ELLIS/FAIRVIEW RESIDENTIAL SUBDIVISION

(ANX, REZ, GPA, TSM, PPL)

Public Review Draft

Initial Study / Mitigated Negative Declaration

September 2024

Prepared by:

The City of MADERA

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

Table of Contents

List of Figures

List of Tables

Chapter 1 Introduction

Precision Civil Engineering, Inc. (PCE) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of City of Madera (City) to address the environmental effects of the proposed Ellis/Fairview Residential Subdivision (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 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. A negative declaration (ND) may be prepared instead if the lead agency finds that there is *no substantial* evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines *Section 15371*). According to CEQA Guidelines *Section 15070*, a ND or *mitigated* ND shall be prepared for a project subject to CEQA when either:

a. *The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or*
b. *The IS identified potentially significant effects, but:*
    1. *Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and*
    2. *There is no substantial evidence, in light of the whole record before the agency, that the proposed Project as revised may have a significant effect on the environment.*

1.2 Document Format

This IS/MND contains five chapters plus appendices. Introduction, provides an overview of the proposed Project and the CEQA process. 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. Mitigation Monitoring and Reporting Program (MMRP), provides the proposed mitigation measures, implementation timelines, and the entity/agency responsible for ensuring implementation. The CNDDB Occurrence Report, CHRIS Record Search Results, NAHC Correspondence, and CalEEMod Run Results are provided as technical Appendix A and Appendix , Appendix C, and Appendix D respectively, at the end of this document.

Chapter 2 Project Description

2.1 Project Background

2.1.1 Project Title

Ellis/Fairview Residential Subdivision (Annexation 2024-01, Prezone/Rezone 2024-02, General Plan Amendment 2024-01, Tentative Subdivision Map 2024-01, Precise Plan 2024-01)

2.1.2 Lead Agency Name and Address

City of Madera
205 West 4th Street
Madera, CA 93637

2.1.3 Contact Person and Phone Number

Lead Agency Contact
Will Tackett
Director of Community Development
559.661.5451

Applicant Information
CVI Group
Attn: Edward Gallegos
2141 Tuolumne Street, Suite J
Fresno, CA, 93721
(559) 479-1530

2.1.4 Study Prepared by

Precision Civil Engineering
1234 O Street
Fresno, CA 93721

2.1.5 Project Location

The Project is in the jurisdiction of the County of Madera, California, located on the east side of Fairview Street between Tanforan Drive and Adell Street (Figure 2-1). The "Project Area" consists of eleven (11) parcels that totals approximately 19.9 acres (Figure 2-2). The Project Area is identified by the Madera County Assessor as Assessor's Parcel Numbers (APNs) 038-060-017 (6.93 acres), 038-110-016 (0.91 acres), 038-110-017 (1.51 acres), 038-110-018 (0.92 acres), 038-110-019 (1.15 acres), 038-110-020 (2.33 acres), 038-110-021 (0.77 acres), 038-110-022 (1.19 acres), 038-060-028 (1.95 acres), 038-060-032 (1.06 acres), and 038-060-033 (1.18 acres).[1] The Project Area is a portion of Section 11, Township 11 South, Range 17 East, Mount Diablo Base and Meridian.

[1] As described in Section 2.9 – Section 2.13, proposed development and construction is limited to APN 038-060-017, which is 6.93 acres (herein referenced as "Project Site").

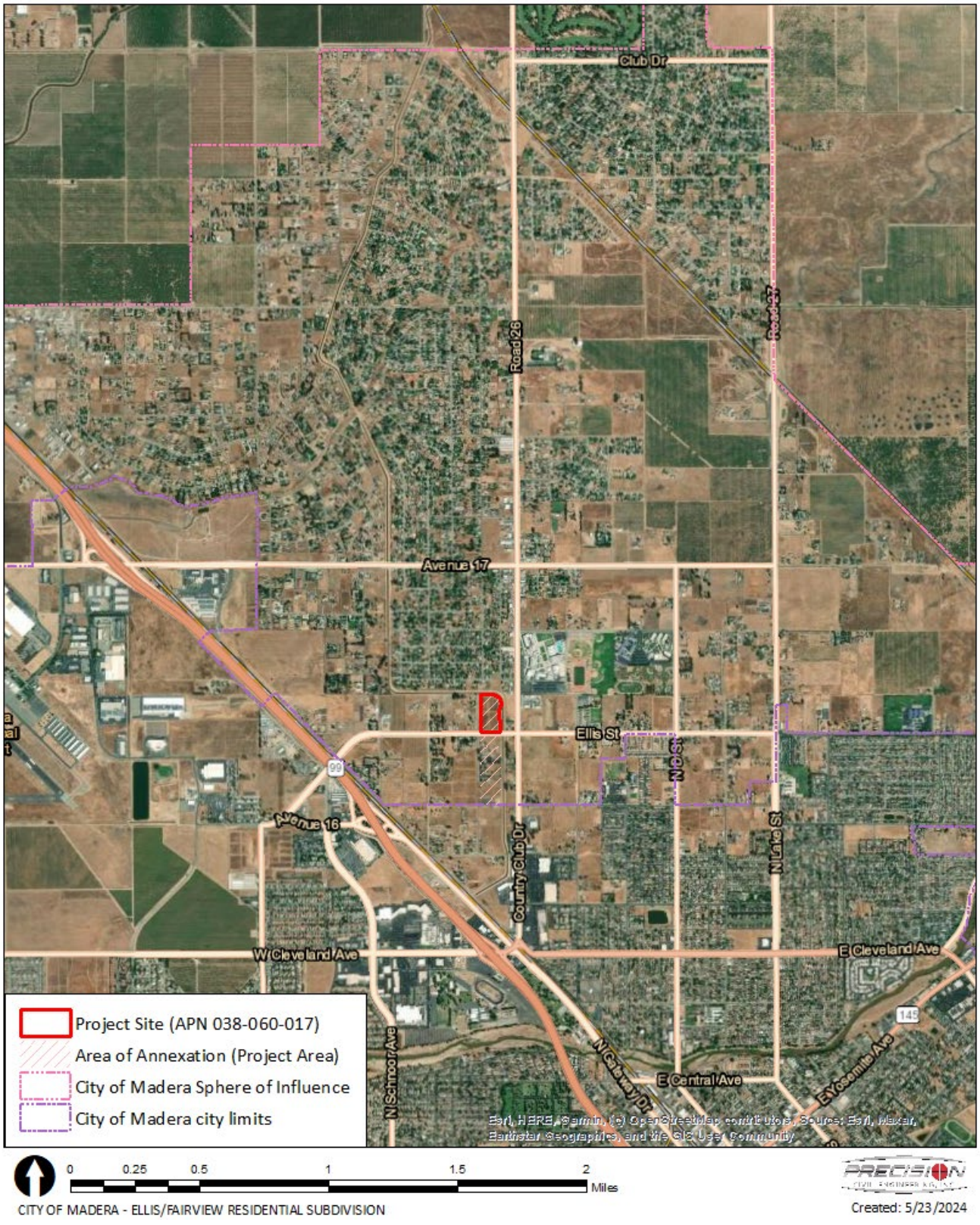


Figure 2-1 Regional Location Map

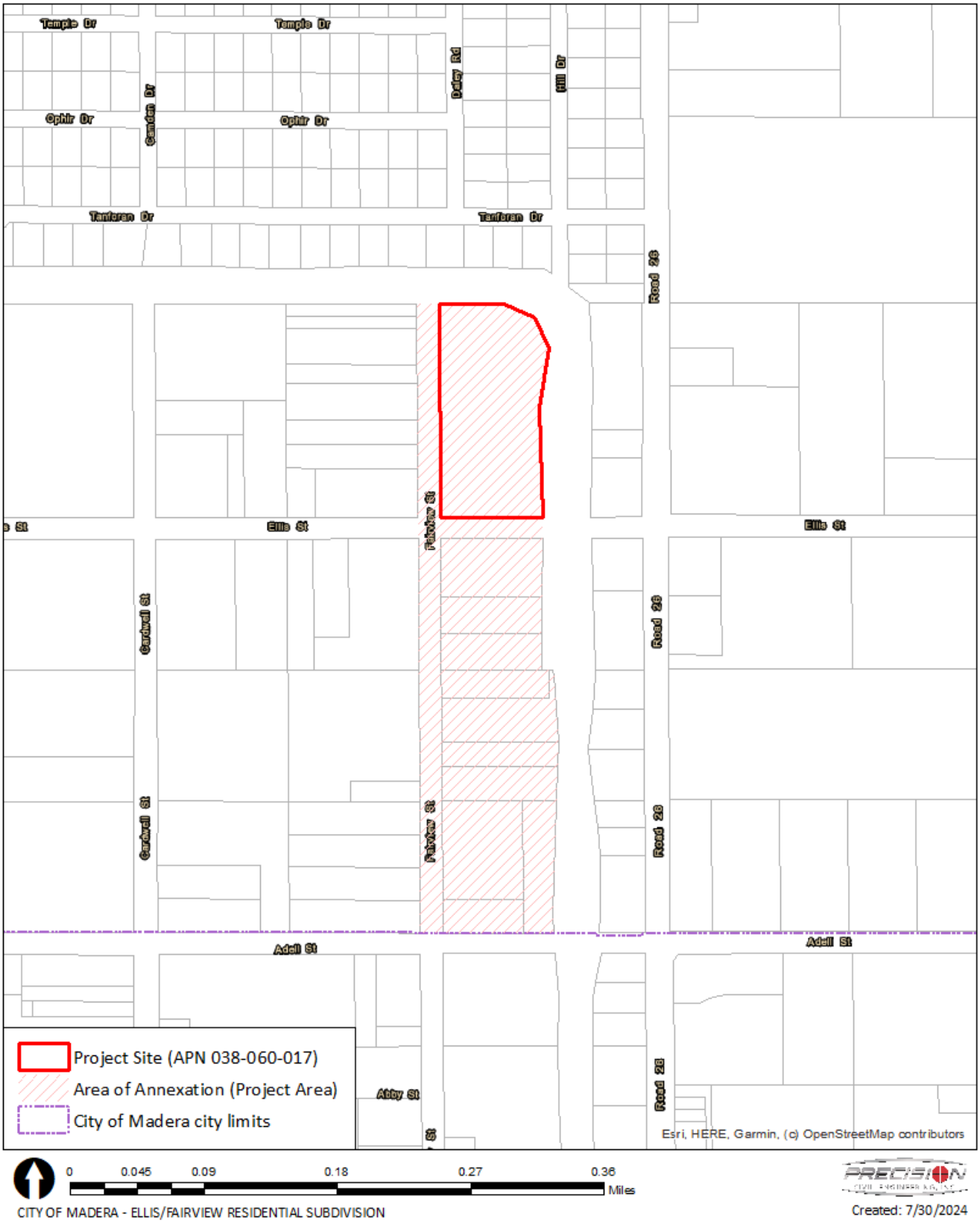


Figure 2-2 Project Vicinity Map

2.1.6 Latitude and Longitude

The centroid of the Project Area is 36.988056598196906, -120.07624420624599.

2.1.7 General Plan Designation

The Project Area has a City of Madera General Plan land use designation of LD - Low Density Residential (Figure 2-3). According to the General Plan, the LD – Low Density Residential land use designation provides "*residential development at a density of 2.1 to 7 units per acre, with a Target Density of 5.25 units per acre. The Low-Density Residential category represents the traditional single-family neighborhood with a majority of single-family detached homes.*" The LD – Low Density Residential land use designation is compatible with the RA, R-1, PD-4500, PD-6000, PD-8000, and PD-12000 zoning districts.

2.1.8 Zoning

The Project Area is currently outside of City limits and located within the County of Madera RRS – Residential, Rural, Single Family zoning district. (Figure 2-4). Because the Project Area is outside City limits, proposed development would require annexation and a pre-zone/rezone of the site to a zoning district consistent with the City of Madera General Plan planned land use designation for the site. Parcels included in the annexation would also be pre-zoned to a zoning district consistent with the General Plan land use designation.

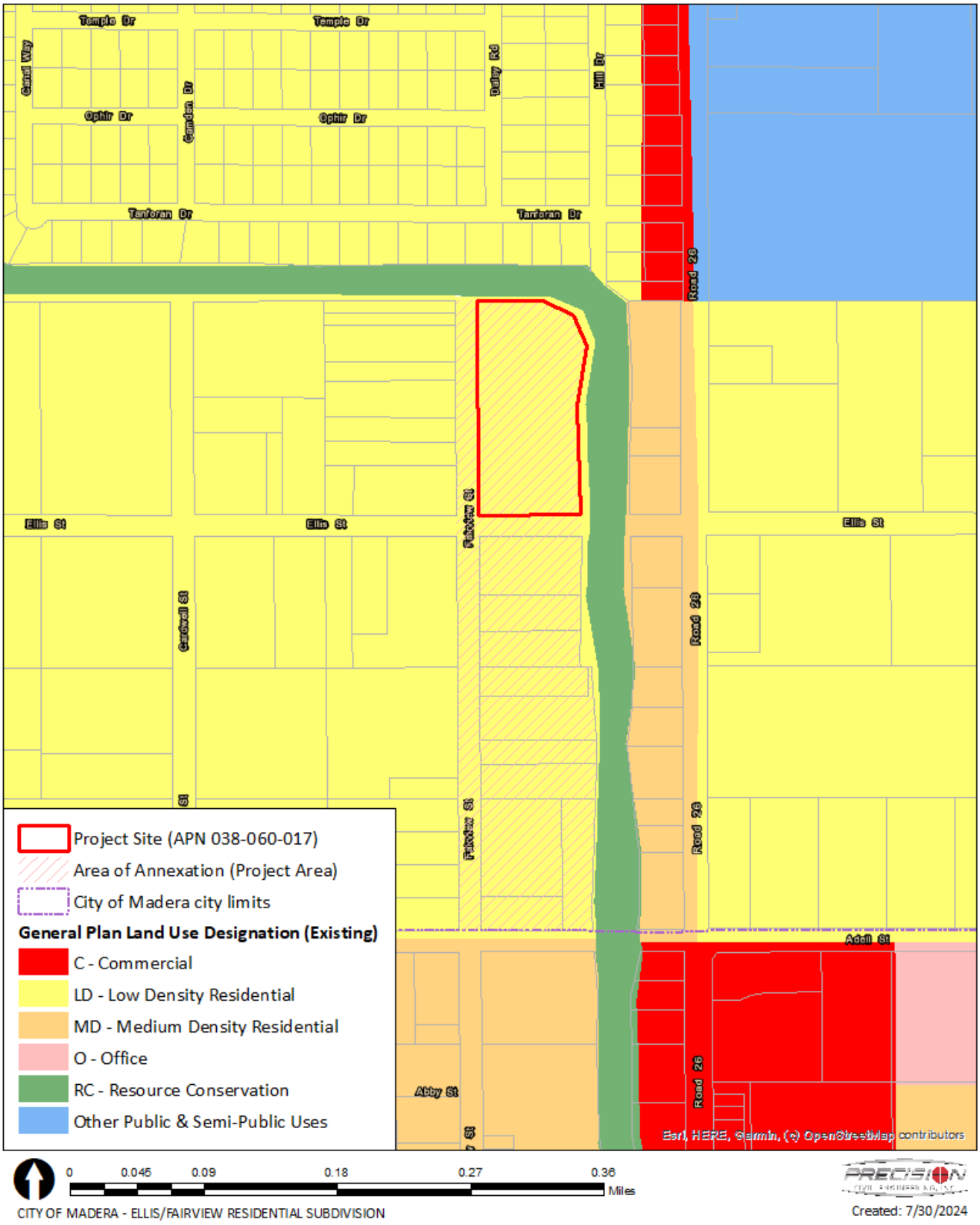


Figure 2-3 City of Madera General Plan Land Use Designation Map (Existing)

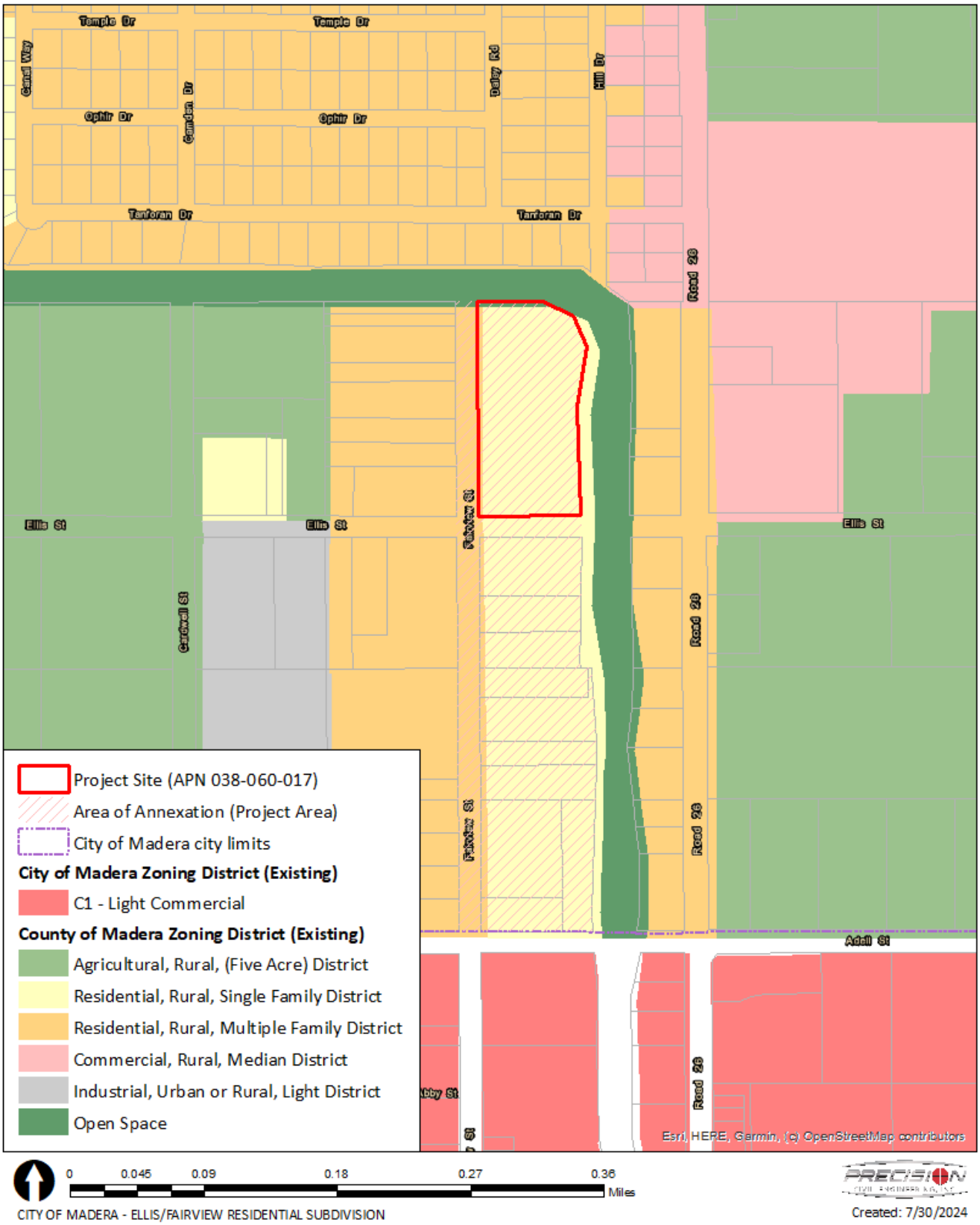


Figure 2-4 Zoning District Map (Existing)

2.1.9 Description of Project

This section describes the components of the proposed Project in more detail, including operations, site preparation, proposed structures, and on- and off-site improvements.

Project Description

CVI Group (Applicant) proposes Annexation (ANX) 2024-01 and Pre-zone/Rezone (REZ) 2024-02 pertaining to 11 parcels (APNs 038-060-017, 038-110-016, 038-110-017, 038-110-018, 038-110-019, 038-110-020, 038-110-021, 038-110-022, 038-060-028, 038-060-032, and 038-060-033) that total approximately 19.90 acres located on the east side of Fairview Street between Tanforan Drive and Adell Street in Madera, CA ("Project Area"). The Applicant also proposes General Plan Amendment (GPA) 2024-01, Tentative Subdivision Map (TSM) 2024-01, and Precise Plan (PPL) 2024-01 to facilitate a 61-lot single-family residential development ("Project") pertaining to one (1) parcel (APN 038-060-017) that totals approximately 6.93 acres located on the northeast corner of Ellis Street and Fairview Street in Madera, CA ("Project site"). No development is proposed on the 10 parcels that are only included as part of the annexation/pre-zone.

- ANX 2024-01 would annex approximately 11 parcels, totaling 19.90 acres, from the County of Madera to the City of Madera, in addition to Fairview Street and the right-of-way on Ellis Street between Fairview Street and the canal.
- GPA 2024-01 would change the General Plan land use designation of the Project site, APN 038-060-017, from LD – Low Density Residential to MD – Medium Density Residential. Figure 2-5 shows the proposed land use designation. No change is proposed to the rest of the Project Area.
- REZ 2024-02 would pre-zone the Project site, APN 038-060-017, to the Planned Development (P-D) (3000) zoning district. The zoning district would be consistent with the proposed planned land use, Medium Density Residential, pending approval of GPA 2024-01. The rest of the Project Area would be pre-zoned to the R-1 – Low Density Residential, which is consistent with the existing General Plan land use designation. Figure 2-6 shows the proposed zoning.
- TSM 2024-01 would subdivide the Project site, APN 038-060-017, into 61 single-family lots (8.80 dwelling units/acre).
- PPL 2024-01 would adopt a precise plan to facilitate the development of the Project site, APN 038-060-017, in accordance with the PD (3000) zone district. The precise plan is conditioned to be provided before the Project goes to City Council hearing.

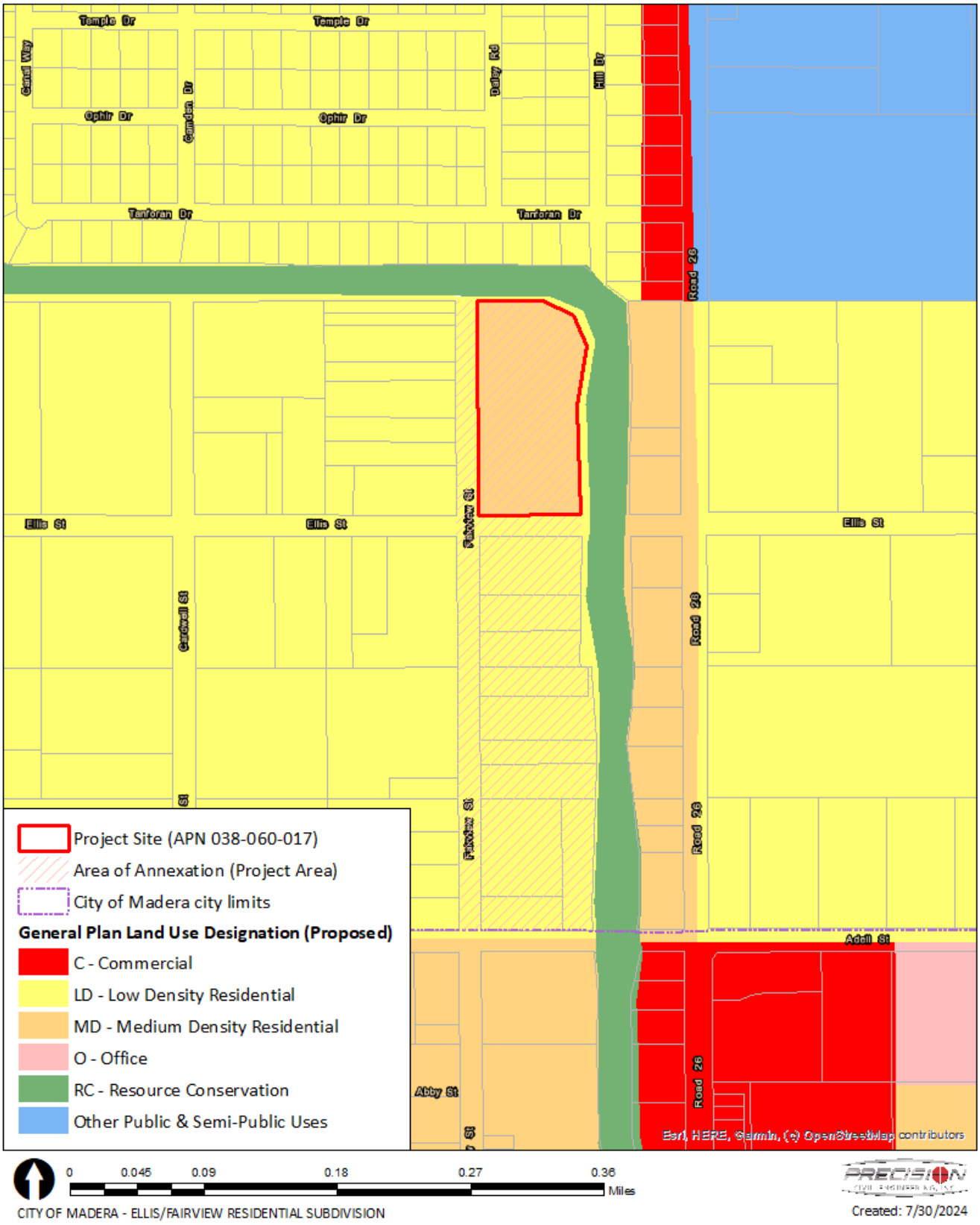


Figure 2-5 City of Madera General Plan Land Use Designation Map (Proposed)

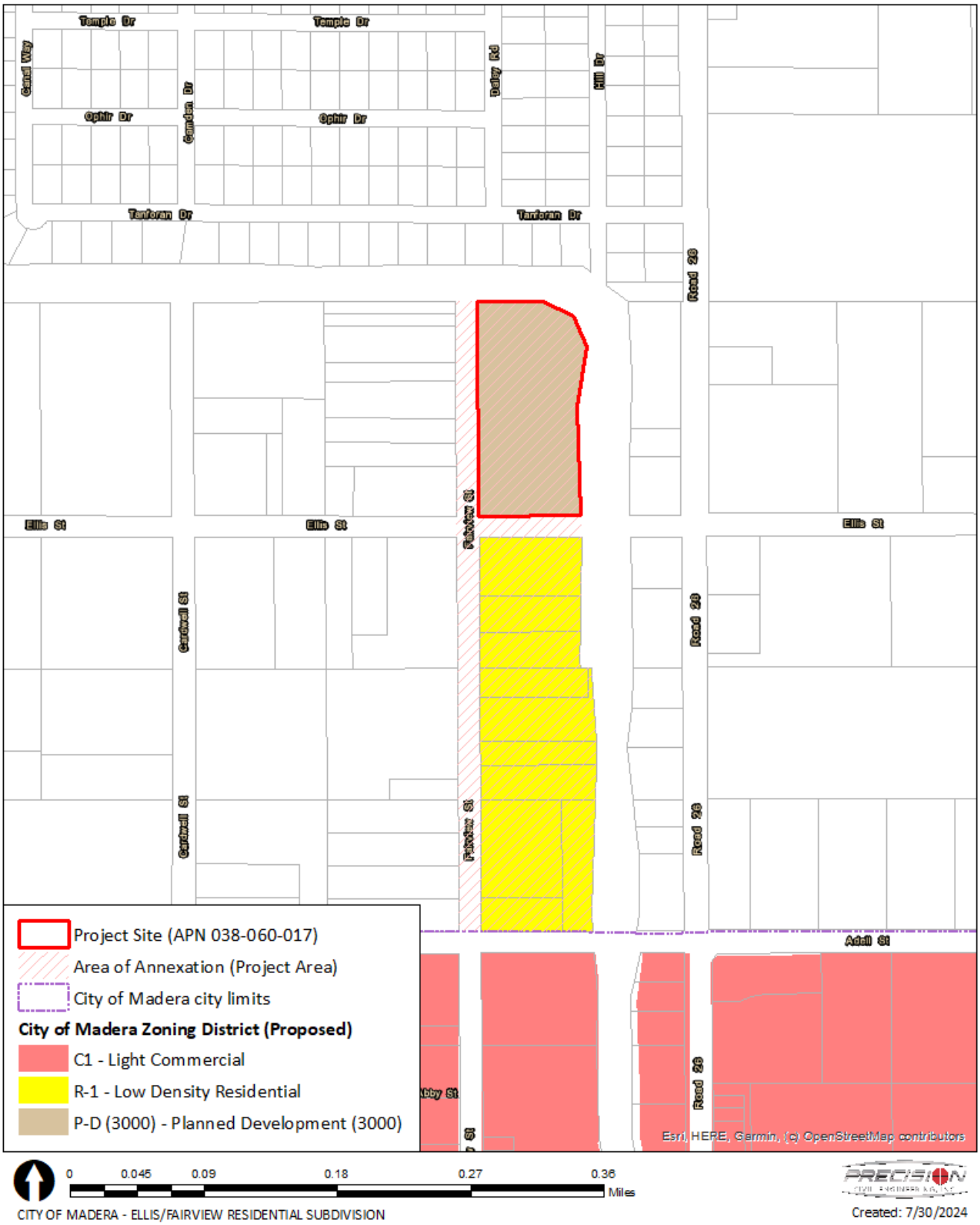


Figure 2-6 Zoning District Map (Proposed)

2.1.10 Site and Surrounding Land Uses and Setting

Project Setting

Project Area

Historically, the parcels which comprise the Project Area have been designated for residential use. Single-family dwellings exist on seven (7) of the 11 parcels. The other three (3) parcels have been vacant and periodically disked since 1998 as seen in aerial imagery. The parcels within the Project Area are relatively flat with a sandy loam soil type that is mostly well drained with an 8 to 9-inch water table depth.

Project site

The Project site, APN 038-060-017, is currently vacant and undeveloped, with no existing infrastructure or improvements. The Project site is bounded to the west by Fairview Street and to the south by Ellis Street, which is not currently improved. The site is bounded by an irrigation canal to the north and east. The existing biotic conditions and resources of the site can be defined primarily as ruderal and herbaceous vegetation with heavy alternation due to discing and grading. There is one (1) tree along the east boundary of the site. No shrubs or water features are present on the site.

Surrounding Land Uses and Setting

As referenced in Table 2-1, the Project Area is surrounded by existing an irrigation canal to the north and east, single-family residences to the west, and vacant land to the south and west. The properties to the north and east are planned for resource conservation (i.e., canal) within the City of Madera Sphere of Influence (SOI). The properties to the south and west are planned for residential uses within the city limits and SOI, respectively.

Table 2-1 Existing Uses, General Plan Designations, and Zone Districts of Surrounding Properties

Direction from the Project site	Existing Land Use	General Plan Land Use	Zoning District
North	Canal	RC – Resource Conservation (Canal)	OS – Open Space (County)
South	Vacant	LD – Low Density Residential	RRS – Residential, Rural, Single-Family District (County)
East	Canal	RC – Resource Conservation (Canal)	OS – Open Space (County)
West	Single-Family Residential, Vacant	LD – Low Density Residential	RRM – Residential, Rural, Multiple Family District (County)

2.1.11 Project Construction and Phasing

Construction would be limited to APN 038-060-017. The Project would be constructed in one (1) phase.

2.1.12 Site Preparation

Site preparation would be limited to APN 038-060-017. Site preparation would include typical grading activities and minor excavation for installation of utility infrastructure for conveyance of water, sewer, stormwater, and irrigation. Site preparation, building, grading, encroachment, and site utilities permits would be subject to review and approval by the appropriate agency and/or department to ensure compliance with applicable codes and regulations. Compliance would be verified through the building permit and inspection process.

2.1.13 Project Components

This section describes the overall components of the Project, such as the proposed buildings, landscaping, vehicle and pedestrian circulation, and utilities. This section is limited to APN 038-060-017.

Site Layout and Elevations

As shown in Figure 2-7, the Project proposes to subdivide the approximately 6.93-acre parcel into 61 lots ranging in size from 3,519 to 4,577 square feet (sf.), and install underground infrastructure, construct and pave in-tract roadways with curb and gutter and improve Ellis Street and Fairview Street along the Project frontage with pavement, curb, and gutter. A 20-foot dedication would widen Ellis Street.

A single-family dwelling is proposed on each lot. Setbacks, height, entrance location, elevations, and other development and design standards would be proposed in the Precise Plan as required by *Section 10-3-4.104* of the City of Madera Municipal Code (MMC). The Project would be built in accordance with all mandatory requirements for single-family as outlined in the 2022 Energy Code and verified through the building permit process. Mandatory requirements apply to building ventilation and indoor air quality, space conditioning systems, water heating systems, electric power distribution, and electric ready buildings.

The Project would be built in accordance with all mandatory indoor water use requirements as outlined in the 2022 California Green Building Standards Code, Title 24, Part 11, *Section 4.303 – Indoor Water Use* and verified through the building permit process. As a residential development that contains plumbing fixtures and fittings, the Project shall comply with water-conserving measures for water closets, urinals, showerheads, and faucets. In addition, as a residential development, the Project would be required to install submeters to measure water usage of individual units in accordance with the California Plumbing Code.

The Project would also be built in accordance with all mandatory outdoor water use requirements as outlined in the 2022 California Green Building Standards Code, Title 24, Part 11, Section 4.304 – Outdoor Water Use and verified through the building permit process. As a residential development that contains landscaping including trees, shrubs, ground cover/annual plants, and lawn, the Project shall comply with the updated Model Water Efficient Landscape Ordinance (MWELO) (California Code of Regulations, Title 23, Chapter 2.7, Division 2), as implemented and enforced through the building permit process.

Site Circulation and Parking

Access to the Project Site would be provided by two (2) points of ingress/egress from Fairview Street, which is proposed to be improved with curb, gutter, sidewalk, and landscaping on the east side of the street. There would be no access to the south road frontage, Ellis Street; however, the Project would dedicate 20 feet to Ellis Street and the frontage would be improved with curb, gutter, sidewalk, and landscaping. Internal circulation within the site would be provided by 37-foot-wide streets and pedestrian walkways.

Open Space and Landscaping

Common open space is not proposed within the Project Site. However, the Project would be subject to Madera Municipal Code *Section 10-2.13 Acquisition of Land and/or Payment of Fees for City Park Facilities* in addition to the Parks Department Impact Fee to mitigate any potential impacts to municipally owned parks. Landscaping would be installed along Fairview Street and Ellis Street as part of road frontage improvements. Residences would be built in accordance with MMC *Section 10-3-4.106*, which requires a minimum of 750 sf of open space exclusive of drives and off-street parking areas. The open space would be provided within the residential lots.

Public Services and Utilities

The Project site is proposed to be annexed into the City of Madera city limits and thus, would be required to connect to water, wastewater, and stormwater services. Natural gas, electricity, telecommunications, and solid waste services are provided by private companies. In addition, the Project would be subject to fees for the construction, acquisition, and improvements for public services including but not limited to fire protection services, police protection services, and schools. Water, wastewater, and stormwater services are described further below.

Domestic water service would be provided to the site through pipelines that are a minimum of eight (8) inches in diameter installed in all streets. The Project is required to install master planned water supply facilities in accordance with the City of Madera Water System Master Plan, as listed below. The underground water mains are required to meet the requirements of the California Fire Code (CFC) as well as the City of Madera Standards for placement and fire flow. Fire hydrants are also required to be installed in accordance with spacing requirements for residential development (i.e., 400 feet).

- Install a 24-inch water main from the intersection of Ellis Street and Country Club Drive to the west edge of the intersection of Ellis Street and Fairview Street.
- Install an 8-inch water main from the intersection of Ellis Street and Fairview Street to the northerly limit of Fairview Street unless fire flow analysis indicates need for a larger pipe.

Sanitary sewer service would be provided to the site through sewer lines and connection to the existing sewer main along the Ellis Street.

Storm runoff from the Project site is planned to go to the basin labeled as P07 in the 2014 Storm Drainage System Master Plan located southwest of the site. The Project would acquire sufficient additional right-of-way, as necessary, to expand the basin and construct other necessary facilities in accordance with criteria in the Storm Master Plan and City standard drawings, as applicable, to convey and hold storm runoff.

