institution, pp. 437-445.

Warren, Claude N. and M. B. McKusiak
1959 A Burial Complex from the southern San Joaquin Valley. Los Angeles: *University of California, Los Angeles, Archaeological Survey Annual Report, 1959*: 17-26.

Warren, Claude N.
1967 "The San Dieguito Complex: A Review and Hypothesis" *American Antiquity* 32(2): 168-185.

Appendix I

Scott M. Hudlow
1405 Sutter Lane
Bakersfield, California 93309
(661) 834-9183

Education

The George Washington University
M.A. American Studies, 1993
Specialization in Historical Archaeology
and Architectural History

University of California, Berkeley
B.A. History, 1987
B.A. Anthropology, 1987
Specialization in Historical Archaeology
and Colonial History

Public Service

3/94-12/02 *Historic Preservation Commission*. City of Bakersfield, Bakersfield, California 93305.

7/97-12/01 *Newsletter Editor. California History Action,* newsletter for the California Council for the Promotion of History.

Relevant Work Experience

8/96- *Adjutant Faculty*. Bakersfield College, 1801 Panorama Drive, Bakersfield, California, 93305. Teach History 17A, Introduction to American History and Anthropology 5, Introduction to North American Indians.

Owner, Sole Proprietorship. Hudlow Cultural Resource Associates. 1405 Sutter Lane, Bakersfield California 93309. Operate small cultural resource management business. Manage contracts, respond to RFP's, bill clients, manage temporary employees. Conduct Phase I archaeological and architectural surveys for private and public clients; including the cultural resource survey, documentary photography, measured drawings, mapping of structures, filing of survey forms, historic research, assessing impact and writing reports. Evaluated archaeological and architectural sites and properties in lieu of their eligibility for the National Register of Historic Places in association with Section 106 and 110 requirements of the National Historic Preservation Act of 1966 and CEQA (California Environmental Quality Act).

Full resume is available upon request.

Appendix II

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-20-002308	CA-MAD-002649H	Resource Name - Madera Canal; Madera Irrigation District; MID; Resource Name - MID Lateral 6.2 Segments; OTIS Resource Number - 676884; OTIS Resource Number - 691057; OTIS Resource Number - 691058	Structure	Historic	AH06; AH08; HP20	1992 (Unknown, JRP Historical Consulting Services); 2000 (Karana Hattersley-Drayton, Caltrans); 2000 (Karana Hattersley-Drayton, Caltrans); 2005 (G. Roark, C. Fish, Jones & Stokes); 2005 (Unknown, Applied EarthWorks, Inc.); 2009 (Joseph Freeman and Rebecca Flores, JRP Historical Consulting, LLC); 2013 (Mark Kile, Culturescape); 2013 (Mark Kile, Culturescape); 2014 (R. Scott Baxter, ESA); 2016 (Brandon Patterson, Garcia and Associates); 2016 (K. Asselin, Applied EarthWorks, Inc.); 2016 (Mark Kile, Culturescape); 2016 (Mark Kile, Culturescape); 2016 (HDR EOC, Inc., HDR EOC, Inc.); 2016 (Katherine Anderson, ESA); 2018 (Ward Stanley, Applied EarthWorks, Inc.)	MA-01203, MA-01254, MA-01257, MA-01266, MA-01267, MA-01287, MA-01332

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
MA-01028	Submitter - Project Name: Ave. 23 & Road 14; Submitter - Project Number: CN2975-01	2006	Losee, Carolyn	New Tower Submission Packet, FCC Form 620, for Ave. 23 & Road 14, CN2975-01	Archaeological Resources Technology	
MA-01203	OHP PRN - BUR_2016_0707_001 ; OHP PRN - BUR_2017_0721_002 ; Submitter - 13-MPRO-191; Submitter - 16-SCAO-122; Submitter - 17-SCAO-055; Submitter - MID Job #27-13-2	2014	Kile, Mark C.	Cultural Resource Inventory for Madera ID Water Conservation 13-MPRO-11 MID Job #27-13-2, Madera County, California	Culturescape	20-002308
MA-01234		2010	Arrington, Cindy	An Archaeological Survey for the Department of Water Resources Geotechnical Levee Investigation of San Joaquin River, Fresno River North 5.25, and Fresno River South 5.25, Madera County, California	Parus Consulting, Inc.	20-000421