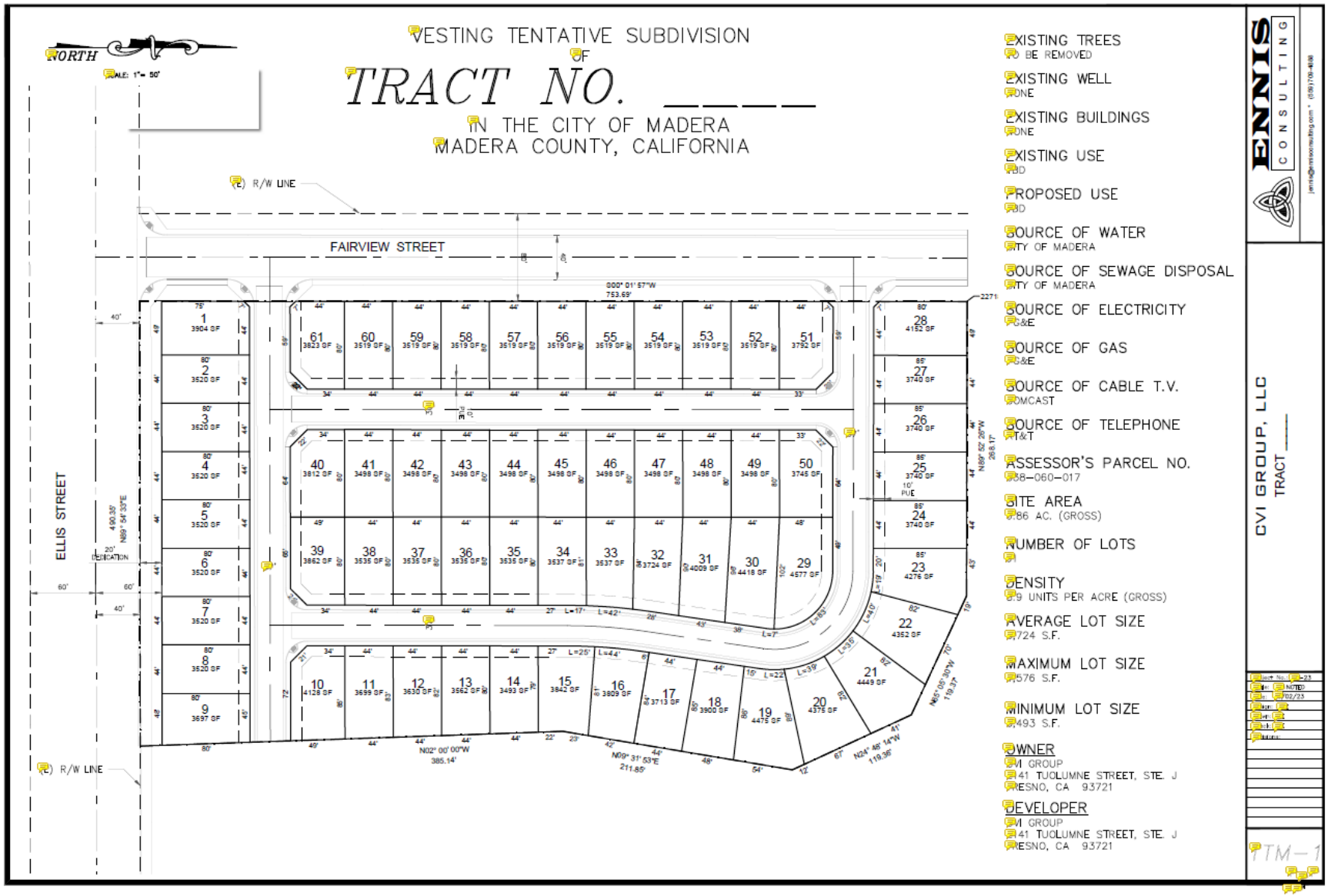


Figure 2-7 Tentative Subdivision Map

2.1.14 Other Public Agencies Whose Approval May Be Required

The City of Madera requires review, permits, and/or approvals for the proposed Project including Annexation, Pre-zone/Rezone, General Plan Amendment, Tentative Subdivision Map, Precise Plan, Grading Permit, Encroachment Permit, Building Permit. Other approvals not listed below may be required as identified through the entitlement process. In addition, other agencies may have the authority to issue permits prior to implementation of the Project including Madera County Department of Public Health, San Joaquin Valley Air Pollution Control District, California Regional Water Quality Control Board, and Bureau of Reclamation.

2.1.15 Consultation with California Native American Tribes

The State requires lead agencies to consider the potential effects of proposed Projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the CEQA Guidelines. Pursuant to PRC *Section 21080.3.1*, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed Project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC *Section 21074(a)(1-2)*). According to the most recent census data, California is home to 109 currently recognized Indian tribes.

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and Project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC *Section 21083.3.2*.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC *Section 5097.96* and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC *Section 21082.3(c)* contains provisions specific to confidentiality.

A consultation list of tribes with traditional lands or cultural places located within Madera County was requested and received from the California Native American Heritage Commission (NAHC) on June 11, 2024. The listed tribes include Amah Mutsun Tribal Band, North Fork Rancheria of Mono Indians, Northern Valley Yokut/Ohlone Tribe, Picayune Rancheria of the Chukchansi Indians, Southern Sierra Miwuk Nation, Tule River Indian Tribe, and Wuksachi Indian Tribe/Eshom Valley Band. The NAHC also conducted a Sacred Lands File (SFL) search which was negative.

The City of Madera conducted formal tribal consultation pursuant to AB 52 (Chapter 532, Statutes 2014) and SB 18 (Chapter 905, Statutes 2004) on October 1, 2024, utilizing the consultation list of tribes received from the NAHC. The same tribes listed above were included in the formal consultation. Consultation for AB 52 ended on October 31, 2024, and consultation for SB 18 ended on December 30, 2024. No response was received.

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. 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

November 4, 2024
Date

Will Tackett, Director of Community Development
City of Madera

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 within Madera County in the San Joaquin Valley in Central California. The City's visual features predominately include urbanized land uses, agricultural land uses, rivers and creeks, and trees. The Project site is in the northern area of the City of Madera, California, on the northeast corner of Ellis Street and Fairview Street. The Project vicinity (i.e., within a ½-mile radius of the Project site) is generally characterized by rural residential use and vacant land.

California Scenic Highway Program

The California Scenic Highway Program was established in 1963 with the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. There are no officially designated State

Scenic Highways in the City of Madera, inclusive of the Project site. The closest eligible State Scenic Highway is State Route (SR) 168, located approximately 23 miles east of the Project. [2]

Madera General Plan

Regarding the proposed use, the Madera General Plan Community Design Element and Land Use Element outline policies related to Goal 6: *"Design neighborhoods to foster interaction among residents and be responsive to human scale."* The following goals and policies related to aesthetics are applicable to the Project.

Community Design Policy CD-29*: All housing units shall be oriented to the streets, parks, or a shared common area.*

Community Design Policy CD-30: *Lot size and building placement on lots shall be designed to reduce the appearance of large-homes close together on small lots. Potential techniques include:*

- *Attention to detail in architectural design, materials, etc.*
- *Varying lot widths to accommodate building footprints.*
- *Variety in residential designs within individual projects.*

Community Design Policy CD-31: *Residential setbacks from the street should be varied when possible in all areas of Madera except the Downtown District, where uniform setbacks may be considered.*

Community Design Policy CD-32*: Garages for new single-family houses, duplexes, and townhouses should be subordinate in visual importance to the house itself, especially the entry. This may be achieved in a number of ways, such as by locating garages toward the back of the properties, constructing alleys, building garages as separate structures from the house, requiring garages to be set back from the front facade of the house and encouraging the orientation of garage doors at 90 degrees to the street.*

Community Design Policy CD-33: *The exterior of residential buildings shall be varied and articulated to provide visual interest to the streetscape.*

Community Design Policy CD-34: *The exterior of residential buildings shall reflect attention to detail as necessary to produce high architectural design and construction quality. Where side and/or rear exterior elevations of residential buildings are visible from any street or public rights-of-way, they shall incorporate architectural treatments in keeping with the front (primary) elevation.*

Community Design Policy CD-35: *The City encourages a variety of features such as front porches and verandas in all new residential development.*

Community Design Policy CD-36: *Where multi-story housing units are proposed adjacent to existing or planned Low Density areas, building elevations and the location of windows, balconies, and air conditioning units above the first story shall be designed to ensure visual compatibility and residential privacy.*

[2] Caltrans. California State Scenic Highway System Map. Accessed on May 6, 2024. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa\

Land Use Policy LU-20: *New residential development should be designed to avoid continuous blocks or clusters of dwellings that are connected only by streets, sidewalks, and hardscape. New development shall incorporate amenities which establish a sense of identity at the project or neighborhood level, create opportunities for community interaction, and enhance the visual appeal of the area. Features which accomplish these goals may include pathways, paseos, parks, community gardens, and other semi-public gathering places.*

Land Use Policy-22: *Single family developments need to provide functional outdoor recreational space. The space can be provided either on individual lots or more efficiently as aggregated local public spaces, creating features such as those described in Policy LU-20.*

Madera Municipal Code

Madera Municipal Code (MMC), *Section 10-3-4.100 Planned Development Zones*, sets forth the City's open space requirements. Specific requirements applicable to the Project are as follows. Other development and design standards for this specific project, such as height, would be established in the Precise Plan.

§ 10-3-4.106 Open Space. *For each residential unit in a planned residential development there shall be provided a minimum 750 square feet of open space exclusive of drives and off-street parking areas.*

4.1.2 Impact Assessment

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

No Impact. The Project Area and vicinity consists of single-family residences and vacant land. The site is generally flat and there are no long-range scenic views (e.g., mountain ranges) that can be seen from the Project Area due to existing development, trees, and the flat topography. Furthermore, the General Plan does not identify or designate scenic vistas or corridors within the general vicinity of the Project Area. As a result, the Project would not adversely affect scenic vistas and no impact would occur because of the Project.

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

No Impact. According to the California State Scenic Highway Program, there are no officially designated State Scenic Highways in the City of Madera, inclusive of the Project site and the annexation parcels. As such, the proposed Project would not damage scenic resources, including trees, rock out-croppings, and historic buildings within a state scenic highway and no impact would occur.

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?

Less than Significant Impact. The Project Area is adjacent to urbanized land. The Project site is currently vacant and undeveloped and is within an area generally characterized with residences and vacant land. The Project proposes development of a residential subdivision, which would not have a significantly different character from the surrounding area. Further, the proposed use is subject to compliance with applicable

zoning and other regulations governing scenic quality, which will ensure the minimization of any visual impact by upholding the visual character or quality of public views of the site and its surroundings. Through the entitlement process, the Project would be subject to compliance with applicable policies and regulations that govern scenic quality including but not limited to the General Plan, MMC, and California Building Code (CBC). Compliance would ensure that development of the site would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, a less than significant impact would occur because of the Project.

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. Generally, lighting impacts are associated with artificial lighting in evening hours either through interior lighting from windows or exterior lighting (e.g., street lighting, parking lot lighting, landscape lighting, cars, and trucks). Development of the Project site would incrementally increase the amount of light from streetlights, exterior lighting, and vehicular headlights. Such sources could create adverse effects on day or nighttime views in the area.

As mentioned above, the Project would introduce new light sources into the area, including temporary light and glare resulting from construction activities that could adversely affect day or nighttime views. Although construction activities are anticipated to occur primarily during daylight hours, it is possible that some activities could occur during dusk or early evening hours (pursuant to MMC *Section 3-11.01*, construction activities are permitted between 6:00 AM and 8:00 PM). Construction during these time periods could result in light and glare from construction vehicles or equipment. However, construction would occur primarily during daylight hours and would be temporary in nature. Once construction is completed, any light and glare from these activities would cease to occur.

Regarding operations, the Project includes lighting fixtures to provide interior lighting, lamps, outdoor lighting, etc. Lighting design would be required to comply with the MMC, which contains specific, enforceable requirements and/or restrictions intended to prevent light and glare impacts. Compliance with Title 24 lighting requirements would also reduce impacts related to nighttime light. The Title 24 lighting requirements cover outdoor spaces including regulations for mounted luminaires (i.e., high efficacy, motion sensor controlled, time clocks, energy management control systems, etc.). As such, conditions imposed on the Project by the City of Madera pursuant to Title 24 requirements, the General Plan, and MMC, would reduce light and glare impacts to a less than significant impact.

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 site is located within the City of Madera Sphere of Influence and is planned and zoned for residential use. The site is generally flat and does not contain any geologic formations. The Project site is generally surrounded by residential use and vacant land. The Project site is currently vacant with no off-site street improvements. The existing biotic conditions and resources of the site can be defined primarily as ruderal and herbaceous vegetation with heavy alternation due to discing and grading. There is one tree along the east boundary of the site. No shrubs or water features present on the site. Lastly, the Project site does not contain any agricultural or forestry resources such as agricultural land, forest land, or timberland.

Farmland Monitoring and Mapping Program

The California Department of Conservation manages the Farmland Mapping and Monitoring Program (FMMP) that provides maps and data for analyzing land use impacts to farmland. The FMMP produces the Important Farmland Finder as a resource map that shows quality (soils) and land use information. Agricultural land is rated according to soil quality and irrigation status, in addition to many other physical and chemical characteristics. The highest quality land is called "Prime Farmland" which is defined by the FMMP as *"farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.* [3] Maps are updated every two years. According to the FMMP, California Important Farmland Finder, the Project Area is classified as "Vacant or Disturbed Land" and "Rural Residential Land." [4] Similarly, lands within the Project vicinity are not classified as farmlands.

California Land Conservation Act

The California Land Conservation Act of 1965 (i.e., the Williamson Act) allows local governments to enter contracts with private landowners to restrict parcels of land agricultural or open space uses. In return, property tax assessments of the restricted parcels are lower than full market value. The minimum length of a Williamson Act contract is 10 years and automatically renews upon its anniversary date; as such, the contract length is essentially indefinite. The Project site is not subject to the Williamson Act.

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?

No Impact. According to the FMMP, the Project Area is designated as "Vacant or Disturbed Land" and "Rural Residential Land". As such, the Project site is not located on lands designated as "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance." Therefore, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use and no impact would occur.

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

No Impact. The Project Area is not zoned for agricultural use and is not subject to the Williamson Act. Therefore, the Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract and no impact would occur.

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

[3] California Department of Conservation. Important Farmland Categories. Accessed on June 4, 2024, https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx
[4] California Department of Conservation. (2018). California Important Farmland Finder. Accessed on May 6, 2024, https://maps.conservation.ca.gov/DLRP/CIFF/

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

No Impact. The Project Area is not planned or zoned for forest land or timberland. Further, the Project Area would not cause the rezoning of forest land, timberland, or timberland zoned Timberland Production. As a result, the Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production and no impact would occur.

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

No Impact. The Project Area does not contain forest land and is not planned or zoned for forest land or forest uses. Development of the Project site would therefore not result in the loss of forest land or conversion of forest land to non-forest use. As a result, no impact would occur.

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?

No Impact. The Project Area is planned and zoned for residential uses and does not contain agricultural or forestry uses or resources. The properties in the immediate vicinity of the Project Area also do not contain agricultural or forestry uses or resources. According to the FMMP, California Important Farmland Finder, the Project Area and the properties in its immediate vicinity are not classified as farmlands. Therefore, future development of the Project site with residential development would be generally consistent with the existing environment of the surrounding, urbanized, and non-agricultural or forestry uses. As a result, the Project would not involve other changes in the existing environment that could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, no impact would occur because of the Project.

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 Project site is located within the San Joaquin Valley Air Basin (SJVAB). The San Joaquin Valley Air Pollution Control District (SJVAPCD) regulates air quality in eight counties including: Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. The SJVAPCD oversees the SJVAB.

Impacts on air quality result from emissions generated during short-term activities (construction) and long-term activities (operations). Construction-related emissions consist mainly of exhaust emissions (NOx and PM) from construction equipment and other mobile sources, and fugitive dust (PM) emissions from earth moving activities. Operational emissions are source specific and consist of permitted equipment and activities and non-permitted equipment and activities.

Air pollution in the SJVAB can be attributed to both human-related (anthropogenic) and natural (non-anthropogenic) activities that produce emissions. Air pollution from significant anthropogenic activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. Four main sources of air pollutant emissions in the SJVAB are motor vehicles, industrial plants, agricultural activities, and construction activities. All four of the major pollutant sources affect ambient air quality throughout the SJVAB. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air. Air pollutants can remain in the atmosphere for long periods and can build to unhealthful levels when stagnant conditions that are common in the San Joaquin Valley occur. Pollutants are transported downwind from urban areas with many emission sources which are also recirculated back to the urban areas.

Further, the SJVAB is in non-attainment for ozone, PM_{10}, and $PM_{2.5}$, which means that certain pollutants' exposure levels are often higher than the normal air quality requirements. Air quality standards have been set to protect public health, particularly the health of vulnerable people. Therefore, if the concentration of

those contaminants exceeds the norm, some susceptible individuals in the population are likely to experience health effects. Concentration of the pollutant in the air, the length of time exposed and the individual's reaction are factors that affect the extent and nature of the health effects.

San Joaquin Valley Air Pollution Control District

The SJVAPCD is the agency primarily responsible for ensuring that National Ambient Air Quality Standards (NAAQS) (per the U.S. Environmental Protection Agency (EPA)) and California Ambient Air Quality Standards (CAAQS) (per the California Air Resources Board) are not exceeded and that air quality conditions are maintained in the SJVAB, within which the Project is located. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA).

The SJVAPCD adopted rules and regulations for development projects prior to and during construction to reduce air contaminants, including but not limited to the following:

Rule 2010 – Permits Required. *The purpose of this rule is to require any person constructing, altering, replacing or operating any source operation which emits, may emit, or may reduce emissions to obtain an Authority to Construct or a Permit to Operate. This rule also explains the posting requirements for a Permit to Operate and the illegality of a person willfully altering, defacing, forging, counterfeiting or falsifying any Permit to Operate.*

Rule 2201 – New and Modified Stationary Source Review Rule. *The purpose of this rule is to provide for the following:*
The review of new and modified Stationary Sources of air pollution and to provide mechanisms including emission trade-offs by which Authorities to Construct such sources may be granted, without interfering with the attainment or maintenance of Ambient Air Quality Standards; and
No net increase in emissions above specified thresholds from new and modified Stationary Sources of all nonattainment pollutants and their precursors.

Rule 4001 – New Source Performance Standards. *This rule incorporates the New Source Performance Standards from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR).*

Rule 4002 – National Emission Standards for Hazardous Air Pollutants. *This rule incorporates the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR) and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations (CFR).*

Rule 4102 – Nuisance. *The purpose of this rule is to protect the health and safety of the public.*

Rule 4601 – Architectural Coatings. *The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.*

Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. *The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.*

Regulation VIII – Fugitive PM10 Prohibitions. *The purpose of Regulation VIII (Fugitive PM10 Prohibitions) is to reduce ambient concentrations of fine particulate matter (PM10) by requiring actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions.*

Rule 9510 – Indirect Source Review. *The purposes of this rule are to:*
1. Fulfill the District's emission reduction commitments in the PM10 and Ozone Attainment Plans.
2. Achieve emission reductions from the construction and use of development projects through design features and on-site measures.
3. Provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures.

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* (GAMAQI). SJVAPCD recommends a three-tiered approach to air quality analysis based on project size to allow quick screening for CEQA impacts:

a. **Small Project Analysis Level (SPAL):** based on the District's New Source Review, the District pre-quantified emissions and determined values as thresholds of significance for criteria pollutants. Residential, commercial, retail, industrial, educational, and recreational land uses are eligible to use this for screening. The SPAL was published on November 13, 2020, by the SJVAPCD to determine potential impacts in GAMAQI. [5] SPAL is based on a CalEEMod version 2016.3.2.
b. **Cursory Analysis Level (CAL):** CAL is used to determine significance on projects that exceed the SPAL criteria. Analysis includes using CalEEMod to estimate emissions and air pollutants.
c. **Full Analysis Level (FAL):** this level of analysis is usually required for an EIR. It requires a full air quality report that describes impacts on the public.

GAMAQI also 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 on human health and welfare. The thresholds of significance are summarized, as follows:

Criteria Air Pollutants

SJVAPCD adopted thresholds of significance for criteria air pollutants, as shown in Table 4-1. The thresholds of significance are based on a calendar year basis. For construction emissions, the annual emissions are evaluated on a rolling 12-month period. The following summarizes these thresholds:

[5] San Joaquin Valley Air Pollution Control District. (2020). "Small Project Analysis Levels (SPAL)". Accessed on June 13, 2024, https://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF

- Short-Term Emissions of Particulate Matter (PM_{10}): 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 (PM_{10}): 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.

Table 4-1 SJVAPCD Recommended Air Quality Thresholds of Significance[6]

Pollutant	Significance Threshold	
	Construction Emissions (tons/year)	Operational Emission (tons/year)
CO	100	100
NO_X	10	10
ROG	10	10
SO_X	27	27
PM_{10}	15	15
$PM_{2.5}$	15	15

Conflict with or Obstruct Implementation of Applicable Air Quality Plan

Air Quality Plans (AQPs) are plans for reaching the attainment of air quality standards. The applicable AQP for the SJVAB is the GAMAQI. 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 be conflicting with the AQP. 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. Vehicle Miles Traveled are analyzed in Section 4.17.

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).

[6] SJVAPCD. (2015). Guidance for Assessing and Mitigating Air Quality Impacts. Accessed on June 13, 2024, https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF

Toxic Air Contaminants

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 one (1).

As recommended by the SJVAPCD, the latest approved California Air Pollution Control Officer's Association (CAPCOA) methodology was utilized as the TAC screening methodology. According to the CAPCOA Guidance Document titled "Health Risk Assessments for Proposed Land Use Projects," there are two types of land use project that have the potential to cause long-term public health risk impacts. These project types are as follows:

- Type A: Land use projects with toxic emissions that impact receptors, and
- Type B: Land use project that will place receptors in the vicinity of existing toxics sources.

In this Guidance document, Type A projects examples are (project impacts receptors):

- combustion related power plants,
- gasoline dispensing facilities,
- asphalt batch plants,
- warehouse distribution centers,
- quarry operations, and
- other stationary sources that emit toxic substances.

Odor

The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. Specific land uses that are considered sources of undesirable odors include landfills, transfer stations, composting facilities, sewage treatment plants, wastewater pump stations, asphalt batch plants and rendering plants. The SJVAPCD has identified these common types of facilities that have been known to produce odors in the SJVAB and has prepared screening levels for potential odor sources ranging from one to two miles of distance from the odor-producing facility to sensitive receptors. Odor impacts would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

Ambient Air Quality

The SJVAPCD applies the following guidance in determining whether an ambient air quality analysis should be performed: when assessing the significance of project-related impacts on air quality, it should be noted that the impacts may be significant when on-site emission increases from construction activities or operational activities exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures. Under such circumstances, the SJVAPCD recommends that an ambient air quality analysis be performed.

Small Project Analysis Level

The SPAL identifies pre-quantified emissions and determined values related to project type, size, and number of vehicle trips. According to the SPAL, projects that fit specified descriptions are deemed to have a less than significant impact on air quality and as such are excluded from quantifying criteria pollutant emissions for CEQA purposes.

Madera General Plan

In regard to local measures and thresholds for air quality impacts, the Madera General Plan Conservation Element outlines goals, objectives, and policies for addressing air quality. A sample of applicable goals and policies are as follows:

Goal CON-11 Air quality that meets or exceeds all state and federal standards.

GOAL CON-12 Meet or exceed all current and future state-mandated targets for reducing emissions of greenhouse gases.

> *Policy CON-29 The City shall require new air pollution point sources (such as, but not limited to, industrial, manufacturing, and processing facilities) to be located an adequate distance from residential areas and other sensitive receptors. "Adequate distance" will be based on site-specific conditions, the type and location of sensitive receptors, on the types and amounts of potential toxic emissions, and other factors.*
>
> *Policy CON-30 The creation of dust during construction/demolition activities should be reduced to the extent feasible.*

4.3.2 Impact Assessment

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

Less than Significant Impact. The Project would not conflict with the applicable air quality plan if the Project does not exceed the adopted quantitative thresholds for criteria pollutant emissions that are established in the GAMAQI, as demonstrated in the Thresholds of Significance above. As stated above, the SJVAPCD recommends a three (3)-tiered approach to analyze projects for significant impacts on air quality. The first tier is the Small Project Analysis Level (SPAL), which adopts a threshold of significance according to the use type, size, and number of vehicle trips of a project. As demonstrated below, the proposed Project would not have any significant effects relating to air quality pursuant to SPAL.

Based on the Project description, the most applicable land use type for the proposed Project is Single Family. The Project proposes the subdivision of a 6.93-acre parcel into 61 single-family lots. The corresponding threshold for this land use compared to the Project is shown in Table 4-2. As shown, the Project is below all thresholds and therefore, the Project is assumed to result in air quality impacts that are below the identified thresholds of significance and thus, a less than significant impact would occur.

Table 4-2 SPAL Significance Thresholds

	SPAL Threshold	Proposed Project	Exceed Threshold?
Size/Unit	155 dwelling units	61 dwelling units	No
Average Daily One-way Trips for All Fleet Types (Except Heavy-Heavy Duty Trucks (HHDT)) *	800	575.23	No
Average Daily One-way for HHDT trips only (50-mile trip length)	15	0	No

** Average daily trips generated by the Project is estimated using ITE Trip Generation Manual 11th Edition. See detailed calculations in Section 4.17 TRANSPORTATION.*

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?

Less than Significant Impact. The SJVAB is in non-attainment for ozone, PM_{10}, and $PM_{2.5}$, which means that certain pollutants' exposure levels are often higher than the normal air quality requirements. The requirements have been set to protect public health, particularly the health of vulnerable populations. Therefore, if the concentration of those contaminants exceeds the norm, some susceptible individuals in the population are likely to experience health effects. Concentration of the pollutant in the air, the length of time exposed and the individual's reaction are factors that affect the extent and nature of the health effects as analyzed in criterion a) above, the Project would have a less than significant impact on air quality and are excluded from quantifying criteria pollutant emissions for CEQA purposes. Therefore, the Project would not result in significant cumulative health impacts because the emissions are not at a level that would be considered cumulatively significant. As such, the Project would have a less than significant impact.

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

Less than Significant Impact. Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptors include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units. The nearest sensitive receptors to the Project site are single-family residences located adjacent to Fairview Street, approximately 90 feet west of the Project site (measured from the Project's property line to existing structures of the sensitive receptors). As stated under criterion a) above, emissions during construction or operation would not reach the significance thresholds and would not be anticipated to result in concentrations that reach or surpass ambient air quality requirements.

Further, anticipated development that would result from Project implementation would not be uses that would generate toxic emissions (i.e., Type A uses identified by the CAPCOA guidelines). Although emissions would be emitted during construction of the site (i.e., through diesel fuel and exhaust from equipment), emissions would be temporary and last only during construction activities. In addition, construction activities would be required to comply with all rules and regulations administered by the SJVAPCD including but not limited to Rule 9510 (Indirect Source Review), Regulation VIII (Fugitive PM_{10} Prohibitions), Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 4402 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). Therefore, a less than significant impact would occur.

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

Less than Significant Impact. Specific uses and operations that are considered sources of undesirable odors include landfills, transfer stations, composting facilities, sewage treatment plants, wastewater pump stations, asphalt batch plants and rendering plants. The Project would not consist of such land uses; rather, implementation of the proposed Project would facilitate the development of 61 single-family dwelling units, and thus is unlikely to produce odors that would be considered to adversely affect a substantial number of people. Therefore, a less than significant impact would occur.

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 Project site, APN 038-060-017, is currently vacant and undeveloped, with no existing infrastructure or improvements. The Project site is bounded to the west by Fairview Street and to the south by Ellis Street, which is not currently improved. The site is bounded by an irrigation canal to the north and east. The existing biotic conditions and resources of the site can be defined primarily as ruderal and herbaceous vegetation with heavy alternation due to discing and grading. There is one (1) tree along the east boundary of the site. No shrubs or water features are present on the site.

U.S. Fish and Wildlife – Special-Status Species Database

The U.S. Fish and Wildlife Service (USFWS) operates an "Information for Planning and Consultation" (IPaC) database, which is a project planning tool for the environmental review process that provides general information on the location of special-status species that are "known" or "expected" to occur (note: the database does not provide occurrences; refer to the California Department of Fish and Wildlife – Natural Diversity Database below). [7] Specifically, the IPaC database identifies nine (9) special-status species that are potentially affected by activities in the Project site, including: Fresno Kangaroo Rat (endangered), San Joaquin Kit Fox (endangered), Northwestern Pond Turtle (proposed threatened), California Tiger Salamander (threatened), Western Spadefoot (proposed threatened), Monarch Butterfly (candidate), Valley Elderberry Longhorn Beetle (threatened), Vernal Pool Fairy Shrimp (threatened), and Hairy Orcutt Grass (endangered). The IPaC database also identifies the likelihood of bald eagles present in the Project site. The probability of presence is around the third week of January.

U.S. Fish and Wildlife – Critical Habitat Report

Once a species is listed under the federal Endangered Species Act, NOAA Fisheries is required to determine whether there are areas that meet the definition of Critical Habitat. Per NOAA Fisheries, Critical Habitat is defined as:

- Specific areas within the geographical area occupied by the species at the time of listing that contain physical or biological features essential to conservation of the species and that may require special management considerations or protection; and
- Specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. [8]

The process of Critical Habitat designation is complex and involves the consideration of scientific data, public and peer review, economic, national security, and other relevant impacts.

According to the Critical Habitat for Threatened & Endangered Species Report updated May 23, 2024, the Project Area and its immediate vicinity (0.5-mile radius) are not located within a federally designated Critical Habitat. [9] The closest federally designated Critical Habitat is located approximately 4.9 miles north of the Project site for Greene's tuctoria (Tuctoria greenei).

National Wetlands Inventory

The USFWS provides a National Wetlands Inventory (NWI) with detailed information on the abundance, characteristics, and distribution of U.S. wetlands. A search of the NWI shows no federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) on the Project site or within the immediate vicinity (0.5-mile radius) of the Project site.[10] The NWI does not identify any water features

[7] U.S. Fish and Wildlife Service. Information and Planning Consultation Online System. Accessed on June 13, 2024, https://ecos.fws.gov/ipac/

[8] NOAA Fisheries. Critical Habitat. Accessed on June 13, 2024, https://www.fisheries.noaa.gov/national/endangered-species-conservation/critical-habitat#key-regulations

[9] U.S. Fish & Wildlife. (2024). ECOS Environmental Conservation Online System: USFWS Threatened & Endangered Species Active Critical Habitat Report (updated May 23, 2024). Accessed on May 29, 2024, https://ecos.fws.gov/ecp/report/table/critical-habitat.html

[10] U.S. Fish & Wildlife Service. National Wetlands Inventory. Accessed June 13, 2024, https://www.fws.gov/wetlands/data/Mapper.html

within the Project site. The closest water feature is the irrigation canal identified as R4SBCx and R5UBFx. The R4SBCx indicates Riverine System (R) with intermittent flowing water (4) that is completely dewatered at low tide (SB) with seasonal flooding (C) and has been excavated by humans (x) (i.e., canal). The R5UBFx indicates Riverine System (R) with an unknown perennial distinction (5) and an unconsolidated bottom (UB), which is semi-permanently flooded (F) and has been excavated by humans (x) (i.e., canal). Additionally, the Project site is not within or adjacent to a riparian area nor does the site contain water features.

Environmental Protection Agency – WATERS Geoviewer

The U.S. Environmental Protection Agency (EPA) WATERS GeoViewer provides a GeoPlatform based web mapping application of water features by location. According to the WATERS GeoViewer, an irrigation canal runs to the north and east of the Project site. There are no streams, canals, or waterbodies on the Project site. [11]

California Department of Fish and Wildlife – Natural Diversity Database

The California Department of Fish and Wildlife (CDFW) operates the California Natural Diversity Database (CNDDB), which is an inventory of the status and locations of rare plants and animals in California in addition to the reported occurrences of such species. [12] According to the CDFW CNDDB, there are 14 special-status species with a total of 27 occurrences that have been observed and reported to the CDFW in or near the Madera Quad as designated by the United States Geological Survey (USGS). Of the 14 species, there are six (6) federally or state-listed species: California tiger salamander, vernal pool fairy shrimp, Swainson's hawk, blunt-nosed leopard lizard, hairy Orcutt grass, and western spadefoot. [13] Appendix A lists the CNDDB-identified animal and plant species within the Madera Quad, including their habitat and occurrences.

The CNDDB also provides CNDDB-known occurrences within a set geographic radius. Figure 4-1 shows the CNDDB-identified occurrences of animal and plant species within the five (5)-mile radius of the Project site. Table 4-3 lists all federally or state-listed special-status species CNDDB-known occurrences within the five (5)-mile radius of the Project site. As shown, the nearest occurrence are vernal pool fairy shrimp, western spadefoot, and California tiger salamander occurrences 1.7 miles northeast of the Project site, dated 2017, 2023, and 2022, respectively. Other species that are not federally or state-listed that are near the Project site include burrowing owl, hoary bat, Munz's tidy-tips. The CNNDB ranks occurrences by the condition of habitat and ability of the species to persist over time. None of these occurrences have been observed on the Project site or in the immediate vicinity of the site (i.e., within a 0.5- to one (1)-mile radius). Table 4-4 provides an analysis of essential habitats and the potential for the existence of the special-status species to exist on the Project site. Given the existing conditions of the Project site and surrounding properties including heavy alteration, lack of cover, vegetation, or water features, it is unlikely that these species are present on the site.

[11] U.S. Environmental Protection Agency. WATERS GeoViewer. Accessed June 13, 2024, https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=074cfede236341b6a1e03779c2bd0692

[12] California Department of Fish and Wildlife. California Natural Diversity Database. Accessed June 13, 2024, https://wildlife.ca.gov/Data/CNDDB

[13] California Department of Fish and Wildlife. Biogeographic Information and Observation System 6. Accessed June 13, 2024, https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx#

Table 4-3 Special-status Species Occurrences within 5-mile radius of Project site

Special-status species	Date	Rank	Distance to site
vernal pool fairy shrimp	2017/01/26	Fair **	1.7 miles northeast
western spadefoot	2023/04/14	Unknown	1.7 miles northeast
California tiger salamander	2022/01/18	Fair **	1.7 miles northeast
western spadefoot	2015/02/12	Unknown	2.1 miles northwest
western spadefoot	2023/03/08	Unknown	2.1 miles north
western spadefoot	2022/03/02	Unknown	2.3 miles north
California tiger salamander	2021/09/20	Unknown	2.5 miles north
California tiger salamander	2018/05/04	Fair **	1.9 miles northeast
western spadefoot	2023/04/26	Unknown	1.9 miles northeast
western spadefoot	2023/05/15	Unknown	2.3 miles northeast
vernal pool fairy shrimp	2016/02/11	Poor ***	2.5 miles east
western spadefoot	2021/05/07	Fair **	2.5 miles east
California tiger salamander	2018/07/10	Poor ***	2.5 miles east
Swainson's hawk	2016/04/16	Fair **	3.1 miles southwest
western spadefoot	2023/04/18	Unknown	3.1 miles southeast
Vernal pool fairy shrimp	1993/03/10	Unknown	3.5 miles northeast
western spadefoot	2022/12/08	Unknown	3.6 miles southeast
western spadefoot	2018/06/29	Unknown	3.9 miles southeast
California tiger salamander	2002/03/10	Fair **	4.1 miles north
western spadefoot	2021/03/01	Excellent	4.2 miles southeast
hairy Orcutt grass	2021/10/19	Good	4.2 miles southeast
western spadefoot	1973/03/27	Poor ***	4.2 miles northeast

* Occurrences that are Extirpated, defined as *"Only used when the element has been searched for but not seen for many years or when the habitat is destroyed at this site"*, are not listed in the table.

** *Fair (C) - Population small and/or potentially not very viable OR habitat in disturbed, fragmented or otherwise suboptimal condition. Disturbances are more severe and can include nearby development, heavy recreational use, ORV use and damage, heavy weed infestation, and more. Population not expected to persist in the long term but may persist for 10 years.*

*** *Poor (D) - Population very small and/or non-viable. Habitat may be in good condition, but usually it is not and shows multiple disturbances and features of degradation. Population not expected to persist over 5 years.*

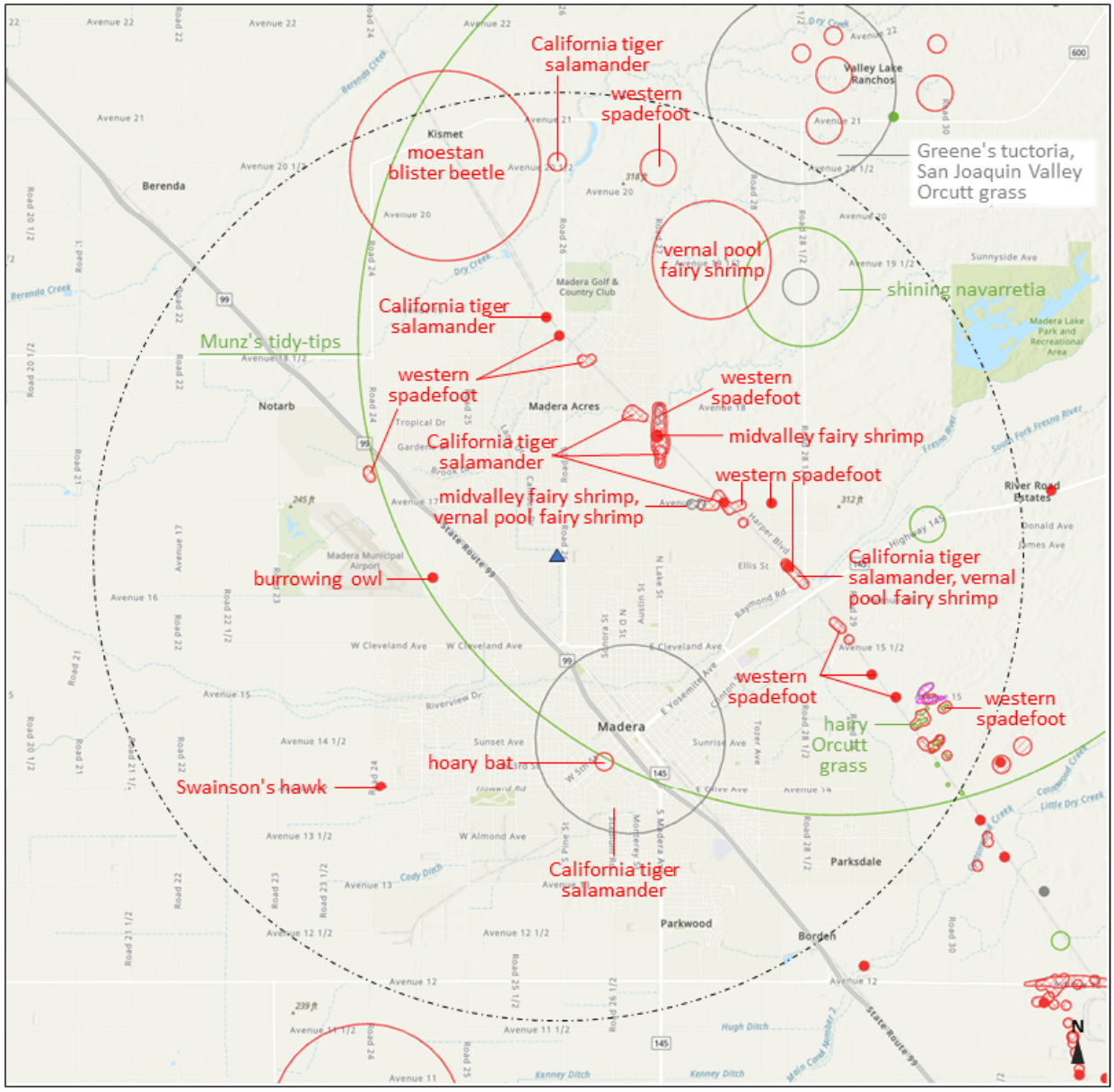


Figure 4-1 CNDDB Special-status Species Occurrences

Table 4-4 Essential Habitats and Potential Existence of Special-Status Species on Site

Special-Status Species	General Habitat	Micro Habitat	Assessment
Vernal pool fairy shrimp	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools.	Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	The Project site does not contain waterbodies. As such, the site does not provide suitable habitat.
Western spadefoot	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Vernal pools are essential for breeding and egg-laying.	The Project site does not contain waterbodies. As such, the site does not provide suitable habitat.
California tiger salamander	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats.	Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	The Project site does not contain grassland, burrows, woodland, or waterbodies. As such, the site does not provide suitable habitat.
Swainson's hawk	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	The Project site does not contain alfalfa or grain fields. However, though the site is heavily alternated due to discing, ruderal and herbaceous vegetation are present, forming grasslands. As such, the site could provide suitable habitat.
Hairy Orcutt grass	Vernal pools.	25-125 m.	The Project site does not contain waterbodies. As such, the site does not provide suitable habitat.

California Fish and Game Code

Sections 3503, 3503.5, and 3513 of the California Fish and Game Code specifically protect native birds and raptors. Mitigation for avoidance of impacts to nesting birds is typically necessary to comply with these Sections of the Fish and Game Code in CEQA. [14]

Section 3503: *It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.*

[14] The California Biologist's Handbook. California Fish and Game Code. Accessed on June 14, 2024, https://biologistshandbook.com/regulations/state-regulations/state-fish-and-game-code/#:~:text=Section%203503,any%20regulation%20made%20pursuant%20thereto.%E2%80%9D

Section 3503.5: It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

Section 3513: It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

Madera General Plan

The Madera General Plan Conservation Element outline policies related to conservation of natural resources, as listed below.

Policy CON-24 Residential, commercial, industrial and recreational projects shall avoid impacts to native wildlife and plant habitat to the extent feasible.

Policy CON-25 The City encourages the preservation of habitat areas needed for the ongoing viability of native species, and habitat connectivity through the use of conservation easements or other methods.

Policy CON-26 To offset possible additional losses of native wildlife and plant habitat due to development projects, developers shall be responsible for mitigation. Such mitigation measures may include providing and permanently maintaining similar quality and quantity of replacement habitat, enhancing existing habitat areas or paying in-lieu funds to an approved wildlife habitat improvement and acquisition fund. Replacement habitat may occur either on site or at approved offsite locations, but preference shall be given to on-site replacement.

> *Action Item CON-26.1 The City shall require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain listed plant and/or wildlife species based upon the City's biological resource mapping provided in the General Plan EIR or other technical materials. This evaluation shall be conducted prior to the authorization of any ground disturbance.*
>
> *Action Item CON-26.2 For those areas in which special-status species are found or likely to occur, the City shall require feasible mitigation of impacts to those species that ensure that the activity does not contribute to the decline of the affected species such that their decline would impact the viability of the species. Mitigation shall be determined by the City after the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) are provided an opportunity to comment.*

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 with Mitigation Incorporated. The Project site is currently vacant and undeveloped, with no existing structures or improvements. The existing biotic site conditions and resources of the Project

site can be defined primarily as ruderal and herbaceous vegetation with heavy alternation due to discing and grading as shown in aerial imagery. The site is bounded by an irrigation canal to the north and east. There is one (1) tree along the east boundary of the site. No shrubs or water features present on the site.

As described in Table 4-4, the site conditions provide low suitability for habitat for special-status candidate, sensitive, or special-status species that may occur on the Project site or vicinity. Given the existing conditions of the Project site and surrounding properties including heavy alteration, lack of/limited cover, vegetation, or water features, it is unlikely that these species will occur on the site. However, there is one (1) tree observed on the perimeter of the site that could potentially be used for nesting raptors. ***Mitigation Measure BIO-1*** is incorporated to ensure that any potential impacts would be reduced to less than significant by conducting pre-activity surveys during nesting season.

Mitigation Measure BIO-1: *If Project activities must occur during the nesting season (February 1 to September 15), pre-activity nesting bird surveys shall be conducted within seven (7) days prior to the start of construction on the construction site and a 500-foot buffer for raptors.*

1. *If no active nests are found, no further action is required. However, existing nests may become active, and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress.*
2. *If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on adults or the nest. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.*

In addition to federally- and state-listed special-status species, the Madera General Plan EIR also discusses the impacts of burrowing owls. The EIR identifies projects under the General Plan to have potential to cause direct mortality of or harm to burrowing owl if this species is present during grading or earthmoving work. Burrowing owl habitat is generally present within the ruderal habitat (vacant lands) and annual grasslands within the City of Madera, which conforms with the Project site's condition. Burrowing owls frequently occur in areas used by ground squirrels and will excavate old burrows to use as their own. Ground-disturbing activities caused by the Project could result in a direct take of a burrowing owl by disrupting breeding or destroying borrows actively in use, which would cause a significant impact. As such, ***Mitigation Measure BIO-2*** is incorporated to ensure that potential impacts on burrowing owls would be reduced to less than significant by conducting pre-construction surveys.

Mitigation Measure BIO-2: *14 days prior to Project activities, a pre-construction survey shall be conducted by a qualified biologist knowledgeable in the identification of burrowing owls. The pre-construction survey shall include walking transects to identify presence of burrowing owls and their burrows. For burrowing owls, the transects shall be spaced at no greater than 30-foot intervals to obtain a 100 percent coverage of the Project site and a 250-foot buffer.*

1. *If no evidence of this species is detected, no further action is required.*
2. *If dens or burrows that could support these species are discovered during the pre-construction survey, avoidance buffers outlined below shall be established. Unless a qualified biologist approves and monitors development activity, no work shall occur within these buffers. Burrowing Owl (active burrows):*

a. *Non-breeding season (September 1 to January 31): 160 feet*
b. *Breeding season (February 1 to August 31): 250 feet*

As a result, the Project would not 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, with mitigation incorporated.

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?

No Impact. According to the General Plan, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service, there are no known riparian habitats or other sensitive natural communities identified on the Project site or within the immediate vicinity (i.e., within a 0.5 to one (1) mile radius) of the Project. In addition, the site does not contain any water features that would provide habitat for riparian species. For these reasons, it can be determined that the Project site does not provide any riparian habitat or sensitive natural community habitat and thus, no impact would occur because of the Project.

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?

No Impact. A search of the National Wetlands Inventory shows no federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) on the Project site or within the broader Project Area. Typically, the primary wetland indicators include hydrophytic vegetation, hydric soils, and surface hydrology. The on-site topography consists of leveled, vacant land with no water features including ponds or standing water. The site comprises the AsA – Alamo Clay and SaA – San Joaquin sandy loam soil types, which are subject to occasional frequency to no flooding and no ponding. In addition, the site is designated as Zone X on the most recent FEMA Flood Insurance Rate Map (FIRM) No. 06039C1155E dated 9/26/2008.[15] Zone X is an area of minimal flood hazards with a 0.2 percent-annual-chance of flood (i.e., 500-year flood). Therefore, the Project would have no impact on state or federally protected wetlands. For these reasons, it can be determined that the Project site would not result in any impact on state or federally protected wetlands.

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. Wildlife movement corridors are linear habitats that function to connect two (2) or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another, in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover

[15] FEMA. FEMA Flood Map Service Center. Accessed June 13, 2024, https://msc.fema.gov/portal/home

and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

The habitat value of the Project Area for wildlife is limited and does not contain suitable habitat that could support wildlife species in nesting, breeding, foraging, or escaping from predators. There is no evidence that the plant communities (non-native herbaceous land cover) present in the area support wildlife movement corridors or wildlife nursery sites. The Project site and its surroundings are heavily impacted by human activity (discing, residential uses, vehicular traffic, etc.) so overall use by wildlife is likely low. Due to these conditions, it can be determined that the Project would not interfere with wildlife movement and a less than significant impact would result from the Project.

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

No Impact. The Madera General Plan Conservation Element outlines policies related to conservation of biological resources as listed above. Due to the lack of any identified special-status species or habitat for special-status species on the Project site or within the Project vicinity, the Project would not conflict with any local policies or ordinances protecting biological resources. Therefore, the Project would have no impact.

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?

No Impact. The Project site is within the PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan (HCP). The HCP covers PG&E's routine operations and maintenance activities and minor new construction, on any PG&E gas and electrical transmission and distribution facilities, easements, private access routes, or lands owned by PG&E. The Project would not conflict or interfere with HCP. The Project is also located in the planning area of the Recovery Plan for Upland Species of the San Joaquin Valley, which addresses recovery goals for several species. The Project would not conflict with the plan since the site does not provide appropriate habitat for the species mentioned and would comply to applicable General Plan policies regarding habitat conservation. The City, County, and Regional Planning Agency do not have any other adopted or approved plans for habitat or natural community conservation. For these reasons, the Project would have no impact.

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 dedicated cemeteries?	☐	☒	☐	☐

4.5.1 Environmental Setting

Generally, the term 'cultural resources' describes property types such as prehistoric and historical archaeological sites, buildings, bridges, roadways, and tribal cultural resources. As defined by CEQA, cultural resources are considered "historical resources" that meet criteria in *Section 15064.5(a)* of the CEQA Guidelines. If a Lead Agency determines that a Project may have a significant effect on a historical resource, then the Project is determined to have a significant impact on the environment. No further environmental review is required if a cultural resource is not found to be a historical resource.

Historically, the parcels which comprise the Project Area have been designated for residential use. Single-family dwellings exist on seven (7) of the 11 parcels. The other three (3) parcels have been vacant and periodically disked since 1998 as seen in aerial imagery. The parcels within the Project Area are relatively flat with a sandy loam soil type that is mostly well drained with an 8 to 9-inch water table depth.

The Project site, APN 038-060-017, is currently vacant and undeveloped, with no existing infrastructure or improvements. The site is bounded by an irrigation canal to the north and east. The existing biotic conditions and resources of the site can be defined primarily as ruderal and herbaceous vegetation with heavy alternation due to discing and grading. There is one (1) tree along the east boundary of the site. No shrubs or water features are present on the site.

Madera General Plan

According to the Madera General Plan, there are approximately 54 historic buildings/structures and sites in the city. Places of contemporary historical significance include the Madera County Courthouse, Luther Burbank School, and Dixie Motel. There are also many paleontological resources that have been discovered at the Fairmead landfill (approximately 10-miles northwest of the city). In addition, it is likely that archaeological and cultural resources exist along waterways.

The Madera General Plan Historic and Cultural Resources Element outlines the following policies related to preservation of cultural resources:

Policy HC-1: *The City encourages the preservation and enhancement of existing historical and archaeological resources in the City.*

Policy HC-2: *The City supports the goals and objectives for the Comprehensive Statewide Historic Preservation Plan for California 2000-2005.*
Policy HC-3: *The City encourages restoration, renovation, and/or rehabilitation of buildings which retain their historic integrity.*

Policy HC-4: *Support use of federal financial incentive programs to encourage preservation of historic structures.*

Policy HC-9: *The City will endeavor to protect and preserve prehistoric and historic archaeological resources, cultural resources (particularly those of importance to existing tribes), and fossils.*

> ***Action Item HC-9.2:*** *Impose the following conditions on all discretionary projects which may cause ground disturbance:*
>
> - *"The Planning Department shall be notified immediately if any prehistoric, archaeologic, or fossil artifact or resource is uncovered during construction. All construction must stop and an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action."*
> - *"All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed."*

California Historical Resource Information System Record Search

The Southern San Joaquin Valley Information Center (SJVIC) was requested to conduct a California Historical Resources Information System (CHRIS) Record Search for the Project site and surrounding "Project Area" (0.5-mile radius from perimeter of Project site). Results of the CHRIS Record Search were provided on June 17, 2024 (Record Search File Number 24-264). Full results are provided in Appendix B.

The CHRIS Record Searches generally review file information based on results of Class III pedestrian reconnaissance surveys of project sites conducted by qualified individuals or consultant firms which are required to be submitted, along with official state forms properly completed for each identified resource, to the Regional Archaeological Information Center. Guidelines for the format and content of all types of archaeological reports have been developed by the California Office of Historic Preservation, and reports will be reviewed by the regional information centers to determine whether they meet those requirements.

The results of the SJVIC CHRIS Record Search indicate:

1. There are no recorded prehistoric or historic archaeological resources or historic buildings or structures within the Project Area.
2. There is one recorded resource within the one-half mile radius: P-20-002308. This resource consists of a historic era canal. Resource P-20-002308 have been given a National Register code of 2D2, which indicates it is a Contributor to a multi-component resource determined eligible for National Register by consensus through Section 106 process listed in the California Register.

Further, the SJVIC provided the following comments and recommendations:

1. We recommend a qualified, professional consultant conduct a field survey to determine if cultural resources are present prior to ground disturbance activities.
2. We recommend that you contact the Native American Heritage Commission (NAHC) to provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" (SLF) file to determine what sacred resources, if any, exist within this Project Area and the way in which these resources might be managed.

California Native American Heritage Commission (NAHC)

A consultation list of tribes with traditional lands or cultural places located within Madera County was requested and received from the California Native American Heritage Commission (NAHC) on June 11, 2024. The listed tribes include the Amah Mutsun Tribal Band, North Fork Rancheria of Mono Indians, Northern Valley Yokut / Ohlone Tribe, Picayune Rancheria of the Chukchansi Indians, Southern Sierra Miwuk Nation, Tule River Indian Tribe, and Wuksachi Indian Tribe/Eshom Valley Band. The NAHC also conducted a Sacred Lands File (SFL) check which received negative results. NAHC correspondence letters are provided in Appendix C.

SB 18 Tribal Consultation

The City of Madera conducted formal tribal consultation pursuant to AB 52 (Chapter 532, Statutes 2014) and SB 18 (Chapter 905, Statutes 2004) on October 1, 2024, utilizing the consultation list of tribes received from the NAHC. The same tribes listed above were included in the formal consultation. Consultation for AB 52 ended on October 31, 2024, and consultation for SB 18 ended on December 30, 2024. No responses have been received to date.

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 with Mitigation Incorporated. Based on the CHRIS record search conducted on June 17, 2024 and review of the Madera General Plan, there are no local, state, or federal designated historical resources on the Project site. Further, the Project site is vacant, undeveloped, and highly disturbed with ruderal vegetation. Nevertheless, there is some possibility that a non-visible, buried resource may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. The Project shall incorporate ***Mitigation Measure CUL-1*** in order to reduce any potentially significant impacts to less than significant.

> ***Mitigation Measure CUL-1:*** *If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether a historical resources evaluation shall be completed to confirm if the resources qualify as historical resources as defined by Section 15064.5(a) of CEQA Guidelines. . The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) in architectural history or history. The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines*

and best practices promulgated by the State Office of Historic Preservation to identify any potential historical resources within the proposed project area. All properties 45 years of age or older shall be evaluated within their historic context and documented in a report meeting the State Office of Historic Preservation guidelines. All evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the City for review and concurrence.

Any relocation, rehabilitation, or alteration of the resource shall be implemented consistent with the Secretary of the Interior's Standards for the Treatments of Historic Properties (Standards). In accordance with CEQA, a project that has been determined to conform with the Standards generally would not cause a significant adverse direct or indirect impact to historical resources (14 CCR Section 15126.4[b][1]). Application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the PQS. In conjunction with any development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City for review and concurrence, in addition to the historical resources evaluation.

If significant historical resources are identified on the development site and compliance with the Standards and or avoidance is not feasible, the applicant or developer shall provide a report explaining why compliance with the Standards and or avoidance is not feasible for the City's review and approval. Site-specific mitigation measures shall be established and undertaken, including, but not limited to, documentation of the historical resource in the form of a Historic American Buildings Survey-Like report. The report shall be commissioned by the project applicant or their consultant to comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation and shall generally follow the Historic American Buildings Survey Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the PQS and submitted to the City prior to issuance of any permits for demolition or alteration of the historical resource.

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

Less than Significant with Mitigation Incorporated. As discussed under criterion a), there is no evidence that cultural resources of any type (including historical, archaeological, paleontological, or unique geologic features) exist on the Project site. Nevertheless, there is some possibility that a non-visible, buried resource may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. To mitigate potential impacts, the Project shall incorporate ***Mitigation Measure CUL-1*** as described under criterion a). Thus, in the event of the accidental discovery and recognition of previously unknown resources during ground disturbing activities, incorporation of the mitigation measures would reduce any potentially significant impacts to less than significant.

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

Less than Significant with Mitigation Incorporated. There is no evidence that human remains exist on the Project site. It is not anticipated that the proposed Project will disturb any human remains including those interred outside of formal cemeteries. Nevertheless, there is some possibility that a non-visible buried site

may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. In the event that human remains are identified during future development resulting from Project implementation, then the future development shall incorporate ***Mitigation Measure CUL-2*** in accordance with *Section 15064.5* of the CEQA Guidelines to reduce any potentially significant impacts to less than significant.

Mitigation Measure CUL-2: *In the event of the accidental discovery or recognition of any human remains on the Project site during construction, the following steps in accordance with Section 15064.5 of the CEQA Guidelines shall be taken prior to the continuation of, and during, construction activities, in order to mitigate potential impact:*

1. *There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:*
    a. *The coroner of the County in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required; and,*
    b. *If the coroner determines the remains to be Native American:*
        i. *The coroner shall contact the Native American Heritage Commission within 24 hours.*
        ii. *The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.*
        iii. *The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.*

4.6 Energy

sWould 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

Appendix F – Energy Conservation of the CEQA Guidelines requires consideration of energy implications in Project decisions, including a discussion of the potential energy impacts with emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy resources (Public Resources Code Section 21100(b)(3)). Per Appendix F, a Project would be considered inefficient, wasteful, and unnecessary if it violated existing energy standards, had a negative effect on local and regional energy supplies and requirements for additional capacity, had a negative effect on peak and base period demands for electricity and other energy forms, and effected energy resources. Appendix F includes the following criteria to determine whether a threshold of significance is met:

1. The Project energy requirements and its energy use efficiencies by amount and fuel type for each stage of the Project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
2. The effects of the Project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the Project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the Project complies with existing energy standards.
5. The effects of the Project on energy resources.
6. The Project's Projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Building Energy Efficiency Standards – Title 24

The California Energy Commission updates the Building Energy Efficiency Standards (Title 24, Parts 6 and 11) every three years as part of the California Code of Regulations. The standards were established in 1978 in an effort to reduce the state's energy consumption. They apply for new construction of, and additions and alterations to, residential and nonresidential buildings and relate to various energy efficiencies

including but not limited to ventilation, air conditioning, and lighting.[16] The California Green Building Standards Code (CALGreen), Part 11, Title 24, California Code of Regulations, was developed in 2007 to meet the state goals for reducing Greenhouse Gas emissions pursuant to AB32. CALGreen covers five (5) categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.[17] The 2022 Building Energy Efficiency Standards went into effect on January 1, 2023. Additionally, the California Air Resources Board (CARB) oversees air pollution control efforts, regulations, and programs that contribute to reduction of energy consumption. Compliance with these energy efficiency regulations and programs ensures that development will not result in wasteful, inefficient, or unnecessary consumption of energy sources.

California Energy Action Plan

The Energy Action Plan (EAP) for California was approved in 2003 and updated in 2008. The California Public Utilities Commission (PUC) approved the Energy Action Plan (EAP) for California in 2003, with an update in 2008. The 2008 EAP established goals and next steps to integrate and coordinate energy efficiency demand and response programs and actions.[18]

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?

Less than Significant Impact. The Project would consist of the development of 61 single family dwellings. Energy would be consumed through Project construction and operations. Energy outputs for short-term construction and long-term operations were estimated using CalEEMod (Appendix D). Traffic impacts related to vehicle trips were considered through a Vehicle Miles Traveled (VMT) analysis contained in Section 4.17. Results are summarized in Table 4-5. Based on the data, the energy demand associated with the proposed Project would be less than one percent of Madera County's total demand (*Criterion 1*).

Table 4-5 Project Energy Consumption

Energy Type[1]	Project Annual Energy Consumption	Madera County Annual Energy Consumption	Project Percentage of County Consumption
Electricity[2]	0.486412 GWh	1808.229048 GWh	0.0269%
Natural Gas[2]	1,466.29 MMBTu	4,854,139.000 MMBTu	0.0302%

Notes:
1. Pacific Gas and Electric Company (PG&E) would serve the site for both electricity and natural gas.
2. Energy consumption data for Madera County is provided by the California Energy Commission, "Electricity Consumption by County" accessed on June 6, 2024, http://ecdms.energy.ca.gov/elecbycounty.aspx and "Gas Consumption by County" accessed on June 6, 2024, https://ecdms.energy.ca.gov/gasbycounty.aspx

[16] California Energy Commission. 2019 Building Energy Efficiency Standards. Accessed on June 13, 2024, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency
[17] California Department of General Services. (2020). 2019 California Green Building Standards Code. Accessed on June 13, 2024, https://codes.iccsafe.org/content/CGBC2019P3
[18] State of California. (2008). Energy Action Plan 2008 Update. Accessed on June 13, 2024, https://docs.cpuc.ca.gov/word_pdf/REPORT/28715.pdf

Construction

Construction would be short-term and temporary. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities. Construction activities would include typical site preparation, grading, paving, architectural coating, and trenching – all of which would require the transportation of building materials and equipment. Demolition would not be required because there are no existing structures. Therefore, the primary source of energy for construction activities would be diesel and gasoline (i.e., petroleum fuels). All construction equipment shall conform to current emissions standards and related fuel efficiencies including applicable CARB regulations (Airborne Toxic Control Measure), California Code of Regulations (Title 13, Motor Vehicles), and Title 24 standards. Compliance with existing regulations would ensure that the short-term, temporary construction activities would not result in wasteful, inefficient, or unnecessary consumption of energy resources consistent with *Criterion 4*.

Operations

Operations would involve heating, cooling, equipment, and vehicle trips. Energy consumption related to operations would be associated with natural gas, electricity, and fuel. As new construction, the Project would be required to meet all mandatory requirements for non-residential buildings as outlined in the 2022 Energy Code. Mandatory requirements apply to building envelopes, ventilation and indoor air quality, space conditioning systems, water heating systems, outdoor and indoor lighting, electric power distribution, covered process for pools, solar ready buildings, and electric ready buildings. Compliance would be verified through the building permit process. Therefore, the Project would meet mandatory state building energy codes, which are designed to reduce wasteful, inefficient, or unnecessary consumption of energy sources, consistent with *Criterion 4*.

Energy consumption and peak demand for the state are forecasted in *Volume IV – California Energy Demand Forecast* of the CEC's Integrated Energy Policy Report. As shown in Figure 10 and Figure 4 of the Volume IV Report, the CEC forecasts a 1.3 to 2.3 percent annual average growth rate for electricity and a 0.1 to 0.9 percent annual average growth rate for natural gas between 2021 and 2030. The Project's anticipated operational energy consumption for electricity and natural gas are shown in Table 4-5. The anticipated consumption of electricity and natural gas would represent 0.0269 percent and 0.0302 percent based on Countywide usage, which would be significantly below CEC's forecast. Therefore, the Project would not require additional energy capacity or supplies in accordance with *Criterion 2*. In addition, as an residential development, energy consumption can be expected to peak in the day similar to other residential developments. Through compliance with energy conservation requirements under the 2022 Energy Code, the Project would not result in unique or more intensive peak or base period electricity demand in accordance with *Criterion 3*.

Furthermore, PG&E is subject to the state's Renewable Portfolio Standard (RPS) which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable resources to 33 percent of total procurement by 2020 to 60 percent of total procurement by 2030. The increase in reliance of renewable resources further ensures that the Project would not result in wasteful, inefficient, or unnecessary consumption of energy sources, consistent with *Criterion 5*.

Development of the Project site would also result in fuel consumption through vehicle trips. The Project would generate an estimated 1,630,507 annual vehicle miles traveled (VMT) per CalEEMod, which would consume approximately 71,201 gallons of fuel per year (1,630,507 trips divided by 22.9 miles per gallon).

This is expected to account for less than one percent of diesel and gasoline consumed from vehicle trips in Madera County. Therefore, energy usage associated with vehicle trips for the proposed Project would be minimal in comparison to the gasoline and diesel fuel consumption for the County. In addition, the Project does not propose any unusual features that would result in excessive long-term operational fuel consumption (*Criterion 2*). Further, annual energy use related to vehicles is expected to decrease over time as a result of vehicle fuel efficiency standards.

Therefore, the Project would not cause wasteful, inefficient, and unnecessary consumption of building energy during Project operation, or preempt future energy development or future energy conservation. A less than significant impact would occur.

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

Less than Significant Impact. As discussed under criterion a), the construction and operations of the Project would be subject to compliance with applicable energy efficiency regulations including CALGreen, Title 24, and CARB. Further, Table 4-6 shows the Project's compliance with General Plan energy conservation policies. Thus, applicable state and local regulations and programs would be implemented to reduce energy waste from construction and operations. In addition, state law ensures construction vehicle idling will be limited. Therefore, through compliance, the Project would not conflict with or obstruct any state or local plan for energy efficiency and a less than significant impact would occur as a result of the Project.

Table 4-6 Consistency with General Plan Energy Conservation Policies

General Plan Energy Conservation Policies	Consistency/Applicability Determination
Policy CON-40: *All public and private development—including homes, commercial, and industrial—should be designed to be energy-efficient.*	**Consistent.** The Project would be subject to energy efficiency and conditioned for compliance during the entitlement review and approval process.
Policy CON-41: *The City will allow renewable energy projects in areas zoned for open space, where significant environmental impacts can be avoided or mitigated to the greatest extent feasible, where consistent with all of the elements of this General Plan, and other uses and values.*	**Not Applicable.** The Project site is not zoned for open space.
Policy CON-42: *The City will promote and encourage co-generation projects for commercial, industrial, and municipal facilities, provided they meet all applicable air quality standards and provide a net reduction in GHG emissions associated with energy production.*	**Not Applicable.** The Project is not a commercial, industrial, or municipal facility.
Policy CON-43: *The City will install renewable energy systems at its facilities where feasible, including solar collection systems at municipal properties and waste-toenergy (methane recovery) systems at the wastewater treatment plant.*	**Not Applicable.** The Project is not a municipal facility.
Policy CON-44: *The City supports the use of green building practices in the planning, design, construction,*	**Consistent.** The Project would be subject to energy efficiency and conditioned for

management, renovation, operations, and demolition of all private buildings and projects, including: • *Land planning and design techniques that preserve the natural environment and minimize disturbance of the land.* • *Site development to reduce erosion, minimize paved surfaces and runoff and protect vegetation, especially trees.* • *Water conservation indoors and outdoors.* • *Energy efficiency in heating/cooling systems, appliances, lighting and the building envelope.* • *Selection of materials based on recyclability, durability and the amount of energy used to create the material.* • *Waste reduction, reuse and recycling during construction and throughout the life of the project.* • *Other new aspects of green design and construction included in LEED or other certification programs.* • *Control nighttime lighting to lower energy use, reduce glare, and prevent illumination of the night sky.*	compliance during the entitlement review and approval process.
Policy CON-45: *The City supports the use of green building practices in the planning, design, construction, management, renovation, operations, and demolition of facilities constructed, owned, managed, or financed by the City. All new building projects (projects intended for human occupancy) involving the use of local public funds should incorporate green building practices. Except as dictated by unique circumstances associated with a given project, the typical standard for green building will be the equivalent of the "LEED Silver Standard."*	**Consistent.** The Project would be subject to green building and energy efficiency standards and conditioned for compliance during the entitlement review and approval process.
Policy CON-46: *The City will identify and remove regulatory or procedural barriers to implementing green building practices within its jurisdiction, such as updating codes, guidelines, and zoning, and will ensure that all plan review and building inspection staff are trained in green building materials, practices, and techniques.*	**Consistent.** The Project would be subject to energy efficiency, green building materials, practices and techniques and conditioned for compliance during the entitlement review and approval process.

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 City of Madera is located within the San Joaquin Valley which is part of the Great Valley Geomorphic Providence that is bounded to the east by the Sierra Nevada Mountain range, to the west by the Coastal Range, and to the south by the Tehachapi mountains. Madera is generally flat with some areas of slopes

including areas near rivers and streams. A brief discussion of the likelihood of seismic activities to occur in or affect Madera is provided below.

Faulting

There are no active earthquake faults (i.e., faults showing activity within the last 11,000 years) mapped within the City of Madera, inclusive of the Project site, and the city is not in any Alquist-Priolo Special Studies Zone as established by the Alquist-Priolo Fault Zoning Act (*Section 2622* of Chapter 7.5, Division 2 of the California Public Resources Code). The nearest active faults are more than 50 miles from the Project site.[19]

Subsurface Soils

A search of the Web Soil Survey by the USDA Natural Resources Conservation Service indicates that the following soils comprise the Project site (Figure 4-2).[20]

AsA: Alamo clay, zero (0) to one (1) percent slopes The AsA soils account for approximately 1.5% of the site.

SaA: San Joaquin sandy loam, zero (0) to three (3) percent slopes, MLRA 17. The SaA soils account for 98.5% of the Project site.

Strong Ground Shaking

The Madera County Local Hazard Mitigation Plan (LHMP) assesses a low potential of major earthquake in Madera County and acknowledges that existing building codes would mitigate for potential earthquake.[21] According to the City of Madera General Plan, no earthquakes of magnitude 5.5 or greater have ever been recorded in the city of Madera and there have been no reports on earthquake damage of such magnitude in Madera County. The most recent earthquake occurred on May 30, 2003, with 3.1 magnitude and epicenter located approximately six (6) miles northwest of the city. In addition, Madera is classified by the State as being in a low ground shaking potential (shaking potential 0.35% of gravity) according to the MS48: Earthquake Shaking Potential for California map, which shows the relative intensity of ground shaking in California from anticipated future earthquakes.[22]

[19] California Department of Conservation. Fault Activity Map of California. Accessed on June 13, 2024, https://maps.conservation.ca.gov/cgs/fam/

[20] United States Department of Agriculture Natural Resources Conservation Service. "Web Soil Survey." Accessed on June 13, 2024, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

[21] Madera County. (2017). Local Hazard Mitigation Plan Update. Accessed on June 13, 2024, https://www.maderacounty.com/home/showdocument?id=362

[22] California Department of Conservation. (2016). Geological Hazards Data & Maps - MS48: Earthquake Shaking Potential for California (ref. 2016). Accessed on June 13, 2024 https://maps.conservation.ca.gov/geologichazards/#dataviewer

Figure 4-2 Soil Distribution Map

Source: U.S. Department of Agriculture Natural Resources Conservation Service, Web Soil Survey

Liquefaction

Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Factors that determine liquefaction potential include soil type, soil density, depth to the groundwater table, and duration and intensity of ground shaking. Areas that are most prone to liquefaction are those that are water-saturated, or with a water table of less than 30 feet below the surface. The Madera County LHMP indicates that soil types within the county are not conducive to liquefaction because they are too coarse in texture or too high in clay content. Soil types thereby mitigate against the potential for liquefaction. In addition, neither liquefaction nor lateral spreading have been observed in Madera from any historic earthquake. Liquefaction and lateral spreading potential in the City of Madera is considered very low as due to the nature of the underlying soils, relatively deep-water table, and history of low ground shaking potential.

Ground Subsidence

Ground subsidence is the settling or sinking of surface soil deposits with little or no horizontal motion. Soils with high silt or clay content are subject to subsidence. According to the Madera County LHMP, the probability of future occurrences of subsidence is likely (i.e., between 10% and 100% chance of occurrence in the next year or has a recurrence interval of 10 years or less). However, the likely magnitude/severity is negligible (i.e., less than 10% of property severely damaged; shut down of facilities for less than 24 hours; and/or injuries/illnesses treatable with first aid). In addition, the Madera General Plan indicates the risk of subsidence in Madera County to be "low."

Landslides

A landslide is the down-slope movement of rock, debris, or earth that can be caused by gravity, earthquakes, disturbance by human activities, etc. Lateral spreading is a related occurrence that results in a fluid-like, down-slope movement. Lateral spreading can be caused by liquefaction. According to the Madera County LHMP, most areas throughout the county are at low to moderate risk for landslides. The central and eastern portions of the county are at high risk. Geographic extent of such occurrences is limited to less than 10% of Madera County.

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.

No Impact. There are no known active earthquake faults in Madera, nor is Madera within an Alquist-Priolo earthquake fault zone as established by the Alquist-Priolo Fault Zoning Act. As such, the development of the Project in an area void of earthquake faults would not cause the rupture of a known earthquake fault. In addition, the Project does not have any aspect that could result in a fault rupturing. Thus, no impact would occur as a result of the Project.

a-ii) Strong seismic ground shaking?

No Impact. The Project site is in an area traditionally characterized by relatively low seismic activity. The Project site is relatively flat with stable, native soils and is not near any fault lines. In addition, the Project would be required to conform to current seismic protection standards in the CBC, which are intended to minimize potential risks. Therefore, because of the Project's stable soils and distance from active fault lines, and because of the Project's conformance to CBC seismic safety standards, the Project does not have any aspect that could result in strong seismic ground shaking. Therefore, no impact would occur as a result of the Project.

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

No Impact. As previously discussed, Madera has a low potential for seismic activities. There are also no geologic hazards or unstable soil conditions known to exist on the Project site as the site is relatively flat with stable soils and no apparent unique or significant landforms. Further, development of the site would require compliance with the City's grading and drainage standards, including adherence to Best Management Practices (BMPs), which would reduce impacts resulting from ground disturbance. Lastly, the Project does not have any aspect that could result in seismic-related ground failure, including liquefaction. Therefore, no impact would occur.

a-iv) Landslides?

No Impact. Landslides are not expected to affect the Project site as Madera is not located in a zone where landslides, subsidence, or liquefaction could possibly occur. Furthermore, the topography of the Project site is flat with stable, native soils and the site is not in the immediate vicinity of rivers or creeks that would be more susceptible to landslides. As such, development of the Project on a stable site in an area that is not susceptible to seismic activities or geologic instability would not cause landslides. Therefore, no impact would occur as a result of the Project.

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

Less Than Significant Impact. Development of the Project site would require typical site preparation activities such as grading and trenching which may result in the potential for short-term soil disturbance or erosion impacts. Construction would also involve the use of water which may cause further soil disturbance. Such impacts would be addressed through compliance with regulations set by the Regional Water Quality Control Board (RWQCB), including standards and regulations set forth by the City of Madera for grading and drainage, and subsequent requirements of the State Water Resources Control Board (SWRCB).

Further, because the Project would disturb one (1) or more acres of soil it would be subject to the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2012-0006-DWQ). The General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer that includes BMPs to be implemented during and post construction. The SWPPP estimates the sediment risk associated with construction activities and includes the BMPs to control erosion and loss of topsoil. BMPs specific to erosion control cover erosion, sediment, tracking, and waste management controls. Implementation of the SWPPP minimizes the potential for the Project to result in impacts to soil and topsoil. Therefore, impacts to soil and topsoil by the Project would be considered less than significant.

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?

No Impact. The Project site is not located in a zone where landslides, subsidence, or liquefaction could occur. Further, the site is relatively flat with stable soils and no apparent unique or significant landforms. Therefore, development of the Project on a stable site would not cause landslides, lateral spreading, subsidence, liquefaction, or collapse. Therefore, no impact would occur as a result of the Project.

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 with Mitigation Incorporated. The Project site is relatively flat and stable, native soils of the AsA, Alamo clay, and SaA, San Joaquin sandy loam. Loam and sandy loam soils are not classified as expansive soils, as defined in Table 18-1-B of the Uniform Building Code and would not create substantial direct or indirect risks to life or property. However, clay is classified as an expansive soil (i.e., with an expansion index greater than 20). Therefore, construction on the portion of the site that has underlying soils of the AsA, Alamo clay, variety would be subject to the 2018 International Building Code (IBC) design standards to mitigate for potential risks, specifically *Section 1808.6 Design for expansive soils*.

Mitigation Measure GEO-1: *Subsequent to a preliminary City review of the project grading plans, a soils report, inclusive of information on expansive soils, shall be conducted. The following procedures shall be followed:*

- *If expansive soils are not found, excavation and/or construction activities can commence.*
- *If there is evidence that the Project site includes expansive soils, foundations for buildings and structures founded on expansive soils shall be designed in accordance with IBC Section 1808.6.1 or 1808.6.2 unless 1) the expansive soil is removed in accordance with Section 1808.6.3 or 2) the building official approves stabilization of the soil in accordance with Section 1808.6.4.*

Thus, incorporation of ***Mitigation Measure GEO-1*** would reduce any potentially significant impacts to less than significant.

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 Project would not involve the installation of a septic tank or alternative wastewater disposal system, as the Project would connect to the City's water and sewer systems. Therefore, no impact would occur because of the Project.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant with Mitigation Incorporated. There are no known paleontological resources or unique geological features known to the City on this site. Nevertheless, there is some possibility that a non-visible, buried resource may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. However, ***Mitigation Measure GEO-2*** requires that if unknown paleontological resources are discovered during construction activities, work within a 25-foot buffer would

cease until a qualified paleontologist determined the appropriate course of action. With implementation of ***Mitigation Measure GEO-2***, the Project would have a less than significant impact.

> ***Mitigation Measure GEO-1:*** *If any paleontological resources are encountered during ground-disturbance activities, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or another appropriate facility regarding any discoveries of paleontological resources.*
>
> *If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations, and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects or such effects must be mitigated. Construction in that area shall not resume until the resource-appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.*

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

In assessing the significance of impacts from GHG emissions, Section 15064.4(b) of the CEQA Guidelines states that a lead agency may consider the following:

- The extent to which the project may increase or reduce GHG emissions as compared to the environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

The California Air Resources Board (CARB) 2022 Climate Change Scoping Plan, guidance from the SJVAPCD, and City of Atwater General Plan are discussed below and are utilized as thresholds of significance.

2022 Climate Change Scoping Plan

The CARB 2022 Climate Change Scoping Plan is the adopted statewide plan for reduction and mitigation of GHGs to implement Assembly Bill (AB) 1279. AB 1279 was issued on August 12, 2022 to require California to achieve "net zero greenhouse gas emissions" as soon as possible and to further reduce anthropogenic GHG emissions thereafter. It sets a statewide goal to reduce emissions 85% below 1990 levels no later than 2045.

Consequently, the Scoping Plan involves several measures for cost-effective reduction of GHG emissions, including continuing existing programs such as Renewable Portfolio Standard, Advanced Clean Cars, Low Carbon Fuel Standard, etc., and achieving new mandates to decarbonize several sectors. Along with reducing emissions, environmental justice policies are included to address the ongoing air quality disparities.

Appendix D of the 2022 Scoping Plan include recommendations to build momentum for local government actions to align with State goals, including through CEQA review. The Appendix outlines the priority GHG

reduction strategies for local governments, including transportation electrification, VMT reduction, and building decarbonization. [23]

SJVAPCD CEQA Air Quality Guidelines

The SJVAPCD's Guidance for Valley Land Use Agencies in Addressing GHG Impacts for New Projects Under CEQA (2009) provides screening criteria for climate change analyses, as well as draft guidance for the determination of significance. [24,25] These criteria are used to evaluate whether a project would result in a significant climate change impact (see below). Projects that meet one of these criteria would have less than significant impact on the global climate.

- Does the project comply with an adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions? If no, then:
- Does the project achieve 29% GHG reductions by using approved Best Performance Standards (BPS)? If no, then
- Does the project achieve AB 32 targeted 29% GHG emission reductions compared with Business As Usual (BAU)?

Assembly Bill (AB) 32 was enacted by the California State legislature in 2006 with the aim to reduce GHG emissions to levels of 1990 by 2020. Recommended actions to achieve these aims were adopted by the California Air Resources Board (CARB) in 2008 (i.e., the Climate Change Scoping Plan). However, the 29% GHG emission reductions compared to BAU threshold is outdated since it is aimed to meet AB 32's 2020 goals, thus this threshold would not be used for analysis.

San Joaquin Valley Air Pollution Control District

SJVAPCD adopted *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and the policy *District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* in 2009. It recognized that project-specific emissions are cumulative and could be considered cumulatively considerable without mitigation. SJVAPCD suggested that the requirement to reduce GHG emissions for all projects is the best method to address this cumulative impact.

The SJVAPCD requires quantification of GHG emissions for all projects which the lead agency has determined that an EIR is required. Although an EIR is not required for the Project, the GHG emissions are quantified below. Short-term construction and long-term operational GHG emissions for project buildout were estimated using CalEEMod™ (v.2020.4.0). (See Appendix D). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

[23] California Air Resources Board. (2022). 2022 Scoping Plan Appendix D. Accessed on June 13, 2024, https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-d-local-actions.pdf

[24] San Joaquin Valley Air Pollution Control District. (2009). Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. Accessed June 13, 2024, http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf.

[25] San Joaquin Valley Air Pollution Control District. (2000). Environmental Review Guidelines: Procedures for Implementing the California Environmental Quality Act. Accessed June 13, 2024, http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20_August%202000_.pdf

Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., $MTCO_2e$), based on the global warming potential of the individual pollutants.

City of Madera Climate Action Plan

The City of Madera Climate Action Plan (CAP) was adopted in 2015. The CAP is consistent with State CEQA Guidelines *Section 15183.5*, which allows it to be used in the cumulative GHG emissions impacts analysis of later projects within the City. CAP's *Appendix E – CAP Consistency Worksheet* lists measures applicable to new development to determine whether a project is consistent with the CAP. Generally, only projects that are consistent with the General Plan land use designations and population and employment projections, upon which the GHG emissions modeling and CAP is based, can apply for a determination of consistency with the CAP. If it is determined that the proposed project is not consistent with the CAP, further analysis would be required, and the applicant would be required to demonstrate that the proposed project would not substantially interfere with implementation of the CAP. [26]

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?

Less than Significant Impact. The 2023 CEQA Guidelines do not establish a quantitative threshold of significance for GHG impacts, leaving lead agencies the discretion to establish such thresholds for their respective jurisdictions. The City of Madera CAP established a CAP Consistency Worksheet to demonstrate project compliance with the CAP. However, only projects that are consistent with the General Plan land use designations and population and employment projections, upon which the GHG emissions modeling and CAP is based, can apply for a determination of consistency with the CAP. Since the Project proposes a General Plan Amendment (GPA) that changes the land use designation of the Project site from Low Density to Medium Density Residential, the Project is not consistent with the CAP and further CEQA analysis is required. As a result, since the SJVAPCD does not have established GHG significance emissions thresholds and the Project would not be able to use the City of Madera CAP to determine the significance of GHG impacts, the following utilizes qualitative analysis for GHG impacts. Short-term construction and long-term operational GHG emissions for project buildout were estimated using CalEEMod™ (v.2020.4.0). See Appendix D for output files.

Construction Emissions

In regard to construction, the SJVAPCD does not recommend assessing pollution associated with construction, as pollution-related construction will be temporary. These construction GHG emissions are a one-time release. As such, it can be anticipated that these construction emissions would not generate a significant contribution to global climate change over the lifetime of the Project.

Operational Emissions

Regarding the long-term operational related GHG emissions, the estimated operational emissions for buildout of the Project incorporates the potential area source and vehicle emissions, and emissions associated with utility and water usage, and wastewater and solid waste generation. The South Coast Air

[26] City of Madera. (2015). Climate Action Plan. Accessed on June 13, 2024, https://www.madera.gov/wp-content/uploads/2017/08/Final-Madera-CAP_September-2015.pdf

Quality Management District (SCAQMD) adopted the staff proposal for an interim GHG significance threshold of 10,000 MT CO2e per year for GHG for construction and operational emissions. The BAAQMD also adopted the 10,000 MT CO2e per year threshold. Utilizing this as the threshold, annual operational emissions below 10,000 MT CO2e would have a less than significant cumulative impact on GHGs. The annual operational GHG emissions associated with buildout of the Project is 778.9436 MT CO2e based on the CalEEMod run. This is less than the 10,000 MT CO2e threshold of the SCAQMD and BAAQMD.

Further, the Project would not exceed the thresholds of significance for construction or operational emissions as discussed in Section 4.3. Additionally, as discussed in more detail below, the Project would be generally consistent with the applicable goals and policies related to GHG reduction measures, including CARB's 2022 Scoping Plan and SJVAPCD guidelines, and the City of Madera CAP goals and policies that aim to reduce air emissions and improve air quality, which reduces GHG emissions as a result. Cumulatively, these emissions would not generate a significant contribution to global climate change over the lifetime of the proposed Project. As such, it can be determined that the Project would not occur at a scale or scope with potential to contribute substantially or cumulatively to the generation of GHG emissions and therefore the impact would be less than significant.

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

Less than Significant Impact. The compatibility of the Project with the 2022 Scoping Plan, Madera County Transportation Commission (MCTC) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), and the City of Madera Climate Action Plan (CAP).

Consistency with the 2022 Climate Change Scoping Plan

Based on the evaluation shown in Table 4-7, the Project is consistent with the reduction measures identified in the 2022 Scoping Plan. The reduction measures are derived from the 2022 Scoping Plan *Table 1 – Priority GHG Reduction Strategies*, which provides three (3) priority areas to assist jurisdictions with developing local climate action plans.

Table 4-7 Scoping Plan Priority GHG Reduction Strategies Consistency Analysis

Priority Areas	Priority GHG Reduction Strategies	Consistency/Applicability Determination
Transportation Electrification	Convert local government fleets to ZEVs and provide EV charging at public sites.	**Not Applicable.** The Project proposes residential units and is thus not intended to be accessible to the public. However, the Project is subject to provide 10% of the total number of parking spaces to provide electric vehicle (EV) charging spaces.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).	**Not Applicable.** This is a city-wide strategy thus is not applicable to the Project.
VMT Reduction	Reduce or eliminate minimum parking standards.	**Not Applicable.** This is a city-wide strategy thus is not applicable to the Project.

	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.	**Not Applicable.** Internal roads proposed within the subdivision would be subject to the City's complete street policies. The City's Standard Drawings require all public roads to install curb, gutter, and sidewalks.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.	**Not Applicable.** The Project is not located near transit.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.	**Consistent.** The Project proposes pedestrian facilities (i.e., sidewalks) within the site and connecting to adjacent properties. In addition, as described above, the Project is near an existing bus stop. As such, it increases public access to clean mobility options.
	Implement parking pricing or transportation demand management pricing strategies.	**Not Applicable.** The Project proposes residential development; thus, parking spaces are provided at no cost for residents.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing the allowable density of a neighborhood)	**Not Applicable.** This is a city-wide strategy thus is not applicable to the Project.
	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements)	**Consistent.** The Project is proposed on a site surrounded by existing rural development (i.e., rural residential uses). The Project site is not classified as natural or working lands.
Building Decarbonization	Adopt all-electric new construction reach codes for residential and commercial uses.	**Not Applicable.** This is a city-wide strategy thus is not applicable to the Project.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers).	**Not Applicable.** This is a city-wide strategy thus is not applicable to the Project. In addition, the Project does not include retrofits for existing buildings.
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances	**Not Applicable.** This is a city-wide strategy thus is not applicable to the Project. In addition, the Project does not include retrofits for existing buildings.
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)	**Not Applicable.** This is a city-wide strategy thus is not applicable to the Project.

	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings)	**Consistent.** The Project will be subject to the installation of solar photovoltaic systems on rooftops pursuant California's 2022 Energy Code.

Consistency with the MCTC RTP/SCS

The Madera County Transportation Commission (MCTC) 2018 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) includes a series of goals for the region that would reduce GHG emissions based on the land use consistency and the reduction of vehicle trips through promoting intermodal transportation systems. Most goals and policies are implemented at the regional or City level. Since the proposed Project is an infill development (i.e., within the City's Sphere of Influence and generally surrounded by existing development), encourages active transportation through the installation of sidewalks, and would be annexed into an urbanized area and subject to local regulations, the Project would be generally consistent with goals and policies identified in the RTP/SCS.

Consistency with the City of Madera CAP

The City of Madera CAP established a *CAP Consistency Worksheet* to demonstrate project compliance with the CAP. However, only projects that are consistent with the General Plan land use designations and population and employment projections, upon which the GHG emissions modeling and CAP is based, can apply for a determination of consistency with the CAP. Since the Project proposes a General Plan Amendment (GPA) that changes the land use designation of the Project site from Low Density to Medium Density Residential, the Project is not consistent with the CAP and further CEQA analysis is required. A CEQA analysis is provided above in criteria a). It is determined that the Project would have a less than significant impact regarding the generation of greenhouse gas emissions.

In conclusion, the Project contains features that would reduce GHG emissions in compliance with CARB 2022 Climate Change Scoping Plan, MCTC RTP/SCS, and the Madera CAP. As such, the Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and therefore the impact would be less than significant.

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

For the purposes of this section, the term “hazardous materials” refers to "injurious substances," which include flammable liquids and gases, poisons, corrosives, explosives, oxidizers, radioactive materials, and medical supplies and waste. These materials are either generated or used in various commercial and industrial activities. Hazardous wastes are injurious substances that have been or will be disposed. Potential hazards arise from the transport of hazardous materials, including leakage and accidents involving

transporting vehicles. There also are hazards associated with the use and storage of these materials and waste. Hazardous materials are grouped into the following four categories based on their properties:

- Toxic: causes human health effect
- Ignitable: has the ability to burn
- Corrosive: causes severe burns or damage to materials
- Reactive: causes explosions or generates toxic gases

"Hazardous wastes" are defined in California Health and Safety Code *Section 25141(b)* as wastes that: *"…because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause or significantly contribute to an increase in mortality or an increase in serious illness or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed."* Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous waste generators may include industries, businesses, public and private institutions, and households. Federal, state, and local agencies maintain comprehensive databases that identify the location of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require risk management plans to protect surrounding land uses. The release of hazardous materials would be subject to existing federal, State, and local regulations and is similar to the transport, use, and disposal of hazard materials.

Regulatory Setting

The California Environmental Protection Agency (CalEPA) was established in 1991 to protect the environment. CalEPA oversees the Unified Program through Certified Unified Program Agencies (CUPAs), which consolidates six (6) environmental programs to ensure the handling of hazardous waste and materials in California. The local CUPA in Madera County, Community & Economic Development Department, Environmental Health Division, is responsible for administering the following six (6) CUPA programs:

- Aboveground Petroleum Storage Act (APSA) Program
- California Accidental Release Prevention (CalARP) Program
- Hazardous Material Release Response Plan (Business Plans)
- Hazardous Material Management Plan and Hazardous Materials Inventory Statement (HMMP/HMIS)
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs
- Underground Storage Tanks (UST) Program

The Department of Toxic Substances Control (DTSC) is another agency in California that regulates hazardous waste, conducts inspections, provide emergency response for hazardous materials-related emergencies, protect water resources from contamination, removing wastes, etc. DTSC acts under the authority of Resource Conservation and Recovery Act (RCRA) and California Public Safety Code. The DTSC implements

the California Code of Regulations (CCR) Title 22 Division 4.5 to manage hazardous waste. Government Code *Section 65962.5* requires that DTSC shall compile and update at least annually a list of:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Public Safety Code ("HSC").
2. All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Public Safety Code.
3. All information received by the Department of Toxic Substances Control pursuant to Section 25242 of the Public Safety Code on hazardous waste disposal on public land.
4. All sites listed pursuant to Section 25356 of the Public Safety Code.
5. All sites included in the Abandoned Site Assessment Program.

This list of hazardous waste sites in California, referred to as the Cortese List, is then distributed to each City and county. According to the CCR Title 22, soil excavated from a site containing hazardous materials is considered hazardous waste, and remediation actions should be performed accordingly. Cleanup requirements are determined case-by-case by the jurisdiction.

Record Search

The United States Environmental Protection Agency (EPA) Superfund National Priorities List (NPL) [27], California Department of Toxic Substance Control's EnviroStor [28] database, and the State Water Resources Control Board's GeoTracker [29] database include hazardous release and contamination sites. A search of each database was conducted on June 13, 2024. The search revealed no hazardous material release sites on the Project site. The closest hazardous site is a 543-acre cleanup program site, the Madera Municipal Airport, which is approximately 1.75 miles west of the Project site.

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?

Less than Significant Impact. The Project proposes a residential development. The type of hazardous materials that would be associated with Project operations are those typical of residential uses such as cleaning supplies and HVAC equipment. Because of the proposed residential use, it is not expected that the Project would routinely transport, use, or dispose of hazardous materials other than those typical of residential uses and such materials would not be of the type of quantity that would pose a significant hazard to the public.

Some appliances and electronics used or stored by residents may contain hazardous components (e.g., refrigerants, oils, etc.); however, these hazardous components are regulated by the EPA under the Toxic Substances Control Act and Clean Air Act and transport of such components are regulated by the U.S. Department of Transportation, Office of Hazardous Materials Safety as implemented in California by Title 13 of the California Code of Regulations (CCR), California Building Code, and Uniform Fire Code, as adopted

[27] United States Environmental Protection Agency. Superfund National Priorities List. Accessed June 13, 2024, https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=33cebcdfdd1b4c3a8b51d416956c41f1

[28] California Department of Toxic Substances Control. Envirostar. Accessed June 13, 2024. https://www.envirostor.dtsc.ca.gov/public

[29] California State Water Resources Control Board. GeoTracker. Accessed June 13, 2024. https://geotracker.waterboards.ca.gov/

by the City. Through compliance with regulations, appliances and electronics associated with the Project are not expected to create a significant hazard to the public or the environment.

While construction activities may include the temporary transport, storage, use or disposal of potentially hazardous materials (e.g., fuels, lubricating fluids, cleaners, solvents, etc.), such activities would be regulated by the Department of Toxic Substances Control through the California Hazardous Waste Control Law and Hazardous Waste Control Regulations. Compliance would ensure that construction-related impacts would be less than significant. For these reasons, the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and a less than significant impact would occur.

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. As described under criterion a), it is not anticipated that the Project itself would involve any operations that would require routine transport, use, or disposal of hazardous materials and therefore is not anticipated to create a significant hazard to the public or the environment through release of hazardous materials, including any reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. While potential impacts would occur through construction-related transport and disposal of hazardous materials, such impacts would be short-term and temporary, and would be reduced to less than significant levels through compliance with local, state, and federal regulations in addition to standard equipment operating practices as described under criterion a). Therefore, the Project would have a less than significant impact.

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. Matilda Torres High School is approximately 0.13 miles northeast of the Project site. As described under criteria a) and b) above, the Project is not anticipated to emit hazard emissions or handle hazardous materials, substances, or waste that would pose a risk or threat to the school or surrounding area. Therefore, a less than significant impact would occur.

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?

No Impact. According to the NPL, Envirostor, and GeoTracker, the Project site does not include a hazardous material release site. Since there are no active hazardous materials release sites on the Project site pursuant to Government Code *Section 65962.5*, the Project would not create a significant hazard to the public of the environment and there would be 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 nearest public airport or public use airport is the Madera Municipal Airport located approximately 1.75 miles west of the Project site. The Madera Municipal Airport is owned and operated by the City of Madera and has two (2) runways that are 5,544 feet long and 3,700 feet long. The

applicable airport land use plan for the Madera Municipal Airport is the Madera Countywide Airport Land Use Compatibility Plan (ALUCP) adopted in 2015. [30] According to this land use plan, the Project site is not within the Airport Influence Area or the airport noise contours. Therefore, the Project is not subject to compatibility standards and would be generally compatible with the ALUCP. For these reasons, the Project would not result in a safety hazard for people residing or working in the area and impacts would be less than significant.

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 Project would not involve any new or altered infrastructure associated with evacuation, emergency response, and emergency access routes within the City of Madera or County of Madera. Construction may require lane closure; however, these activities would be short-term and access through Ellis Street and/or Fairview Street would be maintained through standard traffic control. Following construction, this roadway would continue to provide access to the site. Furthermore, the Project would be subject to compliance with applicable standards for on-site emergency access including turn radii and fire access. Therefore, through the compliance, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant.

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

Less than Significant Impact. The Project site is located on a relatively flat, infill property within an area that is surrounded by existing development and infrastructure. In addition, the site is not identified by Cal Fire to be in a Moderate, High, or Very High Fire Hazard Severity Zone (FHSZ). Future development of the site would result in the construction of structures and installation of infrastructure that would be reviewed and conditioned by the City for compliance with all applicable standards, specifications, and codes. In addition, any structure occupied by humans would be required to be constructed in adherence to the Wildland Urban Interface Codes and Standards of the CBC Chapter 7A. Compliance with such regulations would ensure that the Project meets standards to help prevent loss, injury, or death involving wildland fires. For these reasons, the Project would have a less than significant impact.

[30] Madera County. (2015). Madera Countywide Airport Land Use Compatibility Plan. Accessed June 18, 2024, https://www.madera.gov/wp-content/uploads/2018/02/2015-ALUCP.pdf

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 Project site would be within city limits and thus, would be required to connect to water and stormwater services. These services are provided by the City of Madera. The City and responsible agencies have

reviewed the Project to determine adequate capacity in these systems and to ensure compliance with applicable connection and discharge requirements. A brief overview of the systems and services is provided below.

Water Supply System

The City of Madera Water Division manages and operates the City of Madera's water supply system. Groundwater is the sole source of water supply through 20 active wells that pump from the Madera Subbasin of the San Joaquin groundwater basin directly into the City's distribution system. The distribution system consists of 200 miles of water mains that are maintained as a single pressure zone. The system also contains a one (1) million-gallon storage reservoir. The system's connections are primarily "looped," which provides increased capacity and reliability.

According to the City's 2014 Water System Master Plan (WSMP),distribution mains are typically 16 inches or smaller in diameter. The existing system pipe inventory is listed in Table 4-8, below.

Table 4-8 Existing System Pipe Inventory

Diameter (in)	Length (miles)
2	0.07
4	2.87
6	49.98
8	82.53
10	4.34
12	45.32
14	1.93
16	0.19
Total	**187.24**

Source: 2014 Madera Water System Master Plan

Water Supply and Demand

The City's long-term water resource planning for existing and future demand is addressed in the City's 2020 Urban Water Management Plan (UWMP).[31] While the City also utilizes the 2014 Water System Master Plan (WSMP), the methodology used in the WSMP differs from the UWMP. As a result, the demand analysis in the UWMP supersedes the analysis of the WSMP.

According to the UWMP, water demand in the city has declined and is expected to grow at a slower rate than the anticipated population growth. The decline is attributed to conservation programs and water meter installations, in addition to state-imposed water conservation requirements in 2015. Peak water demand for the City is typically during summer whereby most groundwater wells are operated at capacity. During these periods of high demand, the City's storage reservoir is incorporated. As of 2020, the City's existing average daily domestic water demand was estimated at 7.8 million gallons per day (GPD), with residential uses accounting for 69.7% of total water usage.

[31] City of Madera (2022). Urban Water Management Plan 2020 Update. Accessed June 18, 2024, https://www.madera.gov/wp-content/uploads/2023/05/City-of-Madera-Urban-Water-Management-Plan-2020-Update.pdf

Potable water demands are estimated in the UWMP based on a blend of the 2020 Water Use target of 196 gallons per capita per day (gpcd) and a reduced residential target of 183 and 167 gpcd for years 2025 and 2030 and beyond, respectively. This reduced target reflects the anticipated indoor residential water use standards discussed in Assembly Bill (AB) 1668 and Senate Bill (SB) 606. Under this assumption, the Single-Family land use type in the city would generate a demand of 5,214 acre-feet (AF) in 2020 and is projected to generate a demand of 8,450 AF in 2025.

Groundwater Sustainability

To consider long-term sustainability, a Joint Groundwater Sustainability Plan (GSP) was adopted for the Madera Subbasin in 2020 by the Madera Subbasin groundwater sustainability agencies (GSAs) of which the City of Madera is a member. [32] The GSP was prepared in response to the California Department of Water Resources (DWR) identifying the Madera Subbasin as a critically over drafted basin. The intent of the GSP is to identify groundwater conditions, evaluate the overdraft conditions, establish sustainability goals, and determine programs and management actions to achieve sustainable groundwater management by 2040.

As a member agency of the Madera Subbasin GSAs, the City of Madera's land-use decisions must comply with the GSP by decreasing water demand and managing groundwater resources. The City's Water Division, Water Conservation Program oversees enforcement of water conservation regulations as outlined in the Chapter 5 – Water System of the MMC. In particular, Chapter 5 of the MMC requires all new construction to install Automatic Meter Reading and all landscaping irrigation to be compliant with the Model Water Efficient Landscape Ordinance (MWELO).

Lastly, the Madera General Plan Conservation Element addresses groundwater recharge and supplies through the following policies:

Conservation Element Policy CON-1: *The City will coordinate with local, regional, and state water suppliers and water resource managers to identify water management strategies and issues that ensure a clean and sustainable water supply.*

Conservation Element Policy CON-2: *The City supports the consideration and implementation of a broad range of strategies to ensure the long-term sustainability of its water supply, including strategies related to conservation, reclamation, recharge, and diversification of supply.*

Conservation Element Policy CON-3: *The City supports natural groundwater recharge and new groundwater recharge opportunities through means such as:*

- *Developing a comprehensive groundwater recharge program to be applied in conjunction with new development*
- *Increasing the area on developed sites into which rainwater can percolate*
- *Providing areas where rainwater and other water can collect and percolate into the ground.*
- *Providing for groundwater recharge in storm drainage facilities.*
- *The use of reclaimed water to recharge the groundwater table.*

[32] Madera Subbasin Coordination Committee. (2020). Madera Subbasin Joint Groundwater Sustainability Plan. Accessed June 18, 2024, https://sgma.water.ca.gov/portal/gsp/preview/21

Water Quality

The Madera Regional Groundwater Management Plan (GMP) identifies sources of groundwater contamination including but not limited to the results of naturally occurring, point source contamination, and/or regional contamination. [33] Typical sources of point source contamination include gas stations, dry cleaners, high-density animal enclosures, applied fertilizers, leaky sewer lines, wastewater treatment plants, and septic systems. The proposed Project does not propose any of these uses. Another concern for water quality includes non-point source pollutions and associated runoff whereby rain causes pollutants to "runoff" impervious surfaces. Stormwater runoff is addressed in the section below. According to the UWMP, groundwater within the Madera Subbasin has been high quality and as of 2014, the City's water system meets state and federal guidelines for regulation of water quality.

Storm Drainage System

There are four (4) major watersheds that collect and convey stormwater runoff in Madera. These watersheds include Cottonwood Creek, Root Creek/San Joaquin, Middle Fresno River, and Dry Creek. Within these watersheds there are smaller drainage basins, which have existing or natural conveyance systems and may discharge to retention basins, pump stations, or direct outfalls to Madera Irrigation District (MID) canals, or Fresno River. Some basins are connected to MID facilities that receive surface water for recharge. In recent years, captured stormwater has been held in the basins to maximize percolation opportunities. When runoff exceeds basin capacity, water is sent to local streams and irrigation canals to allow basins to accommodate further runoff.

The discharge areas of basins, or "drainage subbasins," contain overland flow routing (i.e., routing rainfall runoff to stormwater conveyance system) or a combined pipe street conveyance system (i.e., conveyance from gutters to catchments). According to the City's 2014 Storm Drainage System Master Plan (SDSMP), the Project site is not within a current drainage subbasin. However, according to the SDSMP's Capital Improvement Program, the Project site is within the subbasin of a proposed future development basin with a recommended capacity of 104 ac-ft. The basin, which has since been constructed, is located approximately 2,400 feet to the west of the Project site at the southwest corner of Ellis Street and Krohn Street.

Stormwater Quality

Discharges to municipal storm drain systems are regulated by the National Pollutant Discharge Elimination System (NPDES) permit. There are two (2) rules – Phase I and Phase II – that regulate pollutant discharges. Phase I Final Rule requires that an operator (i.e., City of Madera) of a regulated municipal separate storm sewer system (MS4) must develop, implement, and enforce a program to reduce runoff pollutants from new development that disturbs one (1) acre or more of land. Phase II Final Rule requires an operator (i.e., City of Madera) to reduce stormwater runoff pollutants through implementation of erosion and sediment controls on construction sites, such as procedures, enforcement measures, sanitation, and BMPs.

The City of Madera's 2004 Storm Water Quality Management Program (SWQMP) outlines a series of best management practices (BMPs) designed to reduce the discharge of pollutants from the municipal storm

[33] County of Madera. (2014). Madera Regional Groundwater Management Plan. Accessed June 18, 2024, https://www.maderacountywater.com/wp-content/uploads/2018/08/Madera-Regional-Groundwater-Management-Plan-2014.pdf

drain systems in order to protect water quality pursuant to the Clean Water Act and in compliance with NPDES. General permit requirements and BMPs are outlined in the SWQMP. In particular, future development of the Project site would be subject to preparation of a Stormwater Pollution Prevention Plan (SWPPP), to obtain coverage under the State Construction General Permit (NPDES General Permit for Stormwater Discharge Association) with construction activity (Order 2013-0001-DWQ), and submission of the SWPPP with a Notice of Intent to the RWQCD. Pursuant to NPDES, this is prepared by a Qualified SWPPP Developer (QSD) and implemented by a Qualified SWPPP Practitioner (QSP). The SWPPP is required to incorporate BMPs, which would prevent water quality degradation, control erosion and siltation, and minimize any impacts to water quality to a level that is less than significant.

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?

Less than Significant Impact. Groundwater is the sole source of water supply for the City. Groundwater is supplied through 18 active wells that pump from the Madera Subbasin of the San Joaquin groundwater basin directly into the City's distribution system. According to the UWMP, groundwater within the Madera Subbasin has been high quality and meets state and federal guidelines. Potential concerns for water quality and groundwater contamination include but are not limited to naturally occurring contamination, point source contamination, regional contamination, and non-point source pollutants and associated runoff (i.e., stormwater runoff). Of these concerns, stormwater runoff is most applicable to the proposed Project.

Generally, stormwater runoff resulting from the anticipated buildout of the Project would be managed by the City in compliance with the UWMP, WSMP, SDSMP, SWQMP, and regulatory requirements pursuant to NPDES General Permit Requirements. In addition, the quality of stormwater runoff would be maintained by design components specific to the Project including but not limited to 1) the required connection to storm drainage facilities, 2) the required preparation of a SWPPP, and 3) the City's approval of the Project's grading and drainage plans. Because the Project site is greater than one (1) acre in size, the developer is required to prepare a SWPPP (Section 4.7) in compliance with the General Permit for Discharges of Storm Water Associated with Construction Activity (i.e., General Permit Order No. 2013-0001-DWQ). The SWPPP estimates the sediment risk associated with construction activities and includes best management practices (BMP) to control erosion. BMPs specific to erosion control cover erosion, sediment, tracking, and waste management controls. Implementation of the SWPPP minimizes the potential for the Project to result in substantial soil erosion or loss of topsoil. These provisions minimize the potential for the Project to violate any waste discharge requirements or otherwise substantially degrade surface or ground water quality. Further, runoff resulting from the Project would be managed in compliance with the approved grading and drainage plans.

Thus, compliance with existing regulations including the General Construction Permit, BMPs, and MMC in addition to approved grading and drainage plans would reduce potential impacts related to water quality and waste discharge to less than significant levels.

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?

Less than Significant Impact. As previously mentioned, groundwater is the sole source of water supply for the City. Groundwater is supplied through 18 active wells that pump from the Madera Subbasin of the San Joaquin groundwater basin directly into the City's distribution system. Management and sustainability of groundwater supplies is discussed in the Madera Subbasin GSP, Madera Regional GMP, UWMP, and WSMP. Anticipated buildout of the proposed Project would increase water demands within the area and would encourage the need for sustainable water sources. Because the Project would be annexed into the City, it will be required to connect to water and stormwater services as provided by the City. As a new connection, the Project is required to comply with Chapter 5 of the MMC to meet water efficiency standards. Additionally, adherence to connection requirements and recommendations pursuant to the City's water supply planning efforts (i.e., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact the City's water provision.

Potable water demands for the Project were estimated using UWMP's target per capita water use in 2025, which is 183 gallons per capita per day (gpcd). The Project site has an existing General Plan land use designation of LD –Low Density Residential and proposes a GPA to the MD – Medium Density Residential land use designation. Table 4-9 summarizes the total water demands to be expected. As shown, development under the existing land use designation would utilize approximately 10.4 acre-feet per year (AFY) compared to an estimated 48.9 AFY under the proposed use. Development of the Project site would account for a less than 1% increase above the City's 2025 anticipated water demand of 8,450 acre-feet (AF). In addition, the minimal increase in demand would not exceed available groundwater supplies during a normal year water supply estimate of 14,870 AFY (according to pumping capacity). Therefore, the Project would be accommodated by existing groundwater supplies and impacts would be less than significant.

Table 4-9 Summary of Total Water Demands by Land Use

Land Use	# of Units	Water Demand Factor	Household Size *	Water Demand (Gallon per Day) **	Water Demand (Acre-Feet per Year)
LD – Low Density Residential	13 (maximum)	183 gpcd	3.91	9,301.89	10.4
MD – Medium Density Residential	61 (proposed)	183 gpcd	3.91	43,647.33	48.9

** Source: U.S. Census Bureau. 2024. QuickFacts: Madera city, California. Accessed on June 18, 2024, https://www.census.gov/quickfacts/fact/table/maderacitycalifornia/PST120222*
*** Water Demand = # of Units * Household Size * Water Demand Factor.*

Furthermore, adherence to connection requirements and recommendations pursuant to the City's water conservation efforts (e.g., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact water supply or impede water management. In particular, the Project would be built accordance with all mandatory outdoor water use requirements as outlined in the applicable California Green Building Standards Code, Title 24, Part 11, *Section 4.304 – Outdoor Water Use* and verified through the building permit process. As a residential development that would contain landscaping, the Project shall comply with the updated Model Water Efficient Landscape Ordinance (MWELO) (California Code of Regulations, Title 23, Chapter 2.7, Division 2), as implemented and enforced through the building permit process. Therefore, through compliance, the potential for the Project to substantially decrease groundwater supplies is limited and impacts would be less than significant.

In addition, development of the Project site would increase impervious surfaces which could increase stormwater runoff and reduce groundwater recharge. Storm runoff from the Project site is planned to go

to the basin labeled as P07 in the 2014 Storm Drainage System Master Plan located southwest of the site. Through the entitlement process, the developer is conditioned to acquire sufficient additional right-of-way, as necessary, to expand the basin and construct other necessary facilities in accordance with criteria in the Storm Master Plan and City standard drawings, as applicable, to convey and hold storm runoff. The developer is also conditioned to provide a detailed drainage study to support the chosen path of conveyance and design of any necessary conveyance facilities prior to any excavating or grading activities. As such, the runoff from the Project site would be redirected to retain groundwater recharge. Therefore, potential for the Project to interfere substantially with groundwater recharge such that the Project would impede sustainable groundwater management is limited and impacts would be less than significant.

Overall, the proposed Project would not generate significantly greater water demand than would otherwise occur with higher intensity land use. As a result, it can be presumed that the existing and planned water distribution system and supplies should be adequate to serve the Project, and the Project would thereby not decrease groundwater supplies, interfere substantially with groundwater recharge, or impede sustainable groundwater management of the basin. In addition, adherence to connection requirements and recommendations pursuant to the City's water supply planning efforts (i.e., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact the City's water provision. For these reasons, a less than significant impact would occur as a result of the Project.

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;

Less than Significant Impact. Erosion is a natural process in which soil is moved from place to place by wind or from flowing water. The effects of erosion within the Project site can be accelerated by ground-disturbing activities associated with development. Siltation is the settling of sediment to the bed of a stream or lake which increases the turbidity of water. Turbid water can have harmful effects to aquatic life by clogging fish gills, reducing spawning habitat, and suppressing aquatic vegetation growth.

Soil erosion and loss of topsoil can be caused by natural factors, such as wind and flowing water, and human activity. Bare soils, common within agricultural land, are more susceptible to erosion than an already developed urban land, thus it is not expected that erosion could occur on-site. Development of the Project site would require typical site preparation activities such as grading and trenching which may result in the potential for short-term soil disturbance or erosion impacts. Soil disturbance during construction is largely caused by the use of water. Excessive soil erosion could cause damage to existing structures and roadways.

The likelihood of erosion occurring during construction would be reduced through site grading and surfacing, which would be subject to review and approval by the City for compliance with applicable standards. Future development of the Project site would be required to comply with the Project's SWPPP, construction-related erosion controls and BMPs would be implemented to reduce potential impacts related to erosion and siltation. These BMPs would include, but are not limited to, covering and/or binding soil surfaces to prevent soil from being detached and transported by water or wind, and the use of barriers such as straw bales and sandbags to control sediment. Together, the controls and BMPs are intended to limit soil transportation and erosion. As such, the likelihood of erosion would be further reduced through compliance with regulations including the General Construction Permit, BMPs, and approved grading and

drainage plans as described under criterion a). With these provisions in place, the impact on soil and topsoil of the Project would be considered less than significant.

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

Less than Significant Impact. The Project would increase impervious surfaces by installing paving, concrete pads, and sidewalks. Such impervious surfaces have the potential to increase the rate or amount of surface runoff that would be captured and drained within the drainage subbasin. As previously discussed, development of the site would require compliance with the SWPPP, approved grading and drainage plan, and implementation of BMPs that would control and direct runoff. Compliance would ensure that construction impacts related to the alteration of the site's natural hydrology and the potential increase in runoff that would result in flooding on- or off-site would be less than significant.

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

Less than Significant Impact. Development of the site would disturb the site's vegetation and soil and temporarily alter the natural hydrology of the site. However, compliance with the SWPPP, approved grading and drainage plan, and implementation of BMPs that would control, and direct runoff would reduce construction impacts related to alteration of the site's natural hydrology and the potential increase in runoff or polluted runoff in excess of existing or planned stormwater drainage systems. Therefore, construction would not result in the creation or contribution of additional sources of runoff or polluted runoff in exceedance of the existing or planned stormwater drainage systems and impacts would be less than significant.

Regarding operational impacts, development of the site would result in an increase in the impervious surface area which would increase runoff from the site. However, compliance with the approved grading and drainage plans would reduce the potential for the Project to cause substantial additional polluted runoff or runoff in excess of existing or planned stormwater drainage systems. A less than significant impact would occur.

iv) impede or redirect flood flows?

Less than Significant Impact. Although the construction of the proposed Project would increase impervious surfaces, the Project would be required to maintain the site's drainage pattern through Project-specific grading and drainage plans that would be reviewed and approved by the City prior to the issuance of building permits. Through compliance, the potential for the Project to impede or redirect flood flows would be minimized or eliminated and a less than significant impact would occur.

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

Less than Significant Impact. The Project site is not in a flood hazard, tsunami, or seiche zone (i.e., standing waves on river, reservoirs, ponds, and lakes). In addition, the Project site is approximately 110 miles from the Pacific Ocean and there are no rivers, reservoirs, ponds, or lakes within the site or Project Area. Furthermore, the Project site is designated as Zone X on the most recent Flood Insurance Rate Map (FIRM) No. 06039C1155E dated September 26, 2008. Zone X is an area of minimal flood hazards with a 0.2 percent-

annual-chance of flood (i.e., 500-year flood). Lastly, the City, inclusive of the Project site, has historically been subject to low to moderate ground shaking and has a relatively low probability of shaking. As such, seiches are unlikely to form due to the low seismic energy produced in the area. Therefore, as a low-risk area, the Project would have a less than significant impact as it relates to the 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?

Less than Significant Impact. The Project site is located within the jurisdiction of the Madera Subbasin and is therefore subject to the Madera Subbasin Groundwater Sustainability Plan (GSP) adopted in 2020. The GSP was prepared in response to the CA DWR identifying the subbasin as a critically over drafted basin. As a member agency of the Madera Subbasin GSAs, the City of Madera's land-use decisions must comply with the GSP by decreasing water demand and managing groundwater resources. The City of Madera Water Division's Water Conservation Program oversees enforcement of water conservation regulations as outlined in the *Chapter 5 – Water System* of the MMC. In particular, Chapter 5 of the MMC requires all new construction to install Automatic Meter Reading and all landscaping irrigation to be compliant with the Model Water Efficient Landscape Ordinance (MWELO). In turn, the Project is subject to compliance with City-identified regulations to maintain groundwater resources. Compliance with such regulations would ensure that the Project would not conflict with or obstruct the implementation of the GSP. For these reasons, a less than significant impact would occur as a result of the Project.

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 Project Area is within the City of Madera's Sphere of Influence (SOI). The Project proposes the annexation of the Project Area into the city limits of Madera. The Project Area, exclusive of the Project site parcel (i.e., APN 038-060-017), would be pre-zoned to R-1 – Low Density Residential, which is consistent with the existing land use designation of LD – Low Density Residential.

The Project site has a City of Madera General Plan land use designation of LD – Low Density Residential. The Project proposes a General Plan Amendment (GPA) to change the site to MD – Medium Density Residential. The Project would also pre-zone the Project site to the Planned Development (P-D) (3000) zoning district. The Project proposes to subdivide the Project site into 61 single-family lots (8.80 dwelling units per acre).

4.11.2 Impact Assessment

a) Would the project physically divide an established community?

Less than Significant Impact. Typically, physical division of an established community would occur if a Project introduced new incompatible uses inconsistent with the planned or existing land uses or created a physical barrier that impeded access within the community. Typical examples of physical barriers include the introduction of new, intersecting roadways, roadway closures, and construction of new major utility infrastructure (e.g., transmission lines, storm channels, etc.).

Surrounding Land Uses

The Project Area is surrounded by single-family residences to the west and south and bounded by an irrigation canal to the north and east. Proposed site improvements would be regulated by development standards and zoning regulations, including height, landscaping, setbacks, improvements, right-of-way dedications, open space, and parking, etc. As such, the Project would be consistent and therefore compatible with the existing residential use surrounding the Project site. Therefore, implementation of the Project would be generally consistent with the existing and planned land uses within the Project vicinity.

Circulation System

Access to the Project site would be provided by two (2) points of ingress/egress from Fairview Street, which is proposed to be improved with curb, gutter, sidewalk, and landscaping on the east side of the street There would be no access to the south road frontage, Ellis Street; however, the Project would dedicate 20 feet to Ellis Street and the frontage would be improved with curb, gutter, sidewalk, and landscaping. Internal circulation within the site would be provided by 37-foot-wide streets and pedestrian walkways. Therefore, implementation of the Project would not include the introduction of new, intersecting roadways. Therefore, a less than significant impact would occur.

Utility Infrastructure

The Project is proposed to be annexed into the City of Madera city limits and thus, will be required to connect to water, sewer, stormwater, and wastewater services. Natural gas, electricity, and telecommunications are provided by private companies. Utility systems are described and analyzed in Section 4.10 and Section 4.9. Based on the analysis, implementation of the Project would not result in the construction of new, major utility infrastructure.

As such, the Project does not represent a significant change in the surrounding area as it would develop a vacant and undeveloped site with residential uses that are consistent and compatible with existing uses surrounding the Project site. In addition, the Project does not include new major roadways or major utility infrastructure. For these reasons, the Project would not result in the physical division of an established community and would thereby have a less than significant impact.

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. Generally, policy conflicts are environmental impacts when they would result in direct physical impacts or where those conflicts relate to avoiding or mitigating environmental impacts. As such, associated physical environmental impacts are discussed in this document under specific topical sections, such as Biological Resources, Cultural Resources, and Tribal Cultural Resources. The Project includes a General Plan Amendment and Rezone/Pre-Zone to provide more flexibility for residential development. A discussion of land use policies that are applicable to the Project is included in Table 4-10. As discussed below, the Project is generally consistent with the proposed General Plan residential land use designation.

Table 4-10 Discussion on Land Use Policies in the General Plan for Residential Development

General Plan Policy	Project Consistency
Policy LU-10: *The Growth Boundary is considered by the City to define the physical limits of development in Madera. The City shall direct all future growth in Madera and in the unincorporated area outside the city limits to occur inside the Growth Boundary shown on the Land Use Map in this General Plan. Within the City's Planning Area, the City encourages the County to assist the City in maintaining an agricultural greenbelt around the Growth Boundary by limiting the use of land*	**Consistent.** The Project site is within the Urban Boundary.

designated for Agriculture on the City's General Plan Land Use map to agriculture.	
Policy LU-20: *New residential development should be designed to avoid continuous blocks or clusters of dwellings that are connected only by streets, sidewalks, and hardscape. New development shall incorporate amenities which establish a sense of identity at the project or neighborhood level, create opportunities for community interaction, and enhance the visual appeal of the area. Features which accomplish these goals may include pathways, paseos, parks, community gardens, and other semi-public gathering places.*	**Consistent.** Since this is a smaller community (61 units), there are no public gathering places within the subdivision. However, the Project does propose landscaping along the street frontage and public sidewalks that connect each unit.
Policy LU-22: *Single family developments need to provide functional outdoor recreational space. The space can be provided either on individual lots or more efficiently as aggregated local public spaces, creating features such as those described in Policy LU-20.*	**Consistent.** The Project provides yard space in setback areas, including on the front, side, and rear of the lot.

Further, through the entitlement process, the Project is reviewed for compliance with applicable regulations inclusive of those adopted for the purpose of avoiding or mitigating environmental effects. Overall, the entitlement process would ensure that the Project complies with the General Plan, Municipal Code, and any other applicable policies. As such, the Project would have a less than significant impact.

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

For the purposes of CEQA, mineral resources are land areas or deposits deemed significant by the California Department of Conservation (DOC). Mineral resources include oil, natural gas, and metallic and nonmetallic deposits, including aggregate resources. The California Geological Survey (CGS) classifies and designates areas within California that contain or potentially contain significant mineral resources. Lands are classified into Aggregate and Mineral Resource Zones (MRZs), which identify known or inferred significant mineral resources. According to the General Plan, the Madera Planning Area, inclusive of the Project site, is not located in an area with mineral deposit significance and there are no active mine operations. In addition, the City of Madera, inclusive of the Project site, is not within a CalGEM-recognized oilfield and there are no oil and gas wells on-site. [34]

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?

No Impact. There are no identified mineral deposits of significance or active mine operations in the Project Area. Therefore, the Project would not 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. Therefore, no impact would occur.

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. There are no identified mineral deposits of significance or active mine operations in the Project Area. As a result, the Project would not 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. Further, the site is not delineated in the General Plan, a Specific Plan, or other land use plan as a locally important mineral resource recovery site,

[34] California Department of Conservation. Well Finder. Accessed on June 19, 2024, https://maps.conservation.ca.gov/doggr/wellfinder/

thus it would not result in the loss of availability of a locally important mineral resource. Therefore, no impact would occur.

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

In general, there are two (2) types of noise sources: 1) mobile sources and 2) stationary sources. Mobile source noises are typically associated with transportation including automobiles, trucks, trains, and aircraft. Stationary sounds are sources that do not move such as machinery or construction sites. Stationary sources can also include events, recreational uses, amplified systems, automotive repair facilities, building mechanical systems, and landscape maintenance. These sources can vary based on factors such as site conditions, equipment operated, and specific activities conducted. Noises generated are also directional but can vary based on site and operational characteristics.

Nosie-related impacts typically affect sensitive receptors and land uses such as residential, schools, churches, nursing homes, hospitals, and open space/recreation areas. Commercial, farmland, and industrial areas are not considered noise sensitive and generally have higher tolerances for exterior and interior noise levels. Noise levels for noise-sensitive receptors will vary depending on location, distance from the source, shielding by terrain and structures, and ground attenuation rates.

Madera General Plan

The Madera General Plan Noise Element outlines goals and policies to mitigate health effects of noise in the community and prevent exposures to excessive noise levels. The following goals and policies are applicable to the Project.

Noise Policy N-1. *The City will protect residential areas and other noise-sensitive uses from excessive noise by doing the following:*

1) *Requiring that land uses, roadways, and other sources do not create incompatible noise levels on adjacent parcels.*
2) *Allowing homes or noise-sensitive uses to be developed only in places where existing and projected noise levels will meet the exterior noise guidelines and standards shown in Policies N-5 and N-6.*
3) *Requiring that City decisions which would cause or allow an increase in noise created by stationary or mobile sources (such as development of noise-generating land uses or the construction of new or wider roadways) be informed by a noise analysis and accompanied by noise reduction measures to keep noise at acceptable levels. The analysis may be accomplished by reviewing available noise data, by requiring additional information on potential noise that would be created, or by a noise analysis prepared as part of the project's environmental analysis. Roadway projects which are consistent with the Circulation Map in this General Plan will generally not require the preparation of a noise analysis.*

Noise Policy N-2. To implement Policy N-1, the following shall apply:

1) *No use regulated by the City shall be permitted to generate noise that would cause the ambient noise on any adjacent parcel to exceed the "completely compatible" 24-hour guidelines shown in Policy N-5 or the 30-minute noise standards in Policy N-6.*
2) *The City shall ensure that noise mitigation to achieve a "completely compatible" 24-hour exterior noise level and conformance with the 30- minute exterior noise standard is provided in conjunction with any decision it makes that would cause a violation of item 1) above.*
3) *Developers of new residential or other noise-sensitive uses which are placed in environments subject to existing or projected noise that exceeds the "completely compatible" guidelines in Policy N-5 shall be responsible for ensuring that acceptable exterior and interior noise levels will be achieved.*
4) *The City shall ensure that transportation projects such as new or widened roadways include mitigation measures to maintain at least "tentatively compatible" noise levels as shown in Policy N-5. Mitigation for roadway noise need not be provided where "tentatively compatible" noise guidelines would be exceeded on vacant lands but shall be installed as part of the transportation project where the noise would affect existing homes. In those instances where noise mitigation is not initially triggered, it shall be the responsibility of the project which places residential units on the vacant lands.*
5)

Noise Policy N-3. The following definitions shall be used to interpret and implement the policies in this Noise Element.

- *"Noise-Sensitive Use" is any use other than residential or commercial for which an acceptable interior or exterior noise level is defined in this General Plan or other uses as determined by the City. Generally, noise-sensitive uses will be those which require a reasonable level of quiet as part of their ordinary functioning.*
- *Noise standards in residential areas shall be applied to outdoor activity areas. Where the outdoor activity areas are not known, the exterior noise standard shall be applied to all areas within 50 feet of the residential dwelling.*
- *"Outdoor Activity Areas" for residential uses include rear yard areas, including patios located in a rear yard; private ground-floor patios; and community play areas, pools, etc.*
- *"Projected Noise Levels" shall be those projected to exist at a time 20 (twenty) years in the future, based on projected future development, traffic, and other factors.*
- *"Residential Area" is any area designated for residential uses on the Land Use Map of this General Plan.*
- *"Transportation Noise" consists of noise generated by motor vehicles, trains, and aircraft takeoffs and landings.*

Noise Policy N-4. The following compatibility standards shall be used to determine whether a proposed use is appropriate for its location, given the projected ambient noise level.

- *"Completely Compatible" means that the specified land use is satisfactory, and both the indoor and outdoor environments are pleasant.*
- *"Tentatively Compatible" means that noise exposure may be of concern, but common building construction practices will make the indoor living environment acceptable, even for sleeping quarters, and outdoor activities will not be unduly disturbed by noise.*
- *"Normally Incompatible" means that noise exposure warrants special attention, and new construction or development should generally be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. Careful site planning or exterior barriers may be needed to make the outdoor environment tolerable.*
- *"Completely Incompatible" means that the noise exposure is so severe that new construction or development should generally not be undertaken.*

Noise Policy N-5. The following are the maximum 24-hour exterior noise levels for land designated by this General Plan for residential, commercial/retail, and public parks.

- *See Policy N-4 for the definitions of these levels of compatibility.*
- *These guidelines apply to land designated by this General Plan for these uses. Residential, retail, or public parks which have been developed on land designated for other uses shall be subject to the exterior noise guidelines for the land on which they are located.*
- *Non-residential uses located on residentially designated land shall be subject to the exterior noise guidelines for residential lands.*
- *All uses on commercial lands, including non-commercial uses, shall be subject to the standards for commercial land.*
- *Land use designations not listed above do not have exterior noise compatibility standards. Land use designations with no exterior noise compatibility standard include office and industrial.*
- *Standards for public schools are set and enforced by the State of California and are not regulated by the City of Madera. Therefore, no standards for public schools are shown in Table N-B.*

TABLE N-B: 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
All Commercial	Less than 70 dBA	70-75 dBA	Greater than 75 dBA	(1)
Public Parks (Lands designated as Open Space on which public parks are located or planned)	Less than 65 dBA	65-70 dBA	70-75 dBA	Greater than 75 dBA

(1) No "Completely Incompatible" category is shown for commercial uses because not all commercial uses are incompatible with noisy environments. The City may determine as part of the review of individual development proposals that some types of commercial uses are incompatible with noise environments in excess of 75 dBA CNEL.

Noise Policy N-6. *The following are the City's standards for maximum exterior non transportation noise levels to which land designated for residential land uses may be exposed for any 30-minute period on any day.*

- *Where existing ambient noise levels exceed these standards, the ambient noise level shall be highest allowable noise level as measured in dBA Leq (30 minutes).*
- *The noise levels specified above shall be lowered by 5 dB for simple tonal noises (such as humming sounds), noises consisting primarily of speech or music, or for recurring impulsive noises (such as pile drivers, punch presses, and similar machinery). Example: the Single Family/Duplex standard from 10 p.m. to 7 a.m. for these types of noises is 45 dBA.*
- *The City may impose exterior noise standards which are less restrictive than those specified above, provided that: 1) The noise impact on the residential or other noise-sensitive use is addressed in an environmental analysis, 2) A finding is made by the approving body stating the reasons for accepting a higher exterior noise standard, and 3) Interior noise standards will comply with those identified in Policy N-7.*

TABLE N-C: EXTERIOR NOISE LEVEL STANDARDS FOR NON-TRANSPORTATION NOISE, MEASURED AS dBA Leq (30 MINUTES)[7]

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

Noise Policy N-7. *The following are the City's standards for acceptable indoor noise levels for various types of land uses. These standards should receive special attention when projects are considered in "Tentatively Compatible" or "Normally Incompatible" areas.*

- *Noise created inside a use listed above shall not count toward the acceptable noise levels to be maintained in accordance with this policy.*

Noise Policy N-9. *The City's preferences for providing noise mitigation are, in order (#1 is the most preferred, #5 the least)*

1) *Reduce noise at the source.*
2) *If #1 is not practical, seek to designate land uses which are compatible with projected noise levels.*
3) *If #1 or #2 are not practical, use distance from the source to reduce noise to acceptable levels.*
4) *If #1, #2, or #3 are not practical, use buildings, berms, or landscaping or a combination of these to reduce exterior noise to acceptable levels. Use construction techniques (sound-reducing windows, etc.) to reduce interior noise to acceptable levels.*
5) *The last measure which should be considered is the use of a sound wall to reduce noise to acceptable levels.*

Noise Policy N-10. *Where they are constructed, sound walls should be:*

1) *Considered only if proven effective by accompanying noise studies.*
2) *Be visually attractive, complement the surroundings, and require a minimum of maintenance. (See Community Design Element references to sound wall designs).*
3) *As small/low as possible consistent with the need to reduce noise to acceptable levels.*

Noise Policy N-13. *For the purposes of CEQA analysis, a 5 db increase in CNEL or Ldn noise levels shall be normally considered to be a significant increase in noise.*

Madera Municipal Code

Madera Municipal Code, Chapter 11, Noise Control, sets forth the City's noise controlling regulations. Specific noise prohibitions applicable to the Project are as follows.

§ 3-11.02 Specific Noise Prohibitions.
The following activities are specifically prohibited:

A. Operating, playing, or permitting the operation or playing of any radio, television set, loudspeaker, stereo, drum, musical instrument, or similar device which produces or reproduces sound which is in violation of the provisions of § 3-11.01 of this title.

B. Between the hours of 8:00 p.m. and 6:00 a.m. of the following day. Noise sources associated with operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, remodeling, paving, or grading of any real property or demolition work which creates sound which is in violation of §3-11.01 of this title is prohibited. Provided, however, the Community Development Director or their designated representative may, for good cause, exempt certain construction work from the provisions of this chapter for a limited time when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed. In such circumstance, the contractor or owner shall be allowed to work after 8:00 p.m. and to operate machinery and equipment necessary until the specific work in progress can be completed in a manner which will not jeopardize the inspection or acceptance of a project or create undue financial hardships for the contractor or property owner.

C. Between the hours of 10:00 p.m. and 6:00 a.m. of the following day. Operating or permitting the operation of any mechanically powered saw, drill, grinder, lawn or garden tool, or similar tool which creates sound which is in violation of §3-11.01 of this title.

Existing Ambient Noise Environment

The Project site's existing noise environment is impacted by various noise sources. As previously discussed, the Project site is bounded by single-family residences to the west and south, and a high school to the northeast. Associated noise from residential uses includes vehicles and typical neighborhood noise (i.e. talking, car doors shutting, dogs barking, etc.), which are usually minimized by trees and landscaping. The Project site is not located within the Airport Influence Area (AIA) of the Madera Municipal Airport, nor is it within the Airport's community noise equivalent level (CNEL) noise contour. Other sources of noise include the vehicular traffic on Ellis Street and Fairview Street, which are both street frontages of the Project site.

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?

Less than Significant Impact. Noise generating activities of the Project would include traffic noise and stationery-source noise, such as operations and construction as described below. It is not anticipated that

Project would generate 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 in other applicable local, state, or federal standards, given the type of development proposed (i.e., residential).

Traffic Noise Exposure

Mobile source noises are typically associated with transportation including automobiles, trains, and aircraft. Sensitive land uses include residential, schools, churches, nursing homes, hospitals, and open space-recreation areas. Commercial, farmland, and industrial areas are not considered noise sensitive and generally have higher tolerances for exterior and interior noise levels. The nearest sensitive land uses are single-family residences to the west of the Project site.

According to the General Plan Noise Element, the Project site is within the 60 dB L_{dn} contour under noise levels of the year 2010 from vehicles traveling on State Route 99. Traffic noise depends primarily on traffic volume, traffic speed, and truck traffic percentage.

The primary source of exterior, on-going noise from full buildout of the Project would be from vehicles traveling to and from the site. Future build-out of the Project site would generate an increase in traffic on roadways in the Project vicinity. However, the relatively low number of new trips (i.e., 576 ADTs) associated with build-out of the Project site is not likely to increase the ambient noise levels by a significant amount as the area is active with vehicles. Additionally, increased traffic noise levels on State Route 99 due to build-out of the Project is expected to be minimal since the trips generated does not include trucks. As such, it is expected that the traffic noise levels will increase minimally and will not cause a significant impact.

Operational Noise Exposure

The proposed residential use is expected to generate typical neighborhood noise (i.e. talking, car doors shutting, dogs barking, etc.). These noises are expected to be minimal due to the relatively low number of units proposed (i.e., 61 units), and will not introduce a new significant source of noise that isn't already occurring in the area. In addition, household machinery sounds (e.g., HVAC systems, refrigerators, etc.) will be confined within the interior of the buildings. As such, it is expected that the operational noise generated by the Project will be minimal and most likely not cause significant impact to existing uses.

Construction Noise Exposure

Construction noise will result from construction activities through the use of construction equipment for grading the site and building the proposed structures. Construction phases would include demolition, site preparation, grading, building construction, architectural coating, and paving. Of all construction phases, it is anticipated that grading would produce the loudest noise.

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM) Version 1.0. For the purpose of this noise assessment, general construction equipment, including air compressors, mixers, cranes, forklifts, generator sets, graders, pavers, paving equipment, rollers, dozers, tractors, and welders, are included in the construction noise modeling. According to existing and anticipated land use within and around the Project site, the baseline and receptors that are analyzed in the RCNM are shown in Table 4-11.

Table 4-11 Receptors and Baseline Analyzed in the RCNM

Location	Land Use	Total dB Lmax *	Total dB Leq **
90 feet to the west	Residential	79.9	82.1

** Total Lmax is the value for the loudest piece of equipment.*
*** This number estimates noise when all equipment is used at the same time.*

Short-term construction noises include traffic noise generated from transporting construction equipment and materials and construction worker commuting. These activities would raise noise levels near the site. According to modeling of the FHWA RCNM Version 1.0, construction noise generated from the offroad equipment is estimated to be 82.1 dB Leq if all equipment was used at the same time. Ambient noise from construction activities would cease upon completion of construction. Since the City of Madera does not have a threshold for construction noise, the construction noise assessment is done for informational purposes.

Although the nearby residential uses would experience elevated noise levels from construction, these activities would be temporary and would generally take place in accordance with MMC *Section 3-11.02* which regulates permissible hours of construction between the hours of 6:00 am and 8:00 pm.

Overall, Project construction is not expected to result in a significant impact because the noise would be regulated by the MMC. Noise would thereby be generated during daylight hours and not during evening or more noise-sensitive time periods; and the increase in noise would cease upon completion of the Project. For these reasons, a less than significant impact would occur.

Although the Project would result in increased ambient noise level at the Project site, compliance with the General Plan policies and MMC requirements would result in the Project's compliance with applicable standards. Overall, the Project would result in a less than significant impact in regard to noise.

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

Less than Significant Impact. Ground borne vibration may result from operations and/or construction, depending on the use of equipment (e.g., pile drivers, bulldozers, jackhammers, etc.), distance to affected structures, and soil type. Depending on the method, equipment-generated vibrations could spread through the ground and affect nearby buildings. The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. None of these activities are anticipated to occur with construction or operation of the proposed Project.

One of the most recent references suggesting vibration guidelines is the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual. [35] The Manual provides guidance for determining annoyance potential criteria and damage potential threshold criteria, as shown in Table 4-12 and Table 4-13. The thresholds are presented in terms of peak particle velocity (PPV) in inches per second (in/sec).

[35] California Department of Transportation. (2020). Transportation and Construction Vibration Guidance Manual. Accessed June 19, 2024, https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf

Table 4-12 Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.1
Severe	2.0	0.4

Source: California Department of Transportation

Table 4-13 Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile, historic buildings, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation

Typical vibration levels at distances of 90 feet are summarized by Table 4-14. These levels are barely perceptible to distinctly perceptible according to the vibration annoyance potential thresholds shown in Table 4-12. These vibration levels are also not expected to cause damage to the nearest sensitive use, older residential structures located approximately 90 feet west of the site, according to the damage potential thresholds shown in Table 4-13.

Table 4-14 Typical Vibration Levels During Construction

Equipment	PPV (in/sec)			
	At 25 feet	At 90 feet	At 100 feet	At 300 feet
Bulldozer (Large)	0.089	0.022	0.011	0.006
Bulldozer (Small)	0.003	0.0007	0.0004	0.00019
Loaded Truck	0.076	0.019	0.01	0.005
Jackhammer	0.035	0.009	0.005	0.002
Vibratory Roller	0.210	0.051	0.03	0.013
Caisson Drilling	0.089	0.022	0.01	0.006

Source: California Department of Transportation

As a result, it is not expected that construction activities would exceed any significant threshold levels for annoyance or damage. Additionally, operational activities related to residential uses are non-perceptible (i.e., vibration from HVAC, refrigerators, etc.) thus would not create any vibration impacts. As such, the Project would have a less than significant impact.

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?

Less than Significant Impact. The nearest public airport or public use airport is the Madera Municipal Airport located approximately 1.75 miles west of the Project site. The Madera Municipal Airport is owned and operated by the City of Madera and has two (2) runways that are 5,544 feet long and 3,700 feet long. The applicable airport land use plan for the Madera Municipal Airport is the Madera Countywide Airport Land Use Compatibility Plan (ALUCP) adopted in 2015. [36] According to this land use plan, the Project site is not within the Airport Influence Area or the airport noise contours. As such, the Project would not expose people living in the Project site to excessive noise levels and the Project would have a less than significant impact.

[36] Madera County. (2015). Madera Countywide Airport Land Use Compatibility Plan. Accessed June 18, 2024, https://www.madera.gov/wp-content/uploads/2018/02/2015-ALUCP.pdf

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

CEQA Guidelines *Section 15126.2(d)* requires that a CEQA document discuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The CEQA Guidelines provide an example of a major expansion of a wastewater treatment plant that may allow for more construction within the service area. The CEQA Guidelines also note that the evaluation of growth inducement should consider the characteristics of a project that may encourage or facilitate other activities that could significantly affect the environment. Direct and Indirect Growth Inducement consists of activities that directly facilitate population growth, such as construction of new dwelling units. A key consideration in evaluating growth inducement is whether the activity in question constitutes "planned growth."

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)?

Less than Significant Impact. The Project includes a General Plan Amendment and Pre-zone/Rezone that requests a land use change from LD – Low Density Residential to MD – Medium Density Residential and a pre-zone for Planned Development (P-D) (3000), consistent with the proposed land use designation.

The Project proposes the development of a 61-lot single family residential development. Based on an average household size of 3.91, 61 units could generate approximately 239 new residents thereby increasing the city's population from 69,079 to 69,318. The City of Madera 2016-2024 Housing Element projects a population of 137,975 in 2035.

Overall, the population and housing units generated by the proposed Project would be within the Madera Housing Element projections for Madera. Therefore, the Project would not induce substantial unplanned population growth and a less than significant impact would occur.

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

No Impact. The Project site is currently vacant with no structures. The site does not contain any existing housing or residential uses. Since the site does not currently provide housing, future development of the Project site would not result in the physical displacement of people or housing. No impact would occur because of the Project.

4.15 Public Services

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
• 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

The Project area would be annexed into Madera city limits and thus, would receive public services provided by the City of Madera and be subject to fees to provide such services. To address impacts to public facilities and services, the City of Madera has implemented development impact fees pursuant to *Section 10-8* of the MMC, which requires developers to pay the "fair share" of the costs of public improvements and facilities generated by new development. These services and fees include:

Fire Protection Services

Fire protection and emergency medical services in the city are provided by the Madera Fire Department (MFD), which is administered by the California Department of Forestry and Fire Protection (CalFire) through a cooperative fire protection agreement. Policy direction remains with the Madera City Council, and all permanent Fire Department staff are CalFire employees. The city operates three (3) fire stations that are staffed 24 hours a day, located at 317 North Lake Street (Station #56), 200 South Schnoor Avenue (Station #57), and 2558 Condor Drive (Station #58). Station #58 is approximately 1.1 miles from the Project site.

The MDF staffs two (2) fire engines and one (1) mini pumper. City fire protection services provided 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. The City also receives automatic aid responses from the County Fire Station #1 located at 14225

Road 28. A Fire Department Impact Fee would be assessed for the proposed Project based on the number of residential units.

Police Protection Services

Police protection services in the city are provided by the Madera Police Department (MPD). MPD Headquarters are located at 330 South C Street, approximately 2.2 miles southeast of the Project site. According to the MPD annual report for 2019, the MPD has 70 sworn officers and 34 non-sworn employees. In 2019, the MPD handled 60,432 events with an average response time of five (5) minutes and 21 seconds, including calls such as an armed robbery or burglary in progress, person not breathing, or traffic collisions involving injuries. Response times of emergency, priority 1, and priority 2 calls have decreased between 2017 and 2019. [37] A Police Department Impact Fee would be assessed for the proposed Project based on the number of residential units.

Schools

Educational services within the Project Area are primarily served by the Madera Unified School District (MUSD). The General Plan provides policy which focuses on collaboration with school districts serving Madera to obtain mitigation for impacts of new development in addition to planning of future land use and facilities. The development is consistent with the General Plan land use designation and would be subject to School Impact Fees to mitigate the effect of the Project on school facilities. In particular, funding for schools and school facilities impacts is outlined in Education Code *Section 17620* and Government Code *Section 65995* et. seq., which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded school facilities. Payment of fees authorized by the statute is deemed "full and complete mitigation." The current developer fee rate for residential development within the MUSD jurisdictional boundaries is $5.04 per square foot.

Parks and Recreation

Park and Recreation Facilities are overseen by the City of Madera Parks and Community Services (PCS) Department. The City of Madera owns and maintains 26 parkland facilities, including three (3) community parks, five (5) neighborhood parks, four (4) pocket parks, four (4) linear parks, two (2) trails, and eight (8) special use facilities. The facilities include 320 acres, not including building grounds, landscape buffer areas, median islands, and park strips. A Parks Department Impact Fee would be assessed for the proposed Project based on the number of residential units.

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:

[37] City of Madera. (2019). City of Madera Police Department Annual Report 2019. Accessed on June 19, 2024, https://www.madera.gov/wp-content/uploads/2020/10/PD-Annual-Report-Final.pdf

Fire Protection

Less than Significant Impact. The Project site would be served by Madera Fire Department. Fire Station #58 is approximately 1.1 miles west of the Project site. The Project's proximity to the existing fire station would support adequate service ratios, response times, and other performance objectives for fire protection services. In addition, the Project would be reviewed for requirements related to water supply, fire hydrants, and fire apparatus access to the structures proposed on the site. For these reasons, it can be determined that the Project can be served by existing facilities and would not result in the need for new or altered facilities and as a result, a less than significant impact would occur.

Police Protection

Less than Significant Impact. The Project would be served by the Madera Police Department. The Project site is approximately 2.2 miles northwest of the city's Police Department. The Project is subject to Police Department Facilities Fee for construction and acquisition costs for improvements to police protection services and facilities. For these reasons, it can be determined that the Project can be served by existing facilities and would not result in the need for new or altered facilities, and as a result, a less than significant impact would occur.

Schools

Less than Significant Impact. Since the Project proposes 61 residential units, the Project is subject to school impact fees. The development and management of school sites are the responsibility of school districts and elected governing school boards. Funding for schools and school facilities impacts is outlined in Education Code *Section 17620* and Government Code *Section 65995 et. seq*, which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded school facilities. Payment of fees authorized by the statute is deemed "full and complete mitigation". Therefore, a less than significant impact would occur.

Parks

Less than Significant Impact. Park and recreational facilities are typically impacted by an increase in use from residential development. The Project proposes residential development that would introduce residents to the area and therefore increase the demand and use of existing neighborhood and regional parks or other recreational facilities. The nearest parks to the Project site include Rotary Park and Zero Gravity Skatepark (1.1 miles southeast), Pan American Park (1.3 miles southeast), and Centennial Park and Pool Complex (1.9 miles southeast). As the Project includes the subdivision of land, the Project would be subject to Madera Municipal Code *Section 10-2.13 Acquisition of Land and/or Payment of Fees for City Park Facilities* in addition to the Parks Department Impact Fee to mitigate any potential impacts to municipally owned parks. Compliance with these requirements would reduce any impacts resulting from increased residential demand for park and recreational facilities to not cause substantial physical deterioration of the facilities. For these reasons, the Project would have a less than significant impact.

Other Facilities

Less than Significant Impact. The Project introduces residences to the area, thus increasing the demand for other public services, such as courts, libraries, hospitals, etc., which could result in development or expansion of public facilities. Typical environmental impacts associated with the development of these facilities include air quality, greenhouse gas emissions, noise, traffic, etc. The expansion of these facilities would be subject to CEQA as they are proposed. In addition, future development would be subject to the

payment of the Development Impact fee in order to mitigate any potential impacts to these public facilities. As a result, the Project would have a less than significant impact.

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

See Section 4.15.

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?

Less than Significant Impact. Park and recreational facilities are typically impacted by an increase in use from residential development. The Project proposes residential development that would introduce residents to the area and therefore increase the demand and use of existing neighborhood and regional parks or other recreational facilities. The nearest parks to the Project site include Rotary Park and Zero Gravity Skatepark (1.1 miles southeast), Pan American Park (1.3 miles southeast), and Centennial Park and Pool Complex (1.9 miles southeast). As the Project includes the subdivision of land, the Project would be subject to Madera Municipal Code *Section 10-2.13 Acquisition of Land and/or Payment of Fees for City Park Facilities* in addition to the Parks Department Impact Fee to mitigate any potential impacts to municipally owned parks. Compliance with these requirements would reduce any impacts resulting from increased residential demand for park and recreational facilities to not cause substantial physical deterioration of the facilities. For these reasons, the Project would have a less than significant impact.

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 Project does not include on-site recreational facilities; however, landscaping along Fairview Street is proposed. Other than the landscaped areas, the Project would not require the construction or expansion of recreational facilities. As such, the facilities would not be in an area or be built to a scale that would cause an adverse physical effect on the environment. As a result, a less than significant impact would occur.

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 Project site, APN 038-060-017, is currently vacant and undeveloped, with no existing infrastructure or improvements. The Project site is bounded to the west by Fairview Street and to the south by Ellis Street, which is not currently improved. The site is bounded by an irrigation canal to the north and east. The Project proposes the development of 61 single-family dwellings.

Madera County Transportation Commission Active Transportation Plan

Madera County Transportation Commission (MCTC) adopted an Active Transportation Plan (ATP) on May 23, 2018. The ATP addresses all forms of human-powered/active transportation, including walking, biking, strollers, skateboarding, rollerblading, etc. The vision of the ATP is to make active transportation more comfortable for people of all ages and abilities, and to plan for a system that can accommodate growth and enhance circulation. Most strategies focus on the development of pedestrian and bicycle infrastructure, in addition to promoting active transportation. [38]

Section 5 – City of Madera Active Transportation Network provides an overview of the existing and planned bikeway network in the City of Madera. There are no existing bicycle facilities (Class I, II, or III) that connect to the Project Area. There is a proposed Class II.B Buffered Bike Lane proposed along Ellis Street. There are no intersection improvements proposed within the Project vicinity.

[38] Madera County Transportation Commission. (2018). Active Transportation Plan. Accessed on June 19, 2024, https://www.maderactc.org/transportation/page/active-transportation-plan

City of Madera General Plan

The Madera General Plan's Circulation and Infrastructure Element provides background information on the City's circulation features (compact grid street system in the downtown area, State Route (SR) 99 as the main transportation corridor, SR 145 running east-west leading to downtown area, Municipal Airport, two (2) railroad lines) and transportation mode (vehicle, walking, biking, public transit, etc.). The element identifies the following objective and policy related to analyzing transportation impacts. The General Plan identifies the following objective and policy related to analyzing transportation impacts.

Policy CI-1: *The City will implement this Master Plan through the policies contained in this and other Elements of the Madera General Plan.*

Policy CI-3 establishes a street classification system to categorize roadways and transportation facilities. The classification system is used for engineering design and traffic operation standards. The following roadway classifications are applicable to the Project site, as defined by the ***Policy CI-3***:

> ***Arterial:*** *Streets which provide the principle network for traffic flow in the community, connecting areas of major activity to each other and to state highways and important County roads. Arterials will generally include up to four lanes (two in each direction)* [39] *, although total widths of six lanes may be appropriate in some locations. To reduce traffic interruptions and improve safety, direct access via driveways is generally not permitted.*
>
> ***Local Streets:*** *Roadways which provide access to individual homes and businesses. Local streets have one lane in each direction. Local streets are shown on the Circulation Map for informational purposes only; the General Plan does not define the desired alignments of local streets.*

Policy CI-5: *The City shall require the dedication or irrevocable offer of dedication of right of way for all arterials and collectors at the earliest opportunity in the development process in order to implement the Roadway Master Plan. Generally, the earliest opportunity to implement this policy will be the first of the following discretionary approvals which is available:*

- *Change of Zoning or General Plan Land Use Designation;*
- *Approval of a Comprehensive Plan, Specific Plan, or other master plan;*
- *Any subdivision map (such as a parcel map or tentative tract map);*
- *Conditional Use Permit;*
- *Site plan or design approval*

If any of these discretionary approvals is not being sought, right of way dedication may be required as a condition of building permit approval.

Policy CI-6: *The City shall protect future right-of-way needed for freeways, arterial and collector streets, and interchanges and railroad corridors and crossings from encroachment by development or other incompatible uses or structures.*

Policy CI-7: *In order to ensure adequate circulation capacity of collectors, arterials and larger streets, turning movements and driveway approaches to adjoining properties and onto local streets shall be limited so through traffic speeds are not reduced by more than 10 (ten) miles per hour based on the street design*

[39] Left- or right-turn lanes or median turn lanes do not count toward the lane totals

speed. This policy will not be applied where the City determines that existing land use patterns and unique site constraints make it impossible. Direct access to sites along arterial and larger streets should typically be provided from adjacent local streets or signalized shared access points. This should be implemented as early as possible in development when zoning and parcels are established.

Policy CI-11: *Development projects shall be required to provide funding or to construct roadway/intersection improvements to implement the City's Circulation Master Plan. The payment of established traffic impact or similar fees shall be considered to provide compliance with the requirements of this policy with regard to those facilities included in the fee program, provided that the City finds that the fee adequately funds all required roadway and intersection improvements. If payment of established fees is used to provide compliance with this policy, the City may also require the payment of additional fees if necessary to cover the fair share cost of facilities not included in the fee program.*

Policy CI-12: *New development shall provide funding acceptable to the City for the construction and permanent maintenance of all roadway facilities. Potential funding mechanisms may include assessment districts, community facility districts, or other methods.*

Policy CI-14: *"Right-of-way" shall be defined as including the full paved roadway, landscape strip, utility easements, bicycle/pedestrian pathway/trail, and potential transit travel lanes along public roadways.*

Policy CI-16: *Proposals to allow left turn lanes from collector and arterial streets shall be evaluated on a case-by-case basis, and allowed only where an engineering analysis confirms that traffic operations and safety conditions are not negatively impacted.*

Policy CI-17: *Shared driveways, driveway consolidation, reciprocal access easements, and cross access easements to commercial centers shall be required along arterials and collector roads in new development projects and in the redevelopment or redesign of existing development to minimize traffic hazards associated with driveways and curb cuts.*

Policy CI-20: *To keep Local Street volume within design capacity, street length (not block length) shall be kept under 1,600 feet or two blocks where possible unless interrupted by an arterial or collector street.*

Policy CI-21: *Installation and maintenance of curb, gutter, sidewalk and paving on Local streets shall be the responsibility of affected property owners.*

Policy CI-22: *The City shall seek to maintain Level of Service (LOS) C at all times on all roadways and intersections in Madera, with the following exceptions:*

- *a) On arterial roadways or roadways with at-grade railroad crossings that were experiencing congestion exceeding LOS C during peak hour travel times as of the date this General Plan Update is adopted the City shall seek to maintain LOS D or better.*
- *b) This policy does not extend to freeways (where Caltrans policies apply) or to private roadways.*
- *c) In the Downtown District (as defined in the Land Use Element of this General Plan), the City shall seek to maintain LOS D.*

Policy CI-23: *Projects contributing traffic to roadways exceeding the desired level of service per Policy CI-22 may be required to fund system wide traffic improvements, including cumulative traffic mitigation at off-*

site locations (as applicable), and to assist in promoting non-vehicular transportation as a condition of project approval.

4.17.2 Impact Assessment

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

Less than Significant Impact. The Project would be required to comply with all Project-level requirements implemented by a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Compliance is further discussed below. Overall, the Project would not conflict with a program plan, ordinance, or policy addressing the circulation system and a less than significant impact would occur.

Roadway Facilities

Access to the site would be provided by two (2) points of ingress/egress from Fairview Street, which is proposed to be improved with curb, gutter, sidewalk, and landscaping on the east side of the street. There would be no access to the south road frontage, Ellis Street; however, the Project would dedicate 20 feet to Ellis Street and the frontage would be improved with curb, gutter, sidewalk, and landscaping. Internal circulation within the site would be provided by 37-foot-wide streets and would be designed in accordance with City Standards and would have curb, gutter, and sidewalk. The rights-of-way would be improved in accordance with City standards. Turning radii are also proposed within the subdivision per City standards for emergency access and solid waste vehicle access.

The Project would be required to submit public improvement plans for off-site improvements through the building permit process, for review and approval by the City to ensure improvements would be consistent with adopted standards, specifications, and approved street plans. Through compliance, the Project would result in improvements to the roadway network consistent with the goals, objectives, and policies of the General Plan as described in the Circulation and Infrastructure Element.

Pedestrian and Bicycle Facilities

There are no existing pedestrian facilities (i.e., sidewalks) or bicycle facilities on or within or in the vicinity of the Project site. According to the MCTC Active Transportation Plan (ATP), there is a proposed Class II.B buffered bike lane along Ellis Street. A buffered bike land is similar to standard bicycle lanes except they are enhanced with a striped area between the bicycle lane and the vehicular travel lane. However, the Madera General Plan does not identify the requirements for a bicycle lane in the Project Area. Therefore, the Project would be consistent with the General Plan and ATP and thereby would not conflict with a program, plan, ordinance, or policy addressing bicycle and pedestrian facilities.

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

Less than Significant Impact. Under Senate Bill 743 (SB743), traffic impacts are related to Vehicle Miles Traveled (VMT). The VMT metric became mandatory on July 1, 2020. Senate Bill (SB) 743 requires that relevant CEQA analysis of transportation impacts be conducted using a metric known as vehicle miles traveled (VMT) instead of Level of Service (LOS). VMT measures how much actual automobile travel (additional miles driven) a proposed Project would create on California roads. If the Project adds excessive automobile travel onto roads, then the Project may cause a significant transportation impact. Therefore,

LOS measures of impacts on traffic facilities are no longer a relevant CEQA criteria for transportation impacts.

To implement SB 743, the CEQA Guidelines were amended by adding *Section 15064.3*. According to *Section 15064.3*, VMT measures the automobile travel generated from a proposed Project (i.e., the additional miles driven). Here, 'automobile' refers to on-road passenger vehicles such as cars and light-duty trucks. If a proposed Project adds excessive automobile travel on California roads thereby exceeding an applicable threshold of significance, then the Project may cause a significant transportation impact. n the case that quantitative models or methods are not available to the lead agency to estimate the VMT for the Project being considered, provisions of CEQA Guidelines *Section 15064.3(b)(3)* permits the lead agency to conduct a qualitative analysis. The qualitative analysis may evaluate factors including but not limited to the availability of transit, proximity to other destinations, and construction traffic.

Lastly, *Section 15064.3(b)(4)* of the CEQA Guidelines states that *"[a] lead agency has discretion to evaluate a Project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a Project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revision to model outputs should be documented and explained in the environmental document prepared for the Project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section."* Below is a discussion of the threshold and analysis used to analyze VMT impacts from the proposed Project.

According to page 19 of the Technical Advisory on Evaluating Transportation Impacts in CEQA published by the Governor's Office of Planning and Research (OPR), *"of land use Projects, residential, office, and retail Projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types."* Neither the City of Madera nor the County's Regional Transportation Planning Agency (Madera County Transportation Commission (MCTC)), have established VMT thresholds or guidelines. Since the MCTC and the City of Madera do not have established thresholds or guidelines, the state guidelines, including the Technical Advisory document mentioned above, have been utilized as the default methodology used to analyze VMT impacts.

In April 2018, the Governor's Office of Planning and Research (OPR) issued the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) (revised December 2018) to provide technical recommendations regarding VMT, thresholds of significance, and mitigation measures for a variety of land use project types. According to OPR's Technical Advisory, lead agencies may use "screening thresholds" to identify when a project should be expected to create a less-than-significant impact without conducting a detailed study. One of the screening methods to screen out VMT impacts for residential project is to use map-based screening. Residential projects that are in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Generally, a travel survey or travel demand model can illustrate areas that are currently below threshold VMT. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential projects from needing to prepare a detailed VMT analysis.

The MCTC has established a screening map to determine if project impacts related to VMT can be determined less than significant based on proposed use and project location. [40] The map utilizes the Madera County Travel Demand Model. According to the VMT Baseline Table, *"The SB743 VMT Tool can be used to calculate VMT per capita by TAZ for a residential development project, or VMT per job by (Transportation Analysis Zone) TAZ for an office development project for SB743 analysis using the MCTC Model outputs. The Madera County subregional baseline VMT per capita/job for the selected TAZ will also be reported for screening purposes."* [41]

According to the above-mentioned document, *"VMT per capita were generated by residential, or home based, trips at the production ends. For residential VMT we summed up all outbound home-based trips, including HW, HS, HK, HC, HO trip purposes, from each internal TAZ. The O-D distances were skimmed off the highway network between each O-D pair in the model including gateway TAZs. For the IX/XI trips, external average trip lengths, per gateway, were added to the skimmed O-D distances. The product of total residential trips and the total O-D distance was the total residential VMT for that TAZ. The baseline VMT per capita for an air basin was calculated by dividing the total residential VMT by the total population in that air basin."* As such, Madera County VMT Screening Maps for VMT per capita are used for the proposed Project since the Project facilitates residential development, which generates home-based trips.

According to the screening map, the proposed Project is located in Transportation Analysis Zone (TAZ) 301. TAZ 301 has a total of 934 home-based VMT with a current employment population of 178. This is equivalent to 5.25 VMTs per job, which is more than 15% below the County Average of 10.0 VMT per capita. Given that this is below the identified threshold of significance, it can be determined that a less than significant impact would occur, and the Project would not conflict or be inconsistent with CEQA Guidelines *Section 15064 (b)*.

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 Project design does not contain any geometric design features that would create hazards. Implementation of the Project would require the improvement and expansion of the Fairview Street and Ellis Street adjacent to the Project site. The site would be accessible via two (2) points of ingress/egress from Fairview Street. Adequate inside/outside turning radii are proposed for fire and solid waste vehicle access. The Project would be required to submit public improvement plans through the Building Permit process for review and approval by the City to ensure offsite improvements would be consistent with adopted City Standards, Specifications, and the approved street plans. Compliance with such standards, specifications, and plans would ensure that any traffic hazards are minimized. Lastly, the Project proposes a residential development of a site that is planned and zoned for residential use within an area comprising existing and planned residential uses. Therefore, the Project does not propose an incompatible use because it is consistent with the existing development in the area and is similar in nature to the surrounding uses. As a result, implementation of the Project would result in a less than significant impact related to hazards due to roadway design features or incompatible uses.

[40] Madera County Transportation Commission. Vehicles Miles Traveled Resources. Accessed June 19, 2024, https://www.maderactc.org/transportation/page/vehicle-miles-traveled-resources

[41] Madera County Transportation Commission. (2019). SB 743 VMT Tool. Accessed June 19, 2024, https://www.maderactc.org/sites/default/files/fileattachments/transportation/page/6137/sb743_vmt_baseline.pdf

d) Would the project result in inadequate emergency access?

Less than Significant Impact. The Project does not involve a change to any emergency response plan. In addition, the Project site is subject to review by the City to ensure adequate site access including emergency access. In the case that Project construction requires lane closures, access through existing roadways would be maintained through standard traffic control and therefore, potential lane closures would not affect emergency evacuation plans. Thus, a less than significant impact would occur because of the Project.

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:	☐	☒	☐	☐
1. 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	☐	☒	☐	☐
2. 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

See Section 4.5.

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

Less than Significant with Mitigation Incorporated. As discussed in Section 4.5, the Project site does not contain any known property or site features that are eligible for listing in the California Register of Historical Sources, or in a local register of historical resources as defined in PRC *Section 5020.1(k)*. Nevertheless, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. Incorporation of ***Mitigation Measure CUL-1*** (described in Section 4.5) would reduce any potentially significant impacts to less than significant.

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 with Mitigation Incorporated. The Project site has not been determined by the City of Madera to be a significant resource pursuant to Public Resources Code *Section 5024.1* and to-date, no substantial information has been provided to the City to indicate otherwise. Further, the Project site, inclusive of site features, is not listed in the California Register of Historical Sources. However, there is some possibility that a non-visible, buried site may exist and may be uncovered during ground disturbing construction activities which would constitute a significant impact. Incorporation of ***Mitigation Measures CUL-1*** and ***CUL-2*** (described in Section 4.5) would reduce any potentially significant impacts to less than significant. In such a case, the California Native American Heritage Commission would also be notified. Thus, if such resources were discovered, implementation of the required condition would further reduce the impact to less than significant. As such, the Project would have a less than significant impact.

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 Project site is proposed to be within city limits and thus, future development of the Project site would be required to connect to water, sewer, stormwater, and wastewater services. Natural gas, electricity, and telecommunications are provided by private companies. Each utility system is described below.

Water

The City of Madera water supply system is described in Section 4.10.

Wastewater

The City of Madera Sewer Division is responsible for the maintenance and operation of the city's sewer collection system, with a goal to effectively collect and deliver wastewater to the treatment plant. In the City of Madera, wastewater is collected through a network of sanitary systems of approximately 140 miles

of sewer mains ranging from six (6) to 48 inches in diameter in addition to five (5) sewer lift stations. The affluent is gravity-fed to the Wastewater Treatment Plant (WWTP) that is located seven (7) miles west of the City. The WWTP is a 10.1 million gallons per day (MGD) primary and secondary treatment facility that currently operates at an average flow of 5.7 MGD. To estimate the buildout wastewater flows from the City's Planning Area (i.e., buildout accounted for in the General Plan), the SSSMP utilized unit flow factors based on land use designations.

Solid Waste

Solid waste recycling and composting services are provided by a private contractor, Mid Valley Disposal. The Madera General Plan outlines goals and policies for source reduction and recycling including the following policies listed below.

There is currently one active, permitted landfill that services available to the City of Madera. The Fairmead Solid Waste Disposal Site (Solid Waste Information System [SWIS] Number: 20-AA-0002) is a Class III landfill located at 21739 Avenue 22 At Road 19 south of the City of Chowchilla. The Fairmead Solid Waste Disposal site is owned by the County of Madera and operated by Madera County Public Works Division. It is located on approximately 120 acres with a total permitted disposal area of 77 acres surrounded by agricultural, open space, residential, and rural land uses. This landfill accepts wood waste, dead animals, agricultural, construction/ demolition, green materials, industrial, tires, asbestos, and mixed municipal wastes with a maximum of 1,100 tons accepted per day. The estimated permitted capacity of the landfill is 9.4 million cubic yards, with approximately 5,552,894 cubic yards of capacity remaining. As of 2020, the estimated closure date of the landfill is 2028.

Circulation and Infrastructure Policy CI-62: The City will promote solid waste source reduction, reuse, recycling, composting and environmentally safe transformation of waste. The City will seek to comply with the requirements of AB 939 with regard to meeting state mandated targets for reductions in the amount of solid waste generated in Madera.

Circulation and Infrastructure Policy CI-63: The City itself will be a leader in promoting waste reduction and recycling through a variety of means when feasible, including:

- Adopting requirements for the use of recycled base materials (e.g., recycled raw batch materials, rubberized asphalt from recycled tires, and other appropriate materials), if practicable, in requests for bids for public roadway construction projects.
- Procurement policies and procedures, which facilitate purchase of recycled, recyclable, or reusable products and materials where feasible.
- Requiring contractors to provide products and services to the City, including printing services, demonstrating that they will comply with the City's recycled materials policies.

Circulation and Infrastructure Policy CI-64: The City supports efforts to provide solid waste resource recovery facilities and household hazardous waste collection facilities convenient to residences, businesses, and industries.

Circulation and Infrastructure Policy CI-65: The City will promote waste diversion and material recycling in private development, business and operations, and will encourage businesses or nonprofit entities to provide source reduction services.

Stormwater

The City of Madera storm drainage system is described in Section 4.10.

Natural Gas and Electricity

PG&E, the natural gas and electric service provider for the area, incrementally expands and updates its service system as needed to serve its users.

Telecommunications

Accordingly, telecommunications providers in the area incrementally expand and update their service systems in response to usage and demand.

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?

Less than Significant Impact. Once annexed, the Project site would be required to connect to water, stormwater, and wastewater services, and utilize solid waste collection services. Natural gas, electricity, and telecommunications would be provided by private companies. The City has reviewed the Project to determine adequate capacity in these systems and ensure compliance with applicable connection requirements. Some of the requirements are listed below

Water: The Project would install the following water supply facilities in accordance with the City of Madera Water System Master Plan as listed below.

- 24-inch water main from the intersection of Ellis Street and Country Club Drive to the west edge of the intersection of Ellis Street and Fairview Street.
- 8-inch water main from the intersection of Ellis Street and Fairview Street to the northerly limit of Fairview Street unless fire flow analysis indicates need for a larger pipe.
- Water services placed 3 feet from either property line, water meters within the City's right-of-way, and backflow prevention device located on private property.

Wastewater Treatment: The Project would install sanitary sewer facilities, including 4-inch sewer clean-outs located in a dedicated public utility easement, sewer lines that are sized accordingly (minimum of 8 inches in diameter), sewer main connections to existing city main, and manholes.

Storm Water Drainage: The storm runoff from the Project site is planned to go to the basin labeled as P07 in the 2014 Storm Drainage System Master Plan. The Project is required to acquire sufficient additional right-of-way, as necessary, to expand the basin and construct other necessary facilities in accordance with criteria in the Storm Master Plan and City standard drawings, as applicable, to convey and hold storm runoff. A detailed drainage study is required.

In addition to connections to water, stormwater, solid waste, and wastewater services, the Project would be served by PG&E for natural gas and electricity and by the appropriate telecommunications provider for the Project site. Therefore, all wet and dry public utilities, facilities, and infrastructure are in place and

available to serve the Project site without the need for relocated, new, or expanded facilities beyond what is planned in the Water System Master Plan and the 2014 Storm Drainage System Master Plan. While new utility and service connections would need to be extended to and from the Project site (e.g., sewer, stormwater runoff, electrical), these new connections would not result in a need to modify the larger off-site infrastructure beyond what is planned. Therefore, the Project would have a less than significant impact.

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?

Less than Significant Impact. As discussed in detail in Section 4.10, groundwater is the sole source of water supply for the City. Groundwater is supplied through 18 active wells that pump from the Madera Subbasin of the San Joaquin groundwater basin directly into the City's distribution system. Management and sustainability of groundwater supplies is discussed in the Madera Subbasin GSP, Madera Regional GMP, UWMP, and WSMP.

Water supply reliability is assessed based on the characteristics of the City's water supplies during various water year types. The City's 2020 UWMP defines these water year types as follows.

- Normal Year: This condition represents the water supplies the City considers available during normal conditions. This could be a single year or an average range of years that most closely represents the average water supply available to the supplier. The City's representative normal year is 1992, during which, the City supplied 11,868 acre-feet (AF) of water.
- Single Dry Year: The single dry year is recommended to be the year that represents the lowest water supply available to the City. The single dry water year is largely unaffected by dry weather conditions, due to the City's reliance on groundwater. The year 2013 represents the single dry year for the City, during which, the City supplied 11,327 AF of water.
- Multiple Dry Year Period: This period represents the lowest average water supply available to the City for a consecutive multiple year period, generally five (5) years or more. For the five-year drought period, the City evaluated the volume of water that was supplied during the State's most recent drought period, which occurred during the years of 2012 to 2016. During this period, the annual volume of water that was supplied was 10,635 AF (2012) to 8,393 AF (2016). Between 2012 and 2016, the volume of water supplied decreased at an average annual rate of approximately 4.2 percent.

According to the UWMP, the City is expected to have adequate water supplies during normal years, single dry year, and multiple dry year periods to meet its projected demands through 2040. The UWMP also indicates that based on the resiliency of the groundwater, it is not anticipated that a single or multiple dry year period will reduce the availability of water supply to the City. Anticipated groundwater supplies are sufficient to meet all demands through the year 2040 even under drought conditions. Since project water demands are expected to correlate directly with projected population estimates, and the Project would not generate population that exceed the projection (see Section 4.14), the Project would have a less than significant impact on water demand and supply.

Furthermore, as discussed under Section 4.10, adherence to connection requirements and recommendations pursuant to the City's conservation efforts (e.g., compliance with California Plumbing Code, efficient appliances, efficient landscaping, etc.) should not negatively impact water supply or impede water management. In particular, the proposed Project would be required to be built accordance with all mandatory outdoor water use requirements as outlined in the applicable California Green Building

Standards Code, Title 24, Part 11, *Section 4.304 – Outdoor Water Use* and verified through the building permit process. As a residential development that would contain landscaping pursuant to SMC regulations, future development shall comply with the updated Model Water Efficient Landscape Ordinance (MWELO) (California Code of Regulations, Title 23, Chapter 2.7, Division 2), as implemented and enforced through the building permit process. Therefore, through compliance, the potential for the Project to substantially decrease groundwater supplies is limited and impacts would be less than significant.

Overall, based on the information collected from the UWMP, the Project would not generate significantly greater water demand as to substantially decrease groundwater supplies. Additionally, adherence to connection requirements and recommendations pursuant to water conservation efforts as well as compliance with applicable California Green Building Standards Code and MWELO would reduce water demand and reduce the potential for the Project to substantially decrease water supply available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. For these reasons, the Project would have a less than significant impact.

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?

Less than Significant Impact. The City of Madera owns and operates a citywide wastewater collection and treatment system. Sanitary sewer service would be provided to the Project site through sewer lines that connect to the existing city main along the entire Project frontage on Ellis Street. Sewer lines installed to serve the Project would be sized accordingly with a minimum of 8 inches in diameter. The City has reviewed the Project to determine adequate capacity in these systems and ensure compliance with applicable connection requirements. While the Project would generate additional wastewater beyond existing conditions, the estimated generation would be within the capacity of the WWTP. As such, impacts would be less than significant.

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?

Less than Significant Impact. The Project would be required to comply with Madera Municipal Code, Title V: Sanitation and Health, Chapter 3: Garbage, Refuse, and Recycling, which outlines requirements and specifications for solid waste collection. For construction and demolition recycling, the Project would be subject to compliance with Madera Municipal Code *Section 5-3.30*: *Construction and Demolition Debris Recycling* which is in accordance with Assembly Bill (AB) 939 and the California Green Building Code (CALGreen). Compliance with these measures and policies would serve to reduce impacts of solid waste by promoting regular collection and encouraging the recycling of materials. For this reason, the Project would have a less than significant impact.

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

Less than Significant Impact. As described under criterion d) above, Project construction and operations would not generate substantial amounts of solid waste and thus, the Project would not conflict with any federal, state, and local management and reduction statutes and regulations related to solid waste.

Further, the Project would be subject to compliance with existing statutes and regulations by the City, state, or federal law. Therefore, the Project would have a less than significant impact.

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 Area is located on a relatively flat property in an area planned for urban uses. According to the California Department of Forestry and Fire Protection (Cal Fire), the Project Area is located within a Local Responsibility Area (LRA) and is not within a Fire Hazard Severity Zone (FHSZ). [42] Additionally, the Project would be required to be developed and operated in compliance with all regulations of the current California Fire Code (CFC).

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?

Less than Significant Impact. The Project would not impair access to the existing roadway network. Construction may require lane closure; however, these activities would be short-term and access through Ellis Street and/or Fairview Street would be maintained through standard traffic control. Following

[42] Cal Fire. (2024). Fire Hazard Severity Zone Viewer. Accessed on June 19, 2024, https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/

construction, the roadways would continue to provide access to the site. Safe and convenient vehicular and pedestrian circulation would be provided in addition to adequate access for emergency vehicles. To determine and ensure adequate vehicular and pedestrian circulation and emergency vehicle access, the Project has been reviewed and conditioned by the City of Madera Fire and Building Department for compliance with applicable code and regulations including applicable emergency response and evacuation plans. Therefore, the Project would not substantially impair any emergency response plan or emergency evacuation plan and less than significant impact would occur.

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?

No Impact. The Project Area is located on a relatively flat property with minimal slope and is not in an area that is subject to strong prevailing winds or other factors that would exacerbate wildfire risks. The site is highly disturbed and is not located within a wildland (i.e., wild, uncultivated, and uninhabited land), which precludes the risk of wildfire. Further, the Project site is within a LRA and is not identified by Cal Fire to be in a FHSZ. For these reasons, no impact would occur as a result of this Project.

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?

Less than Significant Impact. The Project Area would be located within City limits. Therefore, all existing and proposed infrastructure such as roads and utilities would be required to be maintained accordingly. As previously discussed, all proposed Project components (including utilities, roadway, buildings, walls, and landscaping) would be located within the boundaries of the Project site and have been reviewed and/or conditioned by the City for compliance with applicable codes and regulations. Through compliance, such infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment and a less than significant impact would occur.

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?

No Impact. The Project Area is not located in or near state responsibility or lands classified as FHSZ. The topography of the Project site is relatively flat with stable, native soils, and the site is not in the immediate vicinity of rivers or creeks that would be more susceptible to landslides. Therefore, no impact would occur.

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 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 Incorporated. The analyses of environmental issues contained in this Initial Study indicate that the Project is not expected to have substantial impact on the environment or on any resources identified in the Initial Study. Standard requirements that will be implemented through the entitlement process and the mitigation monitoring and reporting program with mitigation measures that have been incorporated in the project to reduce all potentially significant impacts to less than significant. Therefore, the Project would have a less than significant impact.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are

considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than 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. Due to the nature of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. All Project-related impacts were determined to be less than significant including mitigation measures. The Project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increased need for housing, increase in traffic, air pollutants, etc.). As such, Project impacts are not considered to be cumulatively considerable given the effective mitigants proposed to ensure less than significant impacts. The impact is therefore less than significant.

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

Less than Significant Impact. The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Standard requirements and conditions have been incorporated in the project to reduce all potentially significant impacts to less than significant. Therefore, the Project would have a less than significant impact.

Chapter 5 Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Ellis/Fairview Residential Subdivision (Annexation 2024-01, Prezone/Rezone 2024-02, General Plan Amendment 2024-01, Tentative Subdivision Map 2024-01, Precise Plan 2024-01) in the City of Madera. The MMRP lists mitigation measures recommended in the IS/MND for the Project and identifies monitoring and reporting requirements.

Table 5-1 presents the mitigation measures identified for the proposed Project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number.

The first column of Table 5-1 identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure. The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last columns will be used by the City of Madera to ensure that individual mitigation measures have been complied with and monitored.

Table 5-1 Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
Biological Resources					
Mitigation Measure BIO-1: If Project activities must occur during the nesting season (February 1 to September 15), pre-activity nesting bird surveys shall be conducted within seven (7) days prior to the start of construction on the construction site and a 500-foot buffer for raptors. 1. If no active nests are found, no further action is required. However, existing nests may become active, and new nests may be built at any time prior to and throughout the nesting season, including when construction activities are in progress. 2. If active nests are found during the survey or at any time during construction of the Project, an avoidance buffer ranging from 50 feet to 500 feet may be required, with the avoidance buffer from any specific nest being determined by a qualified biologist. The avoidance buffer will remain in place until the biologist has determined that the young are no longer reliant on adults or the nest. Work may occur within the avoidance buffer under the approval and guidance of the biologist, but full-time monitoring may be required. The biologist shall have the ability to stop construction if nesting adults show any sign of distress.	14 days prior to Project Construction	Prior to and During Project Construction	City of Madera	Review of Documentation Submittal	
Mitigation Measure BIO-2: 14 days prior to Project activities, a pre-construction survey shall be conducted by a qualified biologist knowledgeable in the identification of burrowing owls. The pre-construction survey shall include walking transects to identify presence of burrowing owls and their burrows. For burrowing owls, the transects shall be spaced at no greater than	14 days prior to Project Construction	Prior to and During Project Construction	City of Madera	Review of Documentation Submittal	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
30-foot intervals to obtain a 100 percent coverage of the Project site and a 250-foot buffer. 1. If no evidence of this species is detected, no further action is required. 2. If dens or burrows that could support these species are discovered during the pre-construction survey, avoidance buffers outlined below shall be established. Unless a qualified biologist approves and monitors development activity, no work shall occur within these buffers. Burrowing Owl (active burrows): a. Non-breeding season (September 1 to January 31): 160 feet b. Breeding season (February 1 to August 31): 250 feet					
Cultural Resources					
Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether a historical resources evaluation shall be completed to confirm if the resources qualify as historical resources as defined by Section 15064.5(a) of CEQA Guidelines. . The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) in architectural history or history. The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation to identify any potential historical resources within the proposed project area. All properties 45 years of	During Project Construction	During Project Construction	City of Madera	Review of Documentation Submittal	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
age or older shall be evaluated within their historic context and documented in a report meeting the State Office of Historic Preservation guidelines. All evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the City for review and concurrence. Any relocation, rehabilitation, or alteration of the resource shall be implemented consistent with the Secretary of the Interior's Standards for the Treatments of Historic Properties (Standards). In accordance with CEQA, a project that has been determined to conform with the Standards generally would not cause a significant adverse direct or indirect impact to historical resources (14 CCR Section 15126.4[b][1]). Application of the Standards shall be overseen by a qualified architectural historian or historic architect meeting the PQS. In conjunction with any development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City for review and concurrence, in addition to the historical resources evaluation. If significant historical resources are identified on the development site and compliance with the Standards and or avoidance is not feasible, the applicant or developer shall provide a report explaining why compliance with the Standards and or avoidance is not feasible for the City's review and approval. Site-specific mitigation measures shall be established and undertaken, including, but not limited to, documentation of the historical resource in the form of a Historic American Buildings Survey-Like report. The report shall be commissioned by the project applicant or their consultant to comply with the					

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
Secretary of the Interior's Standards for Architectural and Engineering Documentation and shall generally follow the Historic American Buildings Survey Level III requirements, including digital photographic recordation, detailed historic narrative report, and compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the PQS and submitted to the City prior to issuance of any permits for demolition or alteration of the historical resource.					
Mitigation Measure CUL-2: In the event of the accidental discovery or recognition of any human remains on the Project site during construction, the following steps in accordance with Section 15064.5 of the CEQA Guidelines shall be taken prior to the continuation of, and during, construction activities, in order to mitigate potential impact: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The coroner of the County in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required; and, b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.	During Project Construction	During Project Construction	City of Madera	Review of Documentation Submittal	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.					
Geology and Soils					
Mitigation Measure GEO-1: Subsequent to a preliminary City review of the project grading plans, a soils report, inclusive of information on expansive soils, shall be conducted. The following procedures shall be followed: • If expansive soils are not found, excavation and/or construction activities can commence. • If there is evidence that the Project site includes expansive soils, foundations for buildings and structures founded on expansive soils shall be designed in accordance with IBC *Section 1808.6.1* or *1808.6.2* unless 1) the expansive soil is removed in accordance with *Section 1808.6.3* or 2) the building official approves stabilization of the soil in accordance with *Section 1808.6.4*.	Prior to Project Construction	Prior to Project Construction	City of Madera	Review of Documentation Submittal	
Mitigation Measure GEO-2: If any paleontological resources are encountered during ground-disturbance activities, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may	During Project Construction	During Project Construction	City of Madera	Review of Documentation Submittal	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or another appropriate facility regarding any discoveries of paleontological resources. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations, and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects or such effects must be mitigated. Construction in that area shall not resume until the resource-appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.					

Appendix A

CNDDB Occurrence Report

A CNDDB Occurrence was prepared for the proposed Project by the California Department of Fish and Wildlife California Natural Diversity Database on June 13, 2024.

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Madera (3612081))

Map Index Number:	30806	**EO Index:**	46463
Key Quad:	Madera (3612081)	**Element Code:**	AAAAA01181
Occurrence Number:	507	**Occurrence Last Updated:**	2001-11-09

Scientific Name: *Ambystoma californiense pop. 1*

Common Name: California tiger salamander - central California DPS

Listing Status: **Federal:** Threatened

State: Threatened

CNDDB Element Ranks: **Global:** G2G3T3

State: S3

Rare Plant Rank:

Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

General Habitat:

LIVES IN VACANT OR MAMMAL-OCCUPIED BURROWS THROUGHOUT MOST OF THE YEAR; IN GRASSLAND, SAVANNA, OR OPEN WOODLAND HABITATS.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed:	1944-12-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1944-12-XX	**Occurrence Rank:**	None
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Extirpated		

Location:

MADERA. NO OTHER LOCATION INFORMATION GIVEN.

Detailed Location:

Ecological:

Threats:

General:

MVZ #42705 COLLECTED DEC 1944 BY A. HAWBECKER. JENNINGS CONSIDERS THIS LOCATION EXTIRPATED.

PLSS:	T11S, R17E, Sec. 24 (M)	**Accuracy:**	1 mile	**Area (acres):**	0
UTM:	Zone-10 N4094507 E761603	**Latitude/Longitude:**	36.96034 / -120.06173	**Elevation (feet):**	270

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

JEN01U0001	JENNINGS, M. (RANA RESOURCES) - LOCALITY RECORDS FOR AMBYSTOMA CALIFORNIENSE IN CALIFORNIA, 1992, JENNINGS & HAYES SPECIAL CONCERN HERP DATABASE WITH LOCATIONS MARKED AS PRESENT OR EXTIRPATED 2001-11-07
MVZ01S0013	MVZ SPECIMEN DATABASE QUERY (UNIVERSITY OF CALIFORNIA, BERKELEY) - MVZ SPECIMENS FOR AMBYSTOMA CALIFORNIENSE COLLECTED BETWEEN 1912-1990 2001-08-17

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A7971	**EO Index:**	109759
Key Quad:	Madera (3612081)	**Element Code:**	AAAAA01181
Occurrence Number:	1049	**Occurrence Last Updated:**	2021-05-18

Scientific Name: *Ambystoma californiense pop. 1*

Common Name: California tiger salamander - central California DPS

Listing Status: **Federal:** Threatened

State: Threatened

Rare Plant Rank:

Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3T3

State: S3

General Habitat:

LIVES IN VACANT OR MAMMAL-OCCUPIED BURROWS THROUGHOUT MOST OF THE YEAR; IN GRASSLAND, SAVANNA, OR OPEN WOODLAND HABITATS.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed:	2018-07-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2018-07-10	**Occurrence Rank:**	Poor
Owner/Manager:	PVT-BNSF RAILROAD	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

RAILROAD RIGHT OF WAY ACOSS FRESNO RIVER AND NEAR RAYMOND RD CROSSING, 1.0 MI NE OF HWY 145 AT STOREY RD IN MADERA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES. DETECTIONS WERE ASSOCIATED WITH BIOLOGICAL MONITORING DURING CONSTRUCTION ACTIVITIES ASSOCIATED WITH RAILROAD IMPROVEMENTS FOR HIGH SPEED RAIL INCLUDING NEW BRIDGE CONSTRUCTION OVER FRESNO RIVER.

Ecological:

PONDED AREAS ADJACENT TO DIRT ROADS AND RAILROAD TRACKS, IN HEAVILY DISTURBED GRASSLAND, AS WELL AS ALONG FRESNO RIVER CHANNEL.

Threats:

FIRST POND OBSERVED DEEMED LIKELY TO DRY BEFORE METAMORPHOSIS. ACTIVE, GROUND DISTURBING CONSTRUCTION ACTIVITIES.

General:

100S OF LARVAE OBSERVED IN PONDED AREA ALONG DIRT ROAD ON 29 MAR 2017. 100S MORE WELL-DEVELOPED LARVAE OBSERVED IN ADDITIONAL POOLS ON 10 APR 2017. 1 ADULT FEMALE FOUND WONDERING THROUGH CONSTRUCTION SITE ON 10 JUN 2018.

PLSS:	T11S, R18E, Sec. 8, SW (M)	**Accuracy:**	specific area	**Area (acres):**	22
UTM:	Zone-10 N4097373 E764304	**Latitude/Longitude:**	36.98538 / -120.03043	**Elevation (feet):**	293

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

BAY17F0002	BAYNE, K. (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR AMBYSTOMA CALIFORNIENSE 2017-03-29
BAY17F0003	BAYNE, K. (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR AMBYSTOMA CALIFORNIENSE 2017-04-10
DOC18F0001	DOCKENDORF, R. & D. NEWMAN (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR AMBYSTOMA CALIFORNIENSE 2018-07-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	B7294	**EO Index:**	120426
Key Quad:	Madera (3612081)	**Element Code:**	AAAAA01181
Occurrence Number:	1224	**Occurrence Last Updated:**	2021-05-18

Scientific Name: *Ambystoma californiense pop. 1*

Common Name: California tiger salamander - central California DPS

Listing Status:
Federal: Threatened
State: Threatened

Rare Plant Rank:

Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks:
Global: G2G3T3
State: S3

General Habitat:

LIVES IN VACANT OR MAMMAL-OCCUPIED BURROWS THROUGHOUT MOST OF THE YEAR; IN GRASSLAND, SAVANNA, OR OPEN WOODLAND HABITATS.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed:	2018-05-04	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2018-05-04	**Occurrence Rank:**	Fair
Owner/Manager:	STATE-HIGH SPEED RAIL AUTH	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST END OF AVENUE 17 AT RAILROAD TRACKS, ABOUT 2.5 MILES NNE OF CENTRAL MADERA.

Detailed Location:

MAPPED WITH RESPECT TO PROVIDED COORDINATES AND AERIAL IMAGERY.

Ecological:

RURAL RESIDENTIAL DEMOLITION SITE RELATING TO HIGH SPEED RAIL CONSTRUCTION AND EMINENT DOMAIN.

Threats:

THREATENED BY ACTIVITIES ASSOCAITED WITH DEMOLITION AND CONSTRUCTION RELATING TO HIGH SPEED RAIL.

General:

1 ADULT FOUND UNDER DEBRIS PILE DURING DEMOLITION ACTIVITIES ON 4 MAY 2018.

PLSS:	T11S, R18E, Sec. 7, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-10 N4098546 E763058	**Latitude/Longitude:**	36.99629 / -120.044	**Elevation (feet):**	298

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

CRA21D0001	CRAIG, M. (RINCON CONSULTANTS, INC.) - EXCEL TABLE OF 2017-2021 CALIFORNIA TIGER SALAMANDER OBSERVATIONS AND RELOCATIONS RELATING TO HIGH SPEED RAIL, MADERA CO. [UPDATE JAN 2021 - 19 MAR 2021; 20 NEW RECORDS] 2021-03-XX
GAR20D0001	GARZA, A. (RINCON CONSULTANTS, INC.) - EXCEL TABLE OF 2017-2020 CALIFORNIA TIGER SALAMANDER OBSERVATIONS AND RELOCATIONS RELATING TO HIGH SPEED RAIL, MADERA CO. [NOV 2017 - MAY 2020] 2020-10-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	B7359	**EO Index:**	120432
Key Quad:	Madera (3612081)	**Element Code:**	AAAAA01181
Occurrence Number:	1225	**Occurrence Last Updated:**	2021-05-18

Scientific Name: *Ambystoma californiense pop. 1*

Common Name: California tiger salamander - central California DPS

Listing Status: **Federal:** Threatened
State: Threatened

Rare Plant Rank:

Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3T3
State: S3

General Habitat:

LIVES IN VACANT OR MAMMAL-OCCUPIED BURROWS THROUGHOUT MOST OF THE YEAR; IN GRASSLAND, SAVANNA, OR OPEN WOODLAND HABITATS.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed:	2019-05-02	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2019-05-02	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

E SIDE OF RAILROAD ABOUT 0.7 MILES S OF AVENUE 15, 0.8 MILES E OF ROAD 29 AT AVE 14 1/2, 3 MILES E OF CENTRAL MADERA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES AND MAPS. CURRAN RANCH VERNAL POOL #1.

Ecological:

2,520 ACRE RANCH WITH PORTIONS THAT CONSISTED OF AGRICULTURE (ORCHARDS), VERNAL POOLS, AND RAILROAD RIGHT OF WAY. WESTERN SPADEFOOT ALSO FOUND HERE.

Threats:

General:

DETECTED DURING AQUATIC SAMPLING ON 3 APR 2019 AND 2 MAY 2019.

PLSS:	T11S, R18E, Sec. 21, W (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-10 N4094598 E766751	**Latitude/Longitude:**	36.95971 / -120.00395	**Elevation (feet):**	286

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

OBR19F0003	O'BRIEN, S. & B. HELM (HELM BIOLOGICAL CONSULTING) - FIELD SURVEY FORM FOR AMBYSTOMA CALIFORNIENSE 2019-05-02
SMI19D0003	SMITH, E. (VOLLMAR CONSULTING) - MANDATORY WILDLIFE REPORT [SC-009677] 2019-XX-XX
VOL19R0001	VOLLMAR, J. (VOLLMAR CONSULTING) - CURRAN RANCH MADERA COUNTY, CA 2019 90-DAY REPORT 2019-11-XX
VOL19R0008	VOLLMAR, J. (VOLLMAR CONSULTING) - 2019 ANNUAL SURVEY REPORT FOR RECOVERY PERMIT # TE-035336-6.1 2019-12-26

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B4670
Key Quad: Kismet (3712011)
Occurrence Number: 1257

EO Index: 117610
Element Code: AAABF02020
Occurrence Last Updated: 2020-01-07

Scientific Name: *Spea hammondii*
Common Name: western spadefoot

Listing Status: **Federal:** Proposed Threatened
State: None

CNDDB Element Ranks: **Global:** G2G3
State: S3S4

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

General Habitat:

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

Micro Habitat:

VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Last Date Observed: 2015-02-12
Last Survey Date: 2015-02-12
Owner/Manager: PVT
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

0.6 AIR MILE NW OF THE JUNCTION OF HIGHWAY 99 AND AVENUE 17, NORTH OF MADERA MUNICIPAL AIRPORT, MADERA.

Detailed Location:

MAPPED TO COORDINATES PROVIDED.

Ecological:

AERIAL IMAGERY SHOWS ADJACENT LAND USE INCLUDES AGRICULTURAL FIELDS AND RESIDENTIAL DEVELOPMENT.

Threats:

AGRICULTURE.

General:

2 ADULTS OBSERVED ON 27 APR 2014. 1 ADULT OBSERVED ON 12 FEB 2015.

PLSS: T11S, R17E, Sec. 4, SE (M)
UTM: Zone-10 N4098842 E757069

Accuracy: specific area
Latitude/Longitude: 37.00061 / -120.11112

Area (acres): 10
Elevation (feet): 258

County Summary:

Madera

Quad Summary:

Madera (3612081), Kismet (3712011)

Sources:

HER16D0001 HERP, INC. - HERPETOLOGICAL EDUCATION AND RESEARCH PROJECT (HERP) DATABASE. FORMERLY A PROJECT OF THE NORTH AMERICAN FIELD HERPING ASSOCIATION. 2016-10-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	B4672	**EO Index:**	117613
Key Quad:	Madera (3612081)	**Element Code:**	AAABF02020
Occurrence Number:	1260	**Occurrence Last Updated:**	2023-06-07

Scientific Name: *Spea hammondii* **Common Name:** western spadefoot

Listing Status: **Federal:** Proposed Threatened **Rare Plant Rank:**

State: None **Other Lists:** BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3

State: S3S4

General Habitat:

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

Micro Habitat:

VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Last Date Observed:	2021-03-01	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2021-03-01	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT, STATE-HIGH SPEED RAIL	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.3 TO 0.9 MILES SE OF THE INTERSECTION OF AVENUE 15 AND SANTA FE DRIVE, MADERA.

Detailed Location:

MAPPED TO PROVIDED MAP AND COORDINATES. OCCURRENCE REPRESENTS DETECTIONS IN HIGH QUALITY HABITAT EAST OF RAILROAD AND DETECTIONS ALONG RAILROAD WHERE ACTIVE CONSTRUCTION RELATING TO HIGH SPEED RAIL IS OCCURRING.

Ecological:

VERNAL POOLS. EAST SIDE OF RAILROAD APPEARS TO BE PRIVATE CONSERVATION LANDS (HOG FLATS PRESERVE). RAILROAD PART OF CALIFORNIA HIGH SPEED RAIL AUTHORITY.

Threats:

ALONG RAILROAD, ACTIVE CONSTRUCTION INCLUDING GRADING AND COMPACTION WITH HEAVY EQUIPMENT.

General:

AT LEAST 3 LARVAE FOUND ON 3 APR 2019. 60-70 LARVAE CLOSE TO METAMORPHOSIS FOUND ON 2 MAY 2019. 1 RECENTLY METAMORPHOSED FOUND ON 3 JUN 2019. 3 FOUND ALONG RAILROAD ON 10 & 11 FEB 2021. AT LEAST 1 LARVA FOUND IN VERNAL POOL ON 1 MAR 2021.

PLSS:	T11S, R18E, Sec. 21, NE (M)	**Accuracy:**	specific area	**Area (acres):**	61
UTM:	Zone-10 N4094972 E766604	**Latitude/Longitude:**	36.96311 / -120.00547	**Elevation (feet):**	284

County Summary:	**Quad Summary:**
Madera	Gregg (3611988), Madera (3612081)

Sources:

HEL21R0004	HELM, B. & S. O'BRIEN (HELM BIOLOGICAL CONSULTING) - 2021 RECONNAISSANCE-LEVEL WET-SEASON SURVEYS FOR FEDERALLY-LISTED LARGE BRANCHIOPODS AND CALIFORNIA TIGER SALAMANDER LARVAE AT THE HOG FLATS PRESERVE, MADERA COUNTY, CALIFORNIA 2021-05-XX
OBR19F0004	O'BRIEN, S. & B. HELM (HELM BIOLOGICAL CONSULTING) - FIELD SURVEY FORM FOR SPEA HAMMONDII 2019-06-03
SMI22U0001	SMITH, E. (VOLLMAR CONSULTING) - MANDATORY WILDLIFE REPORT [SC-203090002] 2022-XX-XX
THO21F0001	THOMPSON, S. & D. DUBOIS (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR SPEA HAMMONDII 2021-02-10
THO21F0002	THOMPSON, S. & D. DUBOIS (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR SPEA HAMMONDII 2021-02-10
THO21F0003	THOMPSON, S. & D. DOBOIS (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR SPEA HAMMONDII 2021-02-11
VOL19R0001	VOLLMAR, J. (VOLLMAR CONSULTING) - CURRAN RANCH MADERA COUNTY, CA 2019 90-DAY REPORT 2019-11-XX
VOL20R0001	VOLLMAR, J. (VOLLMAR CONSULTING) - ANNUAL SURVEY REPORT FOR WESTERN SPADEFOOT DETECTED BY VOLLMAR NATURAL LANDS CONSULTING IN 2019 2020-01-13

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	B8989	**EO Index:**	117766
Key Quad:	Madera (3612081)	**Element Code:**	AAABF02020
Occurrence Number:	1292	**Occurrence Last Updated:**	2023-06-12

Scientific Name: *Spea hammondii* **Common Name:** western spadefoot

Listing Status: **Federal:** Proposed Threatened
State: None
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3
State: S3S4

General Habitat:

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

Micro Habitat:

VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Last Date Observed:	2021-05-07	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2021-05-07	**Occurrence Rank:**	Fair
Owner/Manager:	PVT, STATE-HIGH SPEED RAIL	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF RAILROAD TRACKS NEAR ELLIS ST, 0.25 MILES NW OF FRESNO RIVER, 2.4 MILES NE OF CENTRAL MADERA.

Detailed Location:

CONSTRUCTION SITE FOR HIGH SPEED RAIL. ALL LARVAE AND 2016 INDIVIDUALS FOUND IN POOLS ADJACENT TO THE BNSF RAILROAD TRACKS, 0.2 MILES NW OF THE RAYMOND ROAD CROSSING. 2021 ADULTS FOUND IN BURROWS ADJACENT TO THE TRACKS NEAR SAME LOCATION.

Ecological:

SITE COMPRISED OF SPARSE ANNUAL GRASSLAND WITH RUDERAL VEGETATION AND GRAVEL. POOL OBSERVED TO BE DRY SHORTLY AFTER MAR 2021 DETECTION; LARVAE DID NOT SURVIVE. CALIFORNIA TIGER SALAMANDER AND VERNAL POOL FAIRY SHRIMP ALSO FOUND AT SITE.

Threats:

CONSTRUCTION RELATED TO THE HIGH SPEED RAIL PROJECT; LARGE EQUIPMENT ON SITE.

General:

1 LARVA, 1 JUVENILE, AND 1 ADULT CAUGHT AND RELEASED BETWEEN 17 MAR AND 7 APR 2016. 100 LARVAE FOUND IN POOL ON 23 MAR 2021; POOL FOUND DRY ON 29 MAR 2021. 2 ADULTS FOUND IN BURROW ON 5 MAY 2021. 2 ADULTS FOUND IN BURROW ON 7 MAY 2021.

PLSS:	T11S, R18E, Sec. 8, SW (M)	**Accuracy:**	specific area	**Area (acres):**	8
UTM:	Zone-10 N4097522 E764154	**Latitude/Longitude:**	36.98676 / -120.03207	**Elevation (feet):**	288

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

HUA18U0001	HUANG, J. (ENVIRONMENTAL SCIENCE ASSOCIATES) - MANADATORY WILDLIFE REPORT [SC-011616] 2018-10-30
PIT21F0002	PITTENGER, D. & S. THOMPSON (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR SPEA HAMMONDII 2021-03-23
THO21F0009	THOMPSON, S. (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR SPEA HAMMONDII 2021-05-05
THO21F0010	THOMPSON, S. (ENVIRONMENTAL SCIENCE ASSOCIATES) - FIELD SURVEY FORM FOR SPEA HAMMONDII 2021-05-07

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B4829
EO Index: 117768
Key Quad: Madera (3612081)
Element Code: AAABF02020
Occurrence Number: 1293
Occurrence Last Updated: 2020-01-27

Scientific Name: *Spea hammondii*
Common Name: western spadefoot

Listing Status: **Federal:** Proposed Threatened
State: None
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3
State: S3S4

General Habitat:

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

Micro Habitat:

VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Last Date Observed: 2018-06-29
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2018-06-29
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

JUST SE OF THE INTERSECTION OF AVENUE 15 AND SANTA FE DRIVE, MADERA.

Detailed Location:

MAPPED TO COORDINATES PROVIDED.

Ecological:

AERIAL IMAGERY SHOWS AVENUE 15 WAS UNDERGOING CONSTRUCTION IN THIS AREA IN 2018.

Threats:

ROAD CONSTRUCTION.

General:

1 ADULT WAS CAPTURED RELOCATED TO NEARBY BURROW ON 29 JUN 2018.

PLSS: T11S, R18E, Sec. 21, NW (M)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-10 N4095363 E766056
Latitude/Longitude: 36.96679 / -120.01148
Elevation (feet): 287

County Summary:

Madera

Quad Summary:

Madera (3612081)

Sources:

HUA18U0001 HUANG, J. (ENVIRONMENTAL SCIENCE ASSOCIATES) - MANADATORY WILDLIFE REPORT [SC-011616] 2018-10-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	B8955	**EO Index:**	120363
Key Quad:	Madera (3612081)	**Element Code:**	AAABF02020
Occurrence Number:	1437	**Occurrence Last Updated:**	2023-05-26

Scientific Name: *Spea hammondii* **Common Name:** western spadefoot

Listing Status: **Federal:** Proposed Threatened **Rare Plant Rank:**

State: None **Other Lists:** BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3

State: S3S4

General Habitat:

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

Micro Habitat:

VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Last Date Observed:	2023-04-26	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2023-04-26	**Occurrence Rank:**	Unknown
Owner/Manager:	STATE-HIGH SPEED RAIL AUTH	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST END OF AVENUE 17 AT RAILROAD TRACKS AND 0.25 MI S ALONG TRACKS, ABOUT 2.5 MILES NNE OF CENTRAL MADERA.

Detailed Location:

MAPPED WITH RESPECT TO PROVIDED COORDINATES AND AERIAL IMAGERY.

Ecological:

RURAL RESIDENTIAL DEMOLITION SITE RELATING TO HIGH SPEED RAIL CONSTRUCTION AND EMINENT DOMAIN. CALIFORNIA TIGER SALAMANDER ALSO DETECTED AT THIS LOCATION.

Threats:

THREATENED BY ACTIVITIES ASSOCIATED WITH DEMOLITION AND CONSTRUCTION RELATING TO HIGH SPEED RAIL.

General:

5 ADULTS FOUND AND RELOCATED OFFSITE IN MAY 2018. 1 JUVENILE FOUND AND RELOCATED IN JAN 2022. 1 JUVENILE FOUND AND RELOCATED IN FEB 2023. 2 ADULTS FOUND IN FEB 2023. 3 ADULTS FOUND IN MAR 2023. ABOUT 192 LARVAE AND 1 ADULT FOUND IN APR 2023

PLSS:	T11S, R18E, Sec. 7, N (M)	**Accuracy:**	specific area	**Area (acres):**	45
UTM:	Zone-10 N4098490 E763064	**Latitude/Longitude:**	36.99578 / -120.04396	**Elevation (feet):**	298

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

CRA21D0002	CRAIG, M. (RINCON CONSULTANTS, INC.) - EXCEL TABLE OF 2017-2021 WESTERN SPADEFOOT TOAD OBSERVATIONS AND RELOCATIONS RELATING TO HIGH SPEED RAIL [21 FEB 2017 - 3 MAR 2021] 2021-XX-XX
CRA22D0002	CRAIG, M. (RINCON CONSULTANTS, INC.) - EXCEL TABLE OF 2017-2022 WESTERN SPADEFOOT TOAD OBSERVATIONS AND RELOCATIONS RELATING TO HIGH SPEED RAIL [UPDATE 10 JAN 2022 - 24 FEB 2022; 23 NEW RECORDS] 2022-02-24
CRA23D0003	CRAIG, M. (RINCON CONSULTANTS, INC.) - EXCEL TABLE OF 2017-2023 WESTERN SPADEFOOT TOAD OBSERVATIONS AND RELOCATIONS RELATING TO HIGH SPEED RAIL [UPDATE 6 FEB 2023 - 26 APR 2023; 23 NEW RECORDS] 2023-XX-XX
MOU23D0001	MOUNT, J. ET AL. (ENVIRONMENTAL SCIENCE ASSOCIATES) - EXCEL TABLE OF WESTERN SPADEFOOT DETECTIONS IN MADERA COUNTY, APRIL-MAY 2023 2023-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B8968
Key Quad: Madera (3612081)
Occurrence Number: 1458
EO Index: 124111
Element Code: AAABF02020
Occurrence Last Updated: 2023-06-05

Scientific Name: *Spea hammondii*
Common Name: western spadefoot

Listing Status: **Federal:** Proposed Threatened
State: None
CNDDB Element Ranks: **Global:** G2G3
State: S3S4
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

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

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

Last Date Observed: 2023-05-15
Last Survey Date: 2023-05-15
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
0.35 MI W OF RAYMOND ROAD AT AVENUE 17, ABOUT 2.8 MI SW OF MADERA LAKE, 2.8 MI NE OF CENTRAL MADERA.

Detailed Location:
MAPPED TO PROVIDED COORDINATES. OBSERVATION IS JUST E OF HIGH-SPEED RAIL PROJECT SITE.

Ecological:
AGRICULTURAL FIELDS WITH SOME RESIDENTIAL DEVELOPMENT.

Threats:

General:
5 ADULTS FOUND ON 15 MAY 2023 DURING BURROW EXCAVATION.

PLSS: T11S, R18E, Sec. 8, NW (M)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-10 N4098565 E763861
Latitude/Longitude: 36.99623 / -120.03499
Elevation (feet): 301

County Summary:
Madera

Quad Summary:
Madera (3612081)

Sources:
MOU23D0001 MOUNT, J. ET AL. (ENVIRONMENTAL SCIENCE ASSOCIATES) - EXCEL TABLE OF WESTERN SPADEFOOT DETECTIONS IN MADERA COUNTY, APRIL-MAY 2023 2023-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B8973
EO Index: 124117
Key Quad: Madera (3612081)
Element Code: AAABF02020
Occurrence Number: 1459
Occurrence Last Updated: 2023-06-09

Scientific Name: *Spea hammondii*
Common Name: western spadefoot

Listing Status: **Federal:** Proposed Threatened
State: None
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3
State: S3S4

General Habitat:

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

Micro Habitat:

VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Last Date Observed: 2023-04-18
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2023-04-18
Occurrence Rank: Unknown
Owner/Manager: STATE-HIGH SPEED RAIL AUTH
Trend: Unknown
Presence: Presumed Extant

Location:

ALONG ROAD 29 AT RAILROAD, ABOUT 0.30 MI NE OF AVENUE 15 1/2 AT WATSON STREET, S OF FRESNO RIVER.

Detailed Location:

MAPPED TO PROVIDED COORDINATES. LARVAE FOUND IN VARIOUS WATER FEATURES ALONGSIDE RAILROAD TRACKS AND ROAD 29.

Ecological:

SITE COMPRISED OF SPARSE ANNUAL GRASSLAND WITH RUDERAL VEGETATION. SOME NEARBY RESIDENTIAL AND COMMERCIAL DEVELOPMENT.

Threats:

CONSTRUCTION RELATED TO HIGH SPEED RAIL PROJECT.

General:

ABOUT 300 LARVAE FOUND ON 21 MAR 2023. ABOUT 100 LARVAE FOUND ON 23 MAR 2023. ABOUT 25 LARVAE FOUND ON 18 APR 2023.

PLSS: T11S, R18E, Sec. 17, NE (M)
Accuracy: specific area
Area (acres): 16
UTM: Zone-10 N4096470 E765100
Latitude/Longitude: 36.97702 / -120.02182
Elevation (feet): 285

County Summary:	Quad Summary:
Madera	Madera (3612081)

Sources:

DUB23D0001	DUBOIS, D. ET AL. (ENVIRONMENTAL SCIENCE ASSOCIATES) - EXCEL TABLE OF WESTERN SPADEFOOT DETECTIONS IN MADERA COUNTY, MARCH 2023 2023-03-XX
MOU23D0001	MOUNT, J. ET AL. (ENVIRONMENTAL SCIENCE ASSOCIATES) - EXCEL TABLE OF WESTERN SPADEFOOT DETECTIONS IN MADERA COUNTY, APRIL-MAY 2023 2023-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B8974
EO Index: 124118
Key Quad: Madera (3612081)
Element Code: AAABF02020
Occurrence Number: 1460
Occurrence Last Updated: 2023-06-07

Scientific Name: *Spea hammondii*
Common Name: western spadefoot

Listing Status: **Federal:** Proposed Threatened
State: None
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G2G3
State: S3S4

General Habitat:

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

Micro Habitat:

VERNAL POOLS ARE ESSENTIAL FOR BREEDING AND EGG-LAYING.

Last Date Observed: 2022-12-08
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2022-12-08
Occurrence Rank: Unknown
Owner/Manager: STATE-HIGH SPEED RAIL AUTH
Trend: Unknown
Presence: Presumed Extant

Location:

ALONG RAILROAD TRACKS ABOUT 0.3 MI NE OF AVENUE 15 AT ROAD 29, ABOUT 2.5 MI ENE OF CENTRAL MADERA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES. INDIVIDUALS FOUND IN BURROWS NEXT TO WILDLIFE EXCLUSION FENCE, ADJACENT TO RAILROAD TRACKS AND SANTA FE DRIVE.

Ecological:

SURROUNDING AREA IS PRIMARILY AGRICULTURAL FIELDS.

Threats:

CONSTRUCTION RELATED TO HIGH SPEED RAIL PROJECT.

General:

4 ADULTS FOUND BURROWED IN SOIL ON 8 DEC 2022.

PLSS: T11S, R18E, Sec. 16, SW (M)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-10 N4095732 E765637
Latitude/Longitude: 36.97023 / -120.01605
Elevation (feet): 284

County Summary:

Madera

Quad Summary:

Madera (3612081)

Sources:

DUB22D0001 DUBOCE, M. & J. MOUNT (ENVIRONMENTAL SCIENCE ASSOCIATES) - TABULAR DATA FOR 2 DETECTIONS ALONG HIGH SPEED RAIL EXCLUSION FENCING, 2022. 2022-12-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A2000	**EO Index:**	103593
Key Quad:	Madera (3612081)	**Element Code:**	ABNKC19070
Occurrence Number:	2691	**Occurrence Last Updated:**	2016-09-28

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5

State: S4

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

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

Last Date Observed:	2016-04-16	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-04-16	**Occurrence Rank:**	Fair
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

NORTH SIDE OF AVE 14, ABOUT 0.1 MILES NE OF ITS INTERSECTION WITH RD 24 IN MADERA.

Detailed Location:

MAPPED TO SYCAMORE/PLANE TREE IN FRONT YARD OF RESIDENCE, VISIBLE IN AIR PHOTOS AND GOOGLE STREET VIEW (COORDINATES GIVEN ARE CLOSE BUT NOT EXACT).

Ecological:

NEST IN SYCAMORE/PLANE TREE IN FRONT YARD OF RESIDENCE (NEST TREE SPECIES DETERMINED FROM PROVIDED PHOTO). DISTURBANCE FROM ADJACENT BUSY ROAD AND RESIDENCES.

Threats:

General:

1 ADULT OBSERVED CIRCLING NEST TREE AND SITTING ON NEST ON 16 APR 2016.

PLSS:	T11S, R17E, Sec. 22, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-10 N4093583 E757427	**Latitude/Longitude:**	36.95316 / -120.10889	**Elevation (feet):**	250

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

FOL16F0001 FOLSOM, G. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2016-04-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A2418
Key Quad: Madera (3612081)
Occurrence Number: 2696
EO Index: 104028
Element Code: ABNKC19070
Occurrence Last Updated: 2016-10-31

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
CNDDB Element Ranks: **Global:** G5
State: S4
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, AND AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

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

Last Date Observed: 2016-07-12
Last Survey Date: 2016-07-12
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

NORTH SIDE OF COTTONWOOD CREEK ABOUT 0.25 MILES NW OF HWY 99 AT AVE 12, 3 MILES SE OF MADERA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST IN COTTONWOOD IN RIPARIAN AREA BETWEEN CANAL AND COTTONWOOD CREEK. AREA NORTH OF CANAL WAS INDUSTRIAL; SURROUNDING AREA AGRICULTURAL.

Threats:

General:

ACTIVE NEST MONITORED THROUGH 2016 SEASON; BY 12 JUL, 3 YOUNG HAD FLEDGED.

PLSS: T11S, R18E, Sec. 33, SW (M)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-10 N4090828 E765622
Latitude/Longitude: 36.92609 / -120.01794
Elevation (feet): 273

County Summary:

Madera

Quad Summary:

Madera (3612081)

Sources:

BAT16F0001 BATES, K. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2016-07-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 62822
Key Quad: Madera (3612081)
Occurrence Number: 757
EO Index: 62876
Element Code: ABNSB10010
Occurrence Last Updated: 2005-10-17

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S2
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

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

Last Date Observed: 2005-02-24
Last Survey Date: 2005-02-24
Owner/Manager: USBOR
Presence: Possibly Extirpated
Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:
0.2 MILE NORTH OF AVENUE 16 AND 0.7 MILE WEST OF HIGHWAY 99, JUST EAST OF MADERA AIRPORT.

Detailed Location:

Ecological:
HABITAT CONSISTED OF RUDERAL/NON-NATIVE GRASSLAND ON A WEST-FACING SLOPE. SURROUNDED BY A PONDING BASIN AND AGRICULTURE.

Threats:
BURROW DESTROYED BY PONDING BASIN ENLARGEMENT.

General:
AFTER THE OWL HAD LEFT THE BURROW, AND IT WAS DETERMINED THAT THERE WERE NO EGGS OR YOUNG INSIDE, THE SITE WAS GRADED TO ENLARGE THE PONDING BASIN.

PLSS: T11S, R17E, Sec. 10, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-10 N4097134 E758193
Latitude/Longitude: 36.98492 / -120.09909
Elevation (feet): 255

County Summary:
Madera

Quad Summary:
Madera (3612081)

Sources:
PEA05F0001 PEARSON, A.J. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA (BURROW SITE) 2005-02-24

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 68509
Key Quad: Madera (3612081)
Occurrence Number: 64
EO Index: 68823
Element Code: AMACC05032
Occurrence Last Updated: 2007-03-16

Scientific Name: *Lasiurus cinereus*
Common Name: hoary bat

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G3G4
State: S4

General Habitat:

PREFERS OPEN HABITATS OR HABITAT MOSAICS, WITH ACCESS TO TREES FOR COVER AND OPEN AREAS OR HABITAT EDGES FOR FEEDING.

Micro Habitat:

ROOSTS IN DENSE FOLIAGE OF MEDIUM TO LARGE TREES. FEEDS PRIMARILY ON MOTHS. REQUIRES WATER.

Last Date Observed: 1944-02-25
Last Survey Date: 1944-02-25
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

MADERA, AT L AND YOSEMITE AVE.

Detailed Location:

MAPPED ACCORDING TO LOCALITY GIVEN BY MANIS.

Ecological:

Threats:

General:

1 MALE SPECIMEN (MVZ #109120) COLLECTED BY ALBERT C. HAWBECKER JR. ON 26 FEB 1944.

PLSS: T11S, R17E, Sec. 24, SW (M)
Accuracy: 1/10 mile
Area (acres): 0
UTM: Zone-10 N4094125 E761175
Latitude/Longitude: 36.95701 / -120.06666
Elevation (feet): 270

County Summary:	Quad Summary:
Madera	Madera (3612081)

Sources:

MAN04S0029 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF LASIURUS CINEREUS SPECIMENS FOR CALIFORNIA FROM MANIS. INCLUDES RECORDS FROM MVZ, CAS, MSB, LSU, KU, LACM, UWBM, FMNH AND TTU. 2004-12-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	14160	**EO Index:**	27810
Key Quad:	Madera (3612081)	**Element Code:**	ARACF07010
Occurrence Number:	107	**Occurrence Last Updated:**	2020-11-03

Scientific Name: *Gambelia sila*

Common Name: blunt-nosed leopard lizard

Listing Status: **Federal:** Endangered
State: Endangered

Rare Plant Rank:

Other Lists: CDFW_FP-Fully Protected
IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G1
State: S2

General Habitat:

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

Micro Habitat:

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

Last Date Observed:	1916-06-20	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1916-06-20	**Occurrence Rank:**	None
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Possibly Extirpated		

Location:

VICINITY OF COTTONWOOD CREEK PLAIN, ABOUT 5 MILES SW OF MADERA.

Detailed Location:

PRESUMABLY J. BRODE (DFG) REVIEWED THIS SPECIMEN & TAG IN THE 1970S-1980S AND RECORDED IT AS "5 MI. SW MADERA." VAN DENBURGH'S ARTICLE REFERENCED "NEAR MADERA" AND "5 MI S FROM MADERA." THE CAS CATALOG LEDGER STATES "MADERA."

Ecological:

THE AREA BETWEEN MADERA, 5 MILES SW OF MADERA, TO 5 MILES S OF MADERA HAS BEEN CONVERTED TO EXTENSIVE AGRICULTURE SINCE THE TIME OF COLLECTION.

Threats:

CONVERSION TO AGRICULTURE.

General:

COLLECTED ALIVE IN THIS AREA BY VAN DENBURGH ON 20 JUN 1916 AND PHOTOGRAPHED FOR HIS PUBLICATION (PLATE 9), AND THEN PRESERVED INTO THE CAS COLLECTION ON 14 JUL 1916.

PLSS:	T12S, R17E, Sec. 09, NE (M)	**Accuracy:**	1 mile	**Area (acres):**	0
UTM:	Zone-10 N4088008 E757384	**Latitude/Longitude:**	36.90299 / -120.11127	**Elevation (feet):**	232

County Summary:	**Quad Summary:**
Madera	Madera (3612081), Bonita Ranch (3612082)

Sources:

BRO74R0001	BRODE, J. & D. STROUF (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - LOCALITIES FOR THE BLUNT-NOSED LEOPARD LIZARD. A LIST OF MUSEUM AND OBSERVATIONS PREPARED BY INLAND FISHERIES BRANCH, CA DEPT OF FISH AND GAME 1974-XX-XX
BRO80U0001	BRODE, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - GEOGRAPHIC REFERENCE CARD CATALOG OF SPECIMENS AND FIELD NOTE RECORDS COMPILED BY JOHN BRODE (DFG) 1980-XX-XX
VAN16S0006	VAN DENBURGH, J. - CAS #41713 COLLECTED FROM MADERA [5 MI S OF MADERA, OR 5 MI SW OF MADERA] 1916-06-20
VAN22A0001	VAN DENBURGH, J. (CALIFORNIA ACADEMY OF SCIENCES) - THE REPTILES OF WESTERN NORTH AMERICA, VOL. 1 LIZARDS. PROCEEDINGS OF CALIFORNIA ACADEMY OF SCIENCES 10:1-611. 1922-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 14334
EO Index: 26027
Key Quad: Madera (3612081)
Element Code: CTT44110CA
Occurrence Number: 129
Occurrence Last Updated: 1998-07-15

Scientific Name: *Northern Hardpan Vernal Pool*
Common Name: Northern Hardpan Vernal Pool

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G3
State: S3.1

General Habitat:

Micro Habitat:

Last Date Observed: 1986-05-21
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1986-05-21
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Decreasing
Presence: Presumed Extant

Location:

ON NORTH AND SOUTH SIDES OF AVENUE 15, 1/2 MILE EAST OF TOPEKA AND SANTA FE RAILWAY.

Detailed Location:

Ecological:

REMNANT VERNAL POOLS IN VALLEY GRASSLAND. POOLS ON SOUTH SIDE OF ROAD ARE IN DISKED WHEAT FIELD. ORCUTTIA PILOSA, PHALARIS, ERYNGIUM, LYTHRUM, AND PSILOCARPHUS. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

Threats:

AGRICULTURE / DISKING IS LARGEST THREAT.

General:

FEWER ORCUTTIA PLANTS IN '86 THAN IN '83. HYDROLOGY OF POOL PROBABLY ALTERED BY DISKING. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS: T11S, R18E, Sec. 16, SE (M)
Accuracy: specific area
Area (acres): 15
UTM: Zone-10 N4095505 E766555
Latitude/Longitude: 36.96793 / -120.00583
Elevation (feet): 290

County Summary:	Quad Summary:
Madera	Madera (3612081)

Sources:

STE86F0036 STEBBINS, J. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA & VERNAL POOL 1986-05-21

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A2132	**EO Index:**	103727
Key Quad:	Madera (3612081)	**Element Code:**	ICBRA03030
Occurrence Number:	902	**Occurrence Last Updated:**	2016-10-13

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

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

Micro Habitat:

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

Last Date Observed:	2016-02-11	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-02-11	**Occurrence Rank:**	Poor
Owner/Manager:	STATE-HS RAIL	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG RAILROAD TRACK, ABOUT 0.2 MILES W OF ELLIS ST AT RD 28 1/2 & 1.1 MILES NE OF HWY 145 AT TOZER ST, MADERA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

SEASONAL POOL/DIRT ROADSIDE PUDDLE ADJACENT TO RAILROAD RIGHT-OF-WAY IN RURAL RESIDENTIAL AREA. WITHIN PLANNED HIGH SPEED RAIL ALIGNMENT, SITE IS PERMITTED BUT HAS NOT BEEN DISTURBED YET (2016).

Threats:

HIGH SPEED RAIL CONSTRUCTION.

General:

THOUSANDS OBSERVED, DOZENS OF ADULTS COLLECTED AND POSITIVELY IDENTIFIED ON 27 JAN, 5 FEB & 11 FEB 2016.

PLSS:	T11S, R18E, Sec. 8, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-10 N4097499 E764182	**Latitude/Longitude:**	36.98655 / -120.03176	**Elevation (feet):**	292

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

NEW16F0001 NEWMAN, D. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2016-02-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A6634	**EO Index:**	108404
Key Quad:	Madera (3612081)	**Element Code:**	ICBRA03030
Occurrence Number:	909	**Occurrence Last Updated:**	2017-10-18

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

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

Micro Habitat:

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

Last Date Observed:	2017-02-26	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2017-02-26	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SOUTH SIDE OF AVENUE 17 ABOUT 0.3 TO 0.4 MILES EAST OF N LAKE ST, N OF MADERA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

TWO BASINS BETWEEN ROWS OF AN INACTIVE VINEYARD IN AGRICULTURAL AREA. RAILROAD TRACKS NEARBY; HIGH SPEED RAIL PROJECT MAY IMPACT AREA. B. MESOVALLENSIS ALSO FOUND.

Threats:

DEVELOPMENT, CONSTRUCTION ACTIVITIES, OR REACTIVATION OF VINEYARD.

General:

1 ADULT OBSERVED IN E POOL, 1 IN W POOL ON 26 FEB 2017. 100S-1000S OF NAUPLII PRESENT, UNKNOWN WHAT PERCENT WERE B. LYNCHI VS. B. MESOVALLENSIS.

PLSS:	T11S, R18E, Sec. 7, NW (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-10 N4098506 E762589	**Latitude/Longitude:**	36.99606 / -120.04928	**Elevation (feet):**	294

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

STO17F0004	STOLPE, R. ET AL. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2017-02-26
STO17F0005	STOLPE, R. ET AL. - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2017-02-26

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A6634
EO Index: 108403
Key Quad: Madera (3612081)
Element Code: ICBRA03150
Occurrence Number: 137
Occurrence Last Updated: 2017-10-02

Scientific Name: *Branchinecta mesovallensis*
Common Name: midvalley fairy shrimp

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2S3

General Habitat:
VERNAL POOLS IN THE CENTRAL VALLEY.

Micro Habitat:

Last Date Observed: 2017-02-26
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2017-02-26
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
SOUTH SIDE OF AVENUE 17 ABOUT 0.3 TO 0.4 MILES EAST OF N LAKE ST, N OF MADERA.

Detailed Location:
MAPPED TO PROVIDED COORDINATES.

Ecological:
TWO BASINS BETWEEN ROWS OF AN INACTIVE VINEYARD IN AGRICULTURAL AREA. RAILROAD TRACKS NEARBY; HIGH SPEED RAIL PROJECT MAY IMPACT AREA. B. LYNCHI ALSO FOUND.

Threats:
DEVELOPMENT, CONSTRUCTION ACTIVITIES, OR REACTIVATION OF VINEYARD.

General:
7 ADULTS OBSERVED IN W POOL, 3 IN E POOL ON 26 FEB 2017. 100S-1000S OF NAUPLII PRESENT, UNKNOWN WHAT PERCENT WERE B. LYNCHI VS. B. MESOVALLENSIS.

PLSS: T11S, R18E, Sec. 7, NW (M)
Accuracy: specific area
Area (acres): 10
UTM: Zone-10 N4098506 E762589
Latitude/Longitude: 36.99606 / -120.04928
Elevation (feet): 294

County Summary:
Madera

Quad Summary:
Madera (3612081)

Sources:

STO17F0006	STOLPE, R. ET AL. - FIELD SURVEY FORM FOR BRANCHINECTA MESOVALLENSIS 2017-02-26
STO17F0007	STOLPE, R. ET AL. - FIELD SURVEY FORM FOR BRANCHINECTA MESOVALLENSIS 2017-02-26

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 30806
EO Index: 64457
Key Quad: Madera (3612081)
Element Code: IICOL4C030
Occurrence Number: 6
Occurrence Last Updated: 2006-03-30

Scientific Name: *Lytta molesta*
Common Name: molestan blister beetle

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:

INHABITS THE CENTRAL VALLEY OF CALIFORNIA, FROM CONTRA COSTA TO KERN AND TULARE COUNTIES.

Micro Habitat:

Last Date Observed: 19XX-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 19XX-XX-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:

MADERA.

Detailed Location:

Ecological:

Threats:

General:

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

PLSS: T11S, R17E, Sec. 24 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-10 N4094507 E761603
Latitude/Longitude: 36.96034 / -120.06173
Elevation (feet): 270

County Summary:

Madera

Quad Summary:

Madera (3612081)

Sources:

CBP06U0001 CALIFORNIA BEETLE PROJECT (SBMNH) - ONLINE DATABASE RECORDS FOR LYTTA MOESTA. 2006-03-27

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	30806	**EO Index:**	124240
Key Quad:	Madera (3612081)	**Element Code:**	IIHYM24260
Occurrence Number:	117	**Occurrence Last Updated:**	2023-06-27

Scientific Name: *Bombus pensylvanicus* **Common Name:** American bumble bee

Listing Status: **Federal:** None **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3G4

State: S2

General Habitat:

Micro Habitat:

LONG-TONGUED; FORAGES ON A WIDE VARIETY OF FLOWERS INCLUDING VETCHES (VICIA), CLOVERS (TRIFOLIUM), THISTLES (CIRSIUM), SUNFLOWERS (HELIANTHUS), ETC. NESTS ABOVE GROUND UNDER LONG GRASS OR UNDERGROUND. QUEENS OVERWINTER IN ROTTEN WOOD OR UNDERGROUND.

Last Date Observed:	1977-09-21	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1977-09-21	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

MADERA.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED NON-SPECIFICALLY TO THE CITY OF MADERA. COLLECTIONS MAY HAVE COME FROM THE AREA OF FRESNO RIVER OR SURROUNDING AGRICULTURE LANDS; NEEDS FIELD WORK.

Ecological:

Threats:

General:

1 ADULT MALE & 1 ADULT FEMALE COLLECTED IN OCT 1958. 20 ADULT MALES & 53 ADULT FEMALES COLLECTED IN OCT 1975. 13 ADULT FEMALES COLLECTED IN JUL 1977. 2 ADULT MALES & 7 ADULT FEMALES COLLECTED IN SEP 1977.

PLSS:	T11S, R17E, Sec. 24 (M)	**Accuracy:**	1 mile	**Area (acres):**	0
UTM:	Zone-10 N4094507 E761603	**Latitude/Longitude:**	36.96034 / -120.06173	**Elevation (feet):**	270

County Summary:	**Quad Summary:**
Madera	Madera (3612081)

Sources:

ALL58S0001	ALLEN, R. - EMEC #550169 & #550699 COLLECTED NEAR MADERA, MADERA COUNTY 1958-10-10
LIN75S0007	LINSLEY, E. ET AL. - EMEC #550140-550159 & #550626-550647 COLLECTED NEAR MADERA, MADERA COUNTY 1975-10-05
LIN75S0008	LINSLEY, E. ET AL. - EMEC #550648-550678 COLLECTED NEAR MADERA, MADERA COUNTY 1975-10-08
LIN77S0008	LINSLEY, E. ET AL. - EMEC #550679-550691 COLLECTED NEAR MADERA, MADERA COUNTY 1977-07-24
LIN77S0009	LINSLEY, E. & J. LINSLEY - EMEC #550170, #550171, & #550692-550698 COLLECTED NEAR MADERA, MADERA COUNTY 1977-09-21
RIC22D0001	RICHARDSON, L. (XERCES SOCIETY) - CALIFORNIA EXTRACT OF BUMBLE BEES OF NORTH AMERICA DATABASE. HTTPS://WWW.LEIFRICHARDSON.ORG/BBNA.HTML. ACCESSED 7 DEC 2022. 2022-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B4500
Key Quad: Kismet (3712011)
Occurrence Number: 81

EO Index: 117431
Element Code: PDAST5N0B0
Occurrence Last Updated: 2019-12-10

Scientific Name: *Layia munzii*
Common Name: Munz's tidy-tips

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G2
State: S2

Rare Plant Rank: 1B.2
Other Lists: BLM_S-Sensitive
SB_SBBG-Santa Barbara Botanic Garden

General Habitat:
CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
HILLSIDES, IN WHITE-GREY ALKALINE CLAY SOILS, W/GRASSES AND CHENOPOD SCRUB ASSOCIATES. 45-765 M.

Last Date Observed: 1937-04-06
Last Survey Date: 1937-04-06
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
NE OF MADERA.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS JUST NE OF MADERA.

Ecological:
GRASSLAND.

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1937 VESTAL COLLECTION. NEEDS FIELDWORK.

PLSS: T10S, R18E, Sec. 32 (M)
UTM: Zone-10 N4101315 E764826

Accuracy: 5 miles
Latitude/Longitude: 37.02072 / -120.02319

Area (acres): 49,683
Elevation (feet):

County Summary:
Madera

Quad Summary:
Gregg (3611988), Madera (3612081), Daulton (3711918), Kismet (3712011)

Sources:
VES37S0008 VESTAL, W. & A. VESTAL - VESTAL SN ILLS #153277, SEINET #7015841 1937-04-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 30806
Key Quad: Madera (3612081)
Occurrence Number: 10

EO Index: 20975
Element Code: PDPLM09130
Occurrence Last Updated: 2009-04-16

Scientific Name: *Leptosiphon serrulatus*
Common Name: Madera leptosiphon

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3
State: S3

Rare Plant Rank: 1B.2
Other Lists: BLM_S-Sensitive
SB_SBBG-Santa Barbara Botanic Garden
USFS_S-Sensitive

General Habitat:
CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.

Micro Habitat:
DRY SLOPES; OFTEN ON DECOMPOSED GRANITE IN WOODLAND. 80-1645 M.

Last Date Observed: 1889-05-XX
Last Survey Date: 1889-05-XX
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
NEAR MADERA.

Detailed Location:
MAPPED AT CNDDB IN VICINITY OF THE COMMUNITY OF MADERA.

Ecological:

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS AN 1889 COLLECTION BY BUCKMINSTER. NEEDS FIELDWORK.

PLSS: T11S, R17E, Sec. 24 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-10 N4094507 E761603
Latitude/Longitude: 36.96034 / -120.06173
Elevation (feet): 270

County Summary:
Madera

Quad Summary:
Madera (3612081)

Sources:
BUC89S0001 BUCKMINSTER, P. - BUCKMINSTER SN UC #84340 JEPS #89130 1889-05-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 14329
Key Quad: Madera (3612081)
Occurrence Number: 15
EO Index: 22325
Element Code: PMPOA4G040
Occurrence Last Updated: 1995-07-21

Scientific Name: *Orcuttia pilosa*
Common Name: hairy Orcutt grass

Listing Status: **Federal:** Endangered
State: Endangered
CNDDB Element Ranks: **Global:** G1
State: S1
Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

General Habitat:
VERNAL POOLS.

Micro Habitat:
25-125 M.

Last Date Observed: 1941-05-31
Last Survey Date: 1987-06-02
Owner/Manager: PVT
Presence: Extirpated
Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:
4 MILES EAST OF MADERA.

Detailed Location:
MAPPED ALONG HIGHWAY 145. COLLECTION MADE "3 MILES OUT OF MADERA ON THE NORTHFORK ROAD" ARE ALSO ATTRIBUTED TO THIS SITE. AREA NEAR HIGHWAY 145 AND ROADS 300 AND 400 SEARCHED IN 1981.

Ecological:

Threats:
DEVELOPMENT, SMALL HORSE PASTURES, ORCHARDS, ROADS, ETC.

General:
AREA SEARCHED IN 1981 & 1987 BUT NO SUITABLE HABITAT REMAINS; SITE EXTIRPATED. INCLUDES FORMER OCCURRENCE #14.

PLSS: T11S, R18E, Sec. 09, NE (M)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-10 N4098288 E766503
Latitude/Longitude: 36.99300 / -120.00543
Elevation (feet): 300

County Summary:
Madera

Quad Summary:
Madera (3612081)

Sources:

BIO88R0001	BIOSYSTEMS ANALYSIS, INC. - STATUS SURVEY OF THE GRASS TRIBE ORCUTTIEAE AND CHAMAESYCE HOOVERI IN THE CENTRAL VALLEY OF CALIFORNIA 1988-09-XX
HAR81F0018	HARRISON, S. & J. FERREIRA - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 1981-06-03
HOO41S0001	HOOVER, R. - HOOVER #5284 UC #766715, DS #329219, CAS-BOT-BC #254319, UTC #00079793, SEINET #196301 1941-05-31
WAG38S0001	WAGNON, K. - WAGNON SN UC 1938-07-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B8293
EO Index: 25989
Key Quad: Madera (3612081)
Element Code: PMPOA4G040
Occurrence Number: 19
Occurrence Last Updated: 2022-09-21

Scientific Name: *Orcuttia pilosa*
Common Name: hairy Orcutt grass

Listing Status: **Federal:** Endangered
State: Endangered
Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VERNAL POOLS.

Micro Habitat:
25-125 M.

Last Date Observed: 2021-10-19
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2021-10-19
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
ALONG BNSF RAILWAY AND AVE 15, ~0.5-1.6 MILES NORTH OF COTTONWOOD CREEK, EAST OF MADERA.

Detailed Location:
13 POLYGONS MAPPED ACCORDING TO A 1986 STEBBINS MAP, 2016 & 2017 COORDINATES FROM HERMANSEN, DE GROOT, & TOEWS, AND MAPS FROM A 2022 WESTERVELT ECOLOGICAL SERVICES REPORT. INCLUDES HOG FLATS PRESERVE.

Ecological:
DEPRESSIONAL FEATURES WITHIN CULTIVATED GRAIN FIELDS, VERNAL POOLS. ASSOCIATED WITH ELEOCHARIS MACROSTACHYA, TYPHA ANGUSTIFOLIA, DOWNINGIA BICORNUTA, SAGITTARIA LATIFOLIA, PLAGIOBOTHRYS SP., ERYNGIUM VASEYI, POLYGONUM AVICULARE, ETC.

Threats:
2010: N SIDE OF ROAD IS ORCHARD; SOME POOLS AVOIDED BUT VERY WEEDY. AGRICULTURE, DISKING, CONSTRUCTION, HIGH SPEED RAIL.

General:
POP #S FOR PORTIONS OF SITE: 1000 PLANTS IN 1982. 3 PLANTS IN 1986, NO PLANTS FOUND IN 2 N POLYS IN 2010, 27 PLANTS IN 2016, 580,541 PLANTS IN 2017, 752,437 IN 2019, 3786 IN 2020, 11,460 IN 2021. INCLUDES FORMER EO#49.

PLSS: T11S, R18E, Sec. 21, SE (M)
Accuracy: specific area
Area (acres): 28
UTM: Zone-10 N4094992 E766574
Latitude/Longitude: 36.9633 / -120.0058
Elevation (feet): 282

County Summary:
Madera

Quad Summary:
Gregg (3611988), Madera (3612081)

Sources:

AAK21F0002	AAKRE, C. ET AL. (WESTERVELT ECOLOGICAL SERVICES) - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 2021-10-19
BIO88R0001	BIOSYSTEMS ANALYSIS, INC. - STATUS SURVEY OF THE GRASS TRIBE ORCUTTIEAE AND CHAMAESYCE HOOVERI IN THE CENTRAL VALLEY OF CALIFORNIA 1988-09-XX
CHA19U0010	CHASEY, A. - OBSERVATION RECORD FOR ORCUTTIA PILOSA, CALFLORA ID: MG85119 2019-05-15
CPR19U0001	CALIFORNIA PLANT RESCUE - SEED BANK DATA FOR THE CALIFORNIA PLANT RESCUE PROJECT 2019-07-24
DEG16F0006	DE GROOT, S. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 2016-09-08
DEG16F0007	DE GROOT, S. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 2016-09-08
DEG16S0006	DE GROOT, S. ET AL. - DE GROOT #8001 RSA #0118076 2016-09-08
DEG16S0007	DE GROOT, S. ET AL. - DE GROOT #8000 RSA #0118077 2016-09-08
HER16F0001	HERMANSEN, T. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 2016-05-23
HER16F0002	HERMANSEN, T. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 2016-05-23
HER16F0003	HERMANSEN, T. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 2016-05-23
STE82F0002	STEBBINS, J. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 1982-06-07
STE82F0010	STEBBINS, J. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 1982-06-07
STE82S0001	STEBBINS, J.C. - STEBBINS #82255 JEPS #81203, UC #1266959, CHSC #37334, MO #2600138, SEINET #10592188, FSC #2633, #2629, #2630, #34486, #34107, #34102 1982-06-07
STE83U0003	STEBBINS, J. - ELEMENT OCCURRENCE EVALUATION FORM FOR ORCUTTIA PILOSA 1983-06-16
STE86F0007	STEBBINS, J. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 1986-05-21
TOE17F0018	TOEWS, D. - FIELD SURVEY FORM FOR ORCUTTIA PILOSA 2017-06-20
WES22R0001	WESTERVELT ECOLOGICAL SERVICES - CALIFORNIA HIGH-SPEED RAIL AUTHORITY MERCED TO FRESNO PROJECT SECTION HAIRY ORCUTT GRASS HABITAT ENHANCEMENT 2020/21 MONITORING REPORT 2022-02-XX
WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25

Appendix B

CHRIS Record Search Results

CHRIS Record Search Results was prepared for the proposed Project by the SSJVIC on June 17, 2024.

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

To: Isaiah Medina
Precision Civil Engineering, Inc.
1234 O Street
Fresno, CA 93721

Record Search 24-264

Date: June 17, 2024

Re: Ellis/Fairview Residential Subdivision

County: Madera

Map(s): Madera 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, the OHP Built Environment Resources Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the OHP are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies completed within the project area. There have been three cultural resource studies completed within the one-half mile radius: MA-00083, 00309, 01026.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there are no recorded resources within the project area. There is one recorded resource within the one-half mile radius: P-20-002308. This resource consists of a historic era canal.

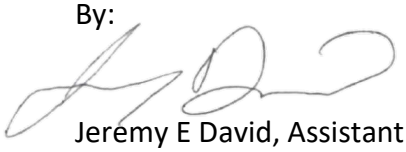
Resource P-20-002308 have been given a National Register code of 2D2, which indicates it is a Contributor to a multi-component resource determined eligible for National Register by consensus through Section 106 process. Listed in the California Register. There are no other recorded cultural resources 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.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of an Annexation and Pre-zone/Rezone of 11 parcels in Madera, CA, the construction of a 61-lot single-family residential development will take place on only one of the parcels. Further, we understand this project site is currently vacant. Because this project area has not been previously studied for cultural resources, it is unknown if any are present. As such, prior to ground disturbance activities, we recommend a qualified, professional consultant conduct a field survey to determine if cultural resources are present. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:



Jeremy E David, Assistant Coordinator **Date**: June 17, 2024

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Appendix C

NAHC Correspondence

NAHC Correspondence was prepared for the proposed Project by the NAHC on June 11, 2024.

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Laurena Bolden
Serrano

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok, Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,

June 11, 2024

Isaiah Medina
Precision Civil Engineering

Via Email to: imedina@precisioneng.net

Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB52), Public Resources Codes §21080.1, §21080.3.1 and §21080.3.2, Ellis/Fairview Residential Subdivision Project, Madera County

Dear Mr. Medina:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties or projects.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for California Environmental Quality Act (CEQA) projects.

The law does not preclude local governments and agencies from initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

Best practice for the AB52 process and in accordance with Public Resources Code §21080.3.1(d), is to do the following:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The NAHC also recommends, but does not require that lead agencies include in their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential affect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE, such as known archaeological sites;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address:

Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

Attachment

Appendix D

CalEEMod Run Results

CalEEMod Run Results was prepared for the proposed Project by Precision Civil Engineering, Inc., on June 18, 2024.

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Ellis/Fairview Residential Subdivision

San Joaquin Valley Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	61.00	Dwelling Unit	6.93	109,800.00	174

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The Project Site is 6.93 acres.

Construction Phase - The site is vacant.

Architectural Coating - Effective January 1, 2022, nonflat gloss and semigloss paints are required to meet the 50 g/l standard, providing lower VOC emissions for buildings constructed after that date.

Area Coating - Effective January 1, 2022, nonflat gloss and semigloss paints are required to meet the 50 g/l standard, providing lower VOC emissions for buildings constructed after that date.

Mobile Land Use Mitigation -

Area Mitigation - Effective January 1, 2022, nonflat gloss and semigloss paints are required to meet the 50 g/l standard, providing lower VOC emissions for buildings constructed after that date.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	EF_Parking	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaCoating	Area_EF_Parking	150	50
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	8/28/2024	7/31/2024
tblLandUse	LotAcreage	19.81	6.93
tblWoodstoves	NumberCatalytic	6.93	0.00
tblWoodstoves	NumberNoncatalytic	6.93	0.00

2.0 Emissions Summary

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0761	0.7136	0.7394	1.3800e-003	0.1776	0.0316	0.2092	0.0870	0.0294	0.1165	0.0000	120.7273	120.7273	0.0302	7.4000e-004	121.7032
2025	0.4775	1.1932	1.5911	2.8100e-003	0.0205	0.0501	0.0706	5.5500e-003	0.0470	0.0526	0.0000	244.7962	244.7962	0.0536	2.0000e-003	246.7339
Maximum	**0.4775**	**1.1932**	**1.5911**	**2.8100e-003**	**0.1776**	**0.0501**	**0.2092**	**0.0870**	**0.0470**	**0.1165**	**0.0000**	**244.7962**	**244.7962**	**0.0536**	**2.0000e-003**	**246.7339**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0761	0.7136	0.7394	1.3800e-003	0.1776	0.0316	0.2092	0.0870	0.0294	0.1165	0.0000	120.7271	120.7271	0.0302	7.4000e-004	121.7030
2025	0.4775	1.1932	1.5911	2.8100e-003	0.0205	0.0501	0.0706	5.5500e-003	0.0470	0.0526	0.0000	244.7960	244.7960	0.0536	2.0000e-003	246.7336
Maximum	**0.4775**	**1.1932**	**1.5911**	**2.8100e-003**	**0.1776**	**0.0501**	**0.2092**	**0.0870**	**0.0470**	**0.1165**	**0.0000**	**244.7960**	**244.7960**	**0.0536**	**2.0000e-003**	**246.7336**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-1-2024**	**10-31-2024**	0.4579	0.4579
2	**11-1-2024**	**1-31-2025**	0.4923	0.4923
3	**2-1-2025**	**4-30-2025**	0.4531	0.4531
4	**5-1-2025**	**7-31-2025**	0.4679	0.4679
5	**8-1-2025**	**9-30-2025**	0.3095	0.3095
		Highest	0.4923	0.4923

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4794	0.0280	0.4622	1.7000e-004		4.3600e-003	4.3600e-003		4.3600e-003	4.3600e-003	0.0000	27.1655	27.1655	1.2100e-003	4.8000e-004	27.3403
Energy	7.9100e-003	0.0676	0.0288	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	123.2515	123.2515	8.7800e-003	2.3200e-003	124.1615
Mobile	0.2604	0.4630	2.4603	6.0500e-003	0.6185	5.3800e-003	0.6239	0.1655	5.0500e-003	0.1706	0.0000	576.2168	576.2168	0.0286	0.0314	586.2783
Waste						0.0000	0.0000		0.0000	0.0000	13.2898	0.0000	13.2898	0.7854	0.0000	32.9250
Water						0.0000	0.0000		0.0000	0.0000	1.2609	2.8012	4.0621	0.1300	3.1100e-003	8.2387
Total	**0.7477**	**0.5586**	**2.9513**	**6.6500e-003**	**0.6185**	**0.0152**	**0.6337**	**0.1655**	**0.0149**	**0.1804**	**14.5507**	**729.4349**	**743.9857**	**0.9540**	**0.0373**	**778.9436**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4794	0.0280	0.4622	1.7000e-004		4.3600e-003	4.3600e-003		4.3600e-003	4.3600e-003	0.0000	27.1655	27.1655	1.2100e-003	4.8000e-004	27.3403
Energy	7.9100e-003	0.0676	0.0288	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	123.2515	123.2515	8.7800e-003	2.3200e-003	124.1615
Mobile	0.2591	0.4590	2.4393	5.9900e-003	0.6117	5.3300e-003	0.6170	0.1637	5.0000e-003	0.1687	0.0000	570.0463	570.0463	0.0284	0.0311	580.0188
Waste						0.0000	0.0000		0.0000	0.0000	13.2898	0.0000	13.2898	0.7854	0.0000	32.9250
Water						0.0000	0.0000		0.0000	0.0000	1.2609	2.8012	4.0621	0.1300	3.1100e-003	8.2387
Total	**0.7464**	**0.5546**	**2.9302**	**6.5900e-003**	**0.6117**	**0.0152**	**0.6268**	**0.1637**	**0.0148**	**0.1785**	**14.5507**	**723.2645**	**737.8152**	**0.9538**	**0.0370**	**772.6842**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.18**	**0.71**	**0.71**	**0.90**	**1.11**	**0.33**	**1.09**	**1.11**	**0.34**	**1.04**	**0.00**	**0.85**	**0.83**	**0.02**	**0.75**	**0.80**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	8/1/2024	7/31/2024	5	0	
2	Site Preparation	Site Preparation	8/29/2024	9/11/2024	5	10	
3	Grading	Grading	9/12/2024	10/9/2024	5	20	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	10/10/2024	8/27/2025	5	230	
5	Paving	Paving	8/28/2025	9/24/2025	5	20	
6	Architectural Coating	Architectural Coating	9/25/2025	10/22/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 222,345; Residential Outdoor: 74,115; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	22.00	7.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6600e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5681	0.5681	2.0000e-005	2.0000e-005	0.5731
Total	**2.6000e-004**	**1.7000e-004**	**2.0700e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5681**	**0.5681**	**2.0000e-005**	**2.0000e-005**	**0.5731**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6500e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	1.7000e-004	2.0700e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.5681	0.5681	2.0000e-005	2.0000e-005	0.5731
Total	**2.6000e-004**	**1.7000e-004**	**2.0700e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5681**	**0.5681**	**2.0000e-005**	**2.0000e-005**	**0.5731**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2747
Total	**0.0166**	**0.1703**	**0.1476**	**3.0000e-004**	**0.0708**	**7.2400e-003**	**0.0781**	**0.0343**	**6.6600e-003**	**0.0409**	**0.0000**	**26.0639**	**26.0639**	**8.4300e-003**	**0.0000**	**26.2747**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.8000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9468	0.9468	3.0000e-005	3.0000e-005	0.9552
Total	**4.3000e-004**	**2.8000e-004**	**3.4500e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9468**	**0.9468**	**3.0000e-005**	**3.0000e-005**	**0.9552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0166	0.1703	0.1476	3.0000e-004		7.2400e-003	7.2400e-003		6.6600e-003	6.6600e-003	0.0000	26.0639	26.0639	8.4300e-003	0.0000	26.2746
Total	**0.0166**	**0.1703**	**0.1476**	**3.0000e-004**	**0.0708**	**7.2400e-003**	**0.0781**	**0.0343**	**6.6600e-003**	**0.0409**	**0.0000**	**26.0639**	**26.0639**	**8.4300e-003**	**0.0000**	**26.2746**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	2.8000e-004	3.4500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9468	0.9468	3.0000e-005	3.0000e-005	0.9552
Total	**4.3000e-004**	**2.8000e-004**	**3.4500e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9468**	**0.9468**	**3.0000e-005**	**3.0000e-005**	**0.9552**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0434	0.3966	0.4769	8.0000e-004		0.0181	0.0181		0.0170	0.0170	0.0000	68.3955	68.3955	0.0162	0.0000	68.7998
Total	**0.0434**	**0.3966**	**0.4769**	**8.0000e-004**		**0.0181**	**0.0181**		**0.0170**	**0.0170**	**0.0000**	**68.3955**	**68.3955**	**0.0162**	**0.0000**	**68.7998**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	9.1300e-003	2.7300e-003	4.0000e-005	1.3700e-003	6.0000e-005	1.4300e-003	4.0000e-004	6.0000e-005	4.5000e-004	0.0000	3.9282	3.9282	2.0000e-005	5.9000e-004	4.1037
Worker	1.8800e-003	1.2000e-003	0.0149	4.0000e-005	5.1900e-003	3.0000e-005	5.2100e-003	1.3800e-003	2.0000e-005	1.4000e-003	0.0000	4.0963	4.0963	1.2000e-004	1.1000e-004	4.1329
Total	**2.1000e-003**	**0.0103**	**0.0177**	**8.0000e-005**	**6.5600e-003**	**9.0000e-005**	**6.6400e-003**	**1.7800e-003**	**8.0000e-005**	**1.8500e-003**	**0.0000**	**8.0245**	**8.0245**	**1.4000e-004**	**7.0000e-004**	**8.2366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0434	0.3966	0.4769	8.0000e-004		0.0181	0.0181		0.0170	0.0170	0.0000	68.3954	68.3954	0.0162	0.0000	68.7997
Total	**0.0434**	**0.3966**	**0.4769**	**8.0000e-004**		**0.0181**	**0.0181**		**0.0170**	**0.0170**	**0.0000**	**68.3954**	**68.3954**	**0.0162**	**0.0000**	**68.7997**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	9.1300e-003	2.7300e-003	4.0000e-005	1.3700e-003	6.0000e-005	1.4300e-003	4.0000e-004	6.0000e-005	4.5000e-004	0.0000	3.9282	3.9282	2.0000e-005	5.9000e-004	4.1037
Worker	1.8800e-003	1.2000e-003	0.0149	4.0000e-005	5.1900e-003	3.0000e-005	5.2100e-003	1.3800e-003	2.0000e-005	1.4000e-003	0.0000	4.0963	4.0963	1.2000e-004	1.1000e-004	4.1329
Total	**2.1000e-003**	**0.0103**	**0.0177**	**8.0000e-005**	**6.5600e-003**	**9.0000e-005**	**6.6400e-003**	**1.7800e-003**	**8.0000e-005**	**1.8500e-003**	**0.0000**	**8.0245**	**8.0245**	**1.4000e-004**	**7.0000e-004**	**8.2366**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1169	1.0662	1.3752	2.3100e-003		0.0451	0.0451		0.0424	0.0424	0.0000	198.2911	198.2911	0.0466	0.0000	199.4564
Total	**0.1169**	**1.0662**	**1.3752**	**2.3100e-003**		**0.0451**	**0.0451**		**0.0424**	**0.0424**	**0.0000**	**198.2911**	**198.2911**	**0.0466**	**0.0000**	**199.4564**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0264	7.7400e-003	1.2000e-004	3.9700e-003	1.7000e-004	4.1400e-003	1.1500e-003	1.6000e-004	1.3100e-003	0.0000	11.1779	11.1779	5.0000e-005	1.6700e-003	11.6767
Worker	5.0500e-003	3.1000e-003	0.0402	1.2000e-004	0.0150	7.0000e-005	0.0151	4.0000e-003	7.0000e-005	4.0600e-003	0.0000	11.5846	11.5846	3.1000e-004	3.0000e-004	11.6828
Total	**5.6800e-003**	**0.0295**	**0.0479**	**2.4000e-004**	**0.0190**	**2.4000e-004**	**0.0193**	**5.1500e-003**	**2.3000e-004**	**5.3700e-003**	**0.0000**	**22.7624**	**22.7624**	**3.6000e-004**	**1.9700e-003**	**23.3595**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1169	1.0662	1.3752	2.3100e-003		0.0451	0.0451		0.0424	0.0424	0.0000	198.2909	198.2909	0.0466	0.0000	199.4562
Total	**0.1169**	**1.0662**	**1.3752**	**2.3100e-003**		**0.0451**	**0.0451**		**0.0424**	**0.0424**	**0.0000**	**198.2909**	**198.2909**	**0.0466**	**0.0000**	**199.4562**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3000e-004	0.0264	7.7400e-003	1.2000e-004	3.9700e-003	1.7000e-004	4.1400e-003	1.1500e-003	1.6000e-004	1.3100e-003	0.0000	11.1779	11.1779	5.0000e-005	1.6700e-003	11.6767
Worker	5.0500e-003	3.1000e-003	0.0402	1.2000e-004	0.0150	7.0000e-005	0.0151	4.0000e-003	7.0000e-005	4.0600e-003	0.0000	11.5846	11.5846	3.1000e-004	3.0000e-004	11.6828
Total	**5.6800e-003**	**0.0295**	**0.0479**	**2.4000e-004**	**0.0190**	**2.4000e-004**	**0.0193**	**5.1500e-003**	**2.3000e-004**	**5.3700e-003**	**0.0000**	**22.7624**	**22.7624**	**3.6000e-004**	**1.9700e-003**	**23.3595**

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.5000e-004	3.2000e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9238	0.9238	2.0000e-005	2.0000e-005	0.9316
Total	**4.0000e-004**	**2.5000e-004**	**3.2000e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9238**	**0.9238**	**2.0000e-005**	**2.0000e-005**	**0.9316**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	2.5000e-004	3.2000e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.9238	0.9238	2.0000e-005	2.0000e-005	0.9316
Total	**4.0000e-004**	**2.5000e-004**	**3.2000e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9238**	**0.9238**	**2.0000e-005**	**2.0000e-005**	**0.9316**

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3435					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**0.3452**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	8.5000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2464	0.2464	1.0000e-005	1.0000e-005	0.2484
Total	**1.1000e-004**	**7.0000e-005**	**8.5000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2464**	**0.2464**	**1.0000e-005**	**1.0000e-005**	**0.2484**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3435					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
Total	**0.3452**	**0.0115**	**0.0181**	**3.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.4000e-004**	**0.0000**	**2.5567**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	7.0000e-005	8.5000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2464	0.2464	1.0000e-005	1.0000e-005	0.2484
Total	**1.1000e-004**	**7.0000e-005**	**8.5000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2464**	**0.2464**	**1.0000e-005**	**1.0000e-005**	**0.2484**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2591	0.4590	2.4393	5.9900e-003	0.6117	5.3300e-003	0.6170	0.1637	5.0000e-003	0.1687	0.0000	570.0463	570.0463	0.0284	0.0311	580.0188
Unmitigated	0.2604	0.4630	2.4603	6.0500e-003	0.6185	5.3800e-003	0.6239	0.1655	5.0500e-003	0.1706	0.0000	576.2168	576.2168	0.0286	0.0314	586.2783

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	575.84	581.94	521.55	1,648,729	1,630,507
Total	575.84	581.94	521.55	1,648,729	1,630,507

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	45.60	19.00	35.40	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.522587	0.052580	0.171418	0.151108	0.026705	0.007202	0.013509	0.026273	0.000644	0.000311	0.023008	0.001408	0.003247

5.0 Energy Detail

Historical Energy Use: N

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	45.0046	45.0046	7.2800e-003	8.8000e-004	45.4497
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	45.0046	45.0046	7.2800e-003	8.8000e-004	45.4497
NaturalGas Mitigated	7.9100e-003	0.0676	0.0288	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2469	78.2469	1.5000e-003	1.4300e-003	78.7118
NaturalGas Unmitigated	7.9100e-003	0.0676	0.0288	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2469	78.2469	1.5000e-003	1.4300e-003	78.7118

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.46629e+006	7.9100e-003	0.0676	0.0288	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2469	78.2469	1.5000e-003	1.4300e-003	78.7118
Total		**7.9100e-003**	**0.0676**	**0.0288**	**4.3000e-004**		**5.4600e-003**	**5.4600e-003**		**5.4600e-003**	**5.4600e-003**	**0.0000**	**78.2469**	**78.2469**	**1.5000e-003**	**1.4300e-003**	**78.7118**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.46629e+006	7.9100e-003	0.0676	0.0288	4.3000e-004		5.4600e-003	5.4600e-003		5.4600e-003	5.4600e-003	0.0000	78.2469	78.2469	1.5000e-003	1.4300e-003	78.7118
Total		**7.9100e-003**	**0.0676**	**0.0288**	**4.3000e-004**		**5.4600e-003**	**5.4600e-003**		**5.4600e-003**	**5.4600e-003**	**0.0000**	**78.2469**	**78.2469**	**1.5000e-003**	**1.4300e-003**	**78.7118**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	486412	45.0046	7.2800e-003	8.8000e-004	45.4497
Total		**45.0046**	**7.2800e-003**	**8.8000e-004**	**45.4497**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	486412	45.0046	7.2800e-003	8.8000e-004	45.4497
Total		**45.0046**	**7.2800e-003**	**8.8000e-004**	**45.4497**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4794	0.0280	0.4622	1.7000e-004		4.3600e-003	4.3600e-003		4.3600e-003	4.3600e-003	0.0000	27.1655	27.1655	1.2100e-003	4.8000e-004	27.3403
Unmitigated	0.4794	0.0280	0.4622	1.7000e-004		4.3600e-003	4.3600e-003		4.3600e-003	4.3600e-003	0.0000	27.1655	27.1655	1.2100e-003	4.8000e-004	27.3403

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0344					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4288					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.6700e-003	0.0228	9.7100e-003	1.5000e-004		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	26.4257	26.4257	5.1000e-004	4.8000e-004	26.5827
Landscaping	0.0136	5.2100e-003	0.4525	2.0000e-005		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	0.7399	0.7399	7.1000e-004	0.0000	0.7576
Total	**0.4794**	**0.0280**	**0.4622**	**1.7000e-004**		**4.3500e-003**	**4.3500e-003**		**4.3500e-003**	**4.3500e-003**	**0.0000**	**27.1655**	**27.1655**	**1.2200e-003**	**4.8000e-004**	**27.3403**

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0344					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4288					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.6700e-003	0.0228	9.7100e-003	1.5000e-004		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	26.4257	26.4257	5.1000e-004	4.8000e-004	26.5827
Landscaping	0.0136	5.2100e-003	0.4525	2.0000e-005		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	0.7399	0.7399	7.1000e-004	0.0000	0.7576
Total	**0.4794**	**0.0280**	**0.4622**	**1.7000e-004**		**4.3500e-003**	**4.3500e-003**		**4.3500e-003**	**4.3500e-003**	**0.0000**	**27.1655**	**27.1655**	**1.2200e-003**	**4.8000e-004**	**27.3403**

7.0 Water Detail

7.1 Mitigation Measures Water

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.0621	0.1300	3.1100e-003	8.2387
Unmitigated	4.0621	0.1300	3.1100e-003	8.2387

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.9744 / 2.5056	4.0621	0.1300	3.1100e-003	8.2387
Total		**4.0621**	**0.1300**	**3.1100e-003**	**8.2387**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.9744 / 2.5056	4.0621	0.1300	3.1100e-003	8.2387
Total		**4.0621**	**0.1300**	**3.1100e-003**	**8.2387**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.2898	0.7854	0.0000	32.9250
Unmitigated	13.2898	0.7854	0.0000	32.9250

Ellis/Fairview Residential Subdivision - San Joaquin Valley Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	65.47	13.2898	0.7854	0.0000	32.9250
Total		**13.2898**	**0.7854**	**0.0000**	**32.9250**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	65.47	13.2898	0.7854	0.0000	32.9250
Total		**13.2898**	**0.7854**	**0.0000**	**32.9250**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation