Initial Study/Mitigated Negative Declaration

Long Gulch Ranch

Tentative Subdivision Map T20-002
And Zone Change RZ20-002

Lead Agency:
Tuolumne County
Community Development Department
48 Yaney Avenue
Sonora, California 95370
209-533-5633
www.tuolumnecounty.ca.gov

Owner:
Long Gulch Ranch, Brian Fitzgerald

Applicant:
Ron Kopf

February 6, 2024

INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study/Proposed Mitigated Negative Declaration (IS/Proposed MND) has been prepared by Tuolumne County to evaluate potential environmental effects resulting from the subdivision of an 82.2-acre site into 13 lots, ranging in size from 5.0 acres to 10.07 acres. Each lot would allow for development of one residence and, pursuant to Government Code Section 65852.2, an accessory dwelling unit (ADU), in Tuolumne County, California.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the *State CEQA Guidelines* (California Code of Regulations Section 15000 et seq.). An Initial Study is prepared by a lead agency to determine if a project may have a significant effect on the environment (*State CEQA Guidelines* Section 15063[a]), and thus to determine the appropriate environmental document. In accordance with State CEQA Guidelines Section 15070, a "public agency shall prepare…a proposed negative declaration or mitigated negative declaration…when: (a) The Initial Study shows that there is no substantial evidence…that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level." In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the project would not have a significant effect on the environment and, therefore, does not require the preparation of an Environmental Impact Report (EIR). By contrast, an EIR is required when the project may have a significant environmental impact that cannot clearly be reduced to a less-than-significant effect by adoption of mitigation or by revisions in the project design.

As described in the environmental checklist (Section 2), the project would not result in any unmitigated significant environmental impacts. Therefore, an IS/Proposed MND is the appropriate document for compliance with the requirements of CEQA. This IS/Proposed MND conforms to these requirements and to the content requirements of *State CEQA Guidelines* Section 15071.

PUBLIC REVIEW REQUIREMENTS

Under CEQA, the lead agency is the public agency with primary responsibility over approval of the project. Tuolumne County is the CEQA lead agency. The purpose of this document is to present information to decision-makers and the public about the environmental consequences of implementing the project. This disclosure document is being made available to the public for review and comment. This IS/Proposed MND will be available for a 30-day public review period from February 6, 2024, to March 6, 2024.

Supporting documentation referenced in this document is available for review at:
Tuolumne County Community Development Department
48 Yaney Avenue, Sonora, CA 95370

Comments must be postmarked by March 6, 2024, and should be addressed to:
Cheydi Gonzales
Tuolumne County Community Development Department
2 South Green Street, CA 95370
cgonzales@co.tuolumne.ca.us

After comments are received from the public and reviewing agencies, the Tuolumne County Board of Supervisors may (1) certify the MND and approve the project; (2) require additional environmental analysis; or (3) disapprove the project. If the project is approved, the applicant may proceed with the project.

PROJECT INFORMATION

DATE: February 6, 2024

SURFACE/MINERAL RIGHTS OWNER Long Gulch Ranch, c/o Brian Fitzgerald

APPLICANT: Ron Kopf

PROJECT DESCRIPTION:

1. Zone Change RZ20-002 to rezone the 82.2-acre site from Exclusive Agricultural, Thirty-Seven Acre Minimum:Airport Combining (AE-37:AIR) to Residential Estate, Five-Acre Minimum:Airport Combining (RE-5:AIR) under Title 17 of the Tuolumne County Ordinance Code (TCOC).

2. Tentative Subdivision Map T20-002 to divide the 82.2-acre parcel into 13 residential lots, ranging in size from 5.0 acres to 10.07 acres.

LOCATION: The project site is located east of the intersection of Ferretti Road and Clements Road, in Groveland on the north side of Ferretti Road. The site is identified by Assessor's Parcel Number (APN) 066-160-085. The project site is located within a portion of Section 13, Township 1 South, Range 16 East, Mount Diablo Baseline and Meridian, and within Tuolumne County Supervisorial District 4.

SITE DESCRIPTION: The project site is currently undeveloped and primarily consists of oak woodland, mixed conifers, annual grassland, and ruderal vegetation. Clements Road borders the northwestern edge of the project site, beyond which exists the site of a recently approved residential development (Airport Estates Project), the Pine Mountain Lake Airport, and Pine Mountain Lake Subdivision. Ferretti Road boarders the site to the south. Single-family residences are located to the north and northwest of the site, along Clements Road and Beaver Court. The nearest residence to the site is approximately 230 feet from the closest point of the project site boundary. The surrounding areas to the northeast, east, and south consist of vacant land. The site is currently designated Rural Residential (RR) by the County's General Plan and is zoned AE-37:AIR under Title 17 of the TCOC.

The site is located within Airport Compatibility Zones B1 and B2 associated with the Pine Mountain Lake Airport. The Pine Mountain Lake Airport runway is located approximately 750 feet from the project site at its closest point. Ferretti Road boarders the site to the southwest. The site is located outside of the Groveland Community Services District (GCSD) boundary but is located within the District's Sphere of Influence. GCSD provides water, sewer, fire, and park services. Pacific Gas and Electric (PG&E) overhead electrical lines cut through the site from Ferretti Road in a northerly direction. A recorded road easement exists on the site in the northwestern portion originating from Clements Road to provide access to parcels to the north that were created via a recently recorded Tentative Parcel Map.

DETAILED PROJECT DESCRIPTION:

An application for General Plan Amendment GPA20-001, Zone Change RZ20-002, and Tentative Subdivision Map (TSM) T20-002 was originally submitted on January 29, 2020. The original application proposed to divide the site into 19 lots with a minimum size of 3 acres. To achieve a minimum of 3 acre lots, a request for a General Plan Amendment to the HR (Homestead Residential) land use designation and a Zone Change to RE-3:AIR (Residential Estate, Three Acre Minimum:Airport Combining) was included with the project application.

A revised map and project description was submitted on December 13, 2022, which is the current project scope being reviewed and analyzed in this document. The revised map would divide the site into 13 residential lots. The lots would range in size from 5.0 acres to 10.07 acres. The Zone Change proposes to rezone the site to RE-5:AIR, which would allow for parcels meeting a 5-acre minimum size. The RE-5:AIR zoning is compatible with the existing General Plan designation of RR. Therefore, a General Plan Amendment is no longer needed and is not included in the project scope. The revised application was recirculated for public review in January of 2023.

Lots 1 through 5 would be accessed via individual driveways on Ferretti Road and Clements Road, while Lots 6 through 13 would be accessed by a new internal roadway and a common driveway. The new access road would connect from the eastern portion of Ferretti Road to Clements Road via the existing road easement in the northwestern corner of the site. The proposed project would require approval of a zone change to change the site's zoning designation from AE-37:AIR to RE-5:AIR to allow for parcels with a minimum size of 5.0 acres. A General Plan Amendment is not required as the proposed RE-5:AIR zoning is compatible with the existing RR General Plan land use designation.

The revised Long Gulch Ranch Vesting Tentative Map Project (proposed project) would subdivide the 82.2-acre site into 13 lots, ranging in size from 5.0 acres to 10.07 acres. Each lot would allow for development of one residence and, pursuant to Government Code Section 65852.2, an accessory dwelling unit (ADU). As such, this Initial Study/Mitigated Negative Declaration (IS/MND) conservatively evaluates potential development of the site with up to approximately 26 future residential units. Allowable uses within the RE-5 zoning district are indicated in Chapter 17.28 of the TCOC.

Water would be provided to serve the parcels via private, on-site wells. Individual private septic systems would be utilized to process wastewater.

This Initial Study identifies and analyzes the potential environmental impacts of the proposed project. The information and analysis presented in this document is organized in accordance with the order of the California Environmental Quality Act (CEQA) checklist in Appendix G of the CEQA Guidelines. Where the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures are prescribed.

The impact discussions for each section of this IS/MND have largely been based on information in the Tuolumne County General Plan, technical studies prepared for the project, and the resources identified at the end of this report. The mitigation measures prescribed for environmental effects described in this IS/MND would be implemented in conjunction with the project, as required by CEQA. The mitigation measures would be incorporated into the project through project conditions of

approval. The County would adopt findings and a Mitigation Monitoring and Reporting Program in conjunction with approval of the project.

The following describes the project site's current location and setting, the proposed project components, and the discretionary actions required for the project.

Project Location and Setting

The project site is currently undeveloped. The site primarily consists of hills and slopes with a long meadow, partly covered in dense vegetation. At least two seasonal drainages run through the valley, as well as a historical ditch. Vegetation within the site includes scattered native pines and oaks, as well as dense grasses, plants, and brush that consists of manzanita, poison oak, toyon, blackberry and buck brush.

Clements Road borders the northwestern edge of the project site, beyond which exists the site of a recently approved residential development (Airport Estates Project), the Pine Mountain Lake Airport, and Pine Mountain Lake Subdivision. Ferretti Road borders the site to the south. Single-family residences are located to the north and northwest of the site, along Clements Road and Beaver Court. The nearest residence to the site is approximately 230 feet from the closest point of the project site boundary. The surrounding areas to the northeast, east, and south consist of vacant land.

The site is currently designated Rural Residential (RR) per the County's General Plan and is zoned Agricultural Exclusive, Thirty-Seven Acre Minimum: Airport Combining (AE-37:AIR).

Project Components

The proposed project would require approval of Zone Change RZ20-001 to rezone the site from AE-37:AIR to RE-5:AIR. Tentative Subdivision Map T20-002 would divide the 82.2-acre site into 13 residential lots, ranging in size from 5.0 acres to 10.07 acres. Decisions on Subdivision Maps and Zone Changes are made by the Tuolumne County Board of Supervisors.

The project components, including the requested approvals, are discussed in detail below.

<u>Rezone</u>

The current zoning for the project site is AE-37:AIR. The AE-37:AIR designation allows a maximum residential density of one dwelling unit per 37 acres and requires parcels to be a minimum size of 37 acres. The proposed project would require a rezone to change the site's current zoning from AE-37:AIR to RE-5:AIR to allow for parcels meeting a minimum size of five gross acres. Allowable uses within the RE-5 zoning district are contained in Chapter 17.28 of the TCOC.

<u>Vesting Tentative Map</u>

The proposed project would include a vesting tentative map to subdivide the project site into 13 lots, ranging in size from 5.0 acres to 10.07 acres. While the project does not include a specific development proposal at this time, the project would allow for future development of the site with single-family residences pursuant to the densities allowed by the zoning and the vesting tentative map. Additional site

improvements associated with the proposed project would include internal vehicle circulation, stormwater management, and landscaping. Figure 3 and Figure 4 below illustrate the site plan and vesting tentative subdivision map for the proposed project.

The proposed project would include construction of a new internal roadway that would be constructed to connect with Ferretti Road to the south and provide primary access for the project site. The new internal roadway would then connect to Clements Road by way of an existing roadway easement in the northern portion of the site. From the internal roadway, a common driveway would offer access to the northeastern-most lots of the subdivision. The internal roadway and common driveway would provide access to Lots 6 through 13. Lots 1 through 5 would have direct driveway access to Ferretti Road.

Electrical and natural gas utilities would be provided by connection to existing infrastructure in the project vicinity. Future on-site residences would include private septic systems and, thus, would not require connection to public sewer infrastructure. Water would be provided via on-site, private wells. Pursuant to Section 16.26.230 of the TCOC, reasonable proof of groundwater availability on-site shall be provided to the environmental health department in a form as specified by their adopted guidelines. For subdivisions with lots of five gross acres or more, groundwater proof shall be provided prior to approval of the final map.

Future residential development within the site would be required to comply with County Code Section 16.26.180, which requires preparation of a drainage study for all new subdivisions. Consistent with Section 16.26.180(B), the drainage study would be required to demonstrate that drainage structures would be installed or improved as necessary to convey stormwater from the project site to the point where the waters enter a natural drainage which can adequately contain and convey the stormwater. With regard to the existing on-site drainages, the drainage study would be required to demonstrate the following, per Section 16.26.180(C):

Where a subdivision is traversed by a watercourse, drainageway, channel, or stream, there shall be provided a storm water easement or drainage right-of-way fifteen feet in width along the centerline of ephemeral drainages, thirty feet in width along the centerline of intermittent drainages and fifty feet along the centerline of perennial streams conforming substantially to the lines of such watercourse. Wherever safe and feasible, as determined by the director, it is desirable that the drainage be maintained by an open channel with landscaped banks and adequate width for maximum potential volume of flow.

Required Approvals

The proposed project would require Tuolumne County Board of Supervisors approval for the following entitlements:

- Zone Change RZ20-001 to rezone to change the site from AE-37:AIR to RE-5:AIR, under Title 17 of the Tuolumne County Ordinance Code; and
- Vesting Tentative Subdivision Map T20-002 to divide the 82.2-acre site into 13 lots and associated roadway improvements.

Other Agency Approvals:

In addition to County review and approval, the project would require permit issuance approvals from other

agencies. These agencies would serve as responsible and trustee agencies pursuant to *CEQA Guidelines* Section 15381 and Section 15386, respectively. This document provides the necessary environmental information for discretionary actions by these agencies.

- California Department of Fish and Wildlife (CDFW) – Reviews/approves project for compliance with applicable rules and regulation, specifically impacts to sensitive plant, animal, and wetland/riparian habitat. Collects CDFW filing fee for review of project environmental document.
- US Fish and Wildlife Service – Reviews/approves applicable rules and regulation, specifically impacts to sensitive plant, animal, and wetland/riparian habitat. The authority to contact regarding buffer protection zones for elderberry shrubs.
- Native American Heritage Commission
- State Water Resources Control Board
- Tuolumne County for encroachment permits, grading permits, building permits, and environmental health permits.

Consultation Pursuant to Public Resources Code Section 21080.3.1:

In compliance with AB 52 (Public Resources Code Section 21080.3.1), Tuolumne County distributed a notification letter via regular and certified mail to the Chicken Ranch Rancheria of Me-Wuk Indians and Tuolumne Band of Me-Wuk Indians. The letters were distributed on August 14, 2020. Request for consultation has not been received.

Figure 1: Regional Project Location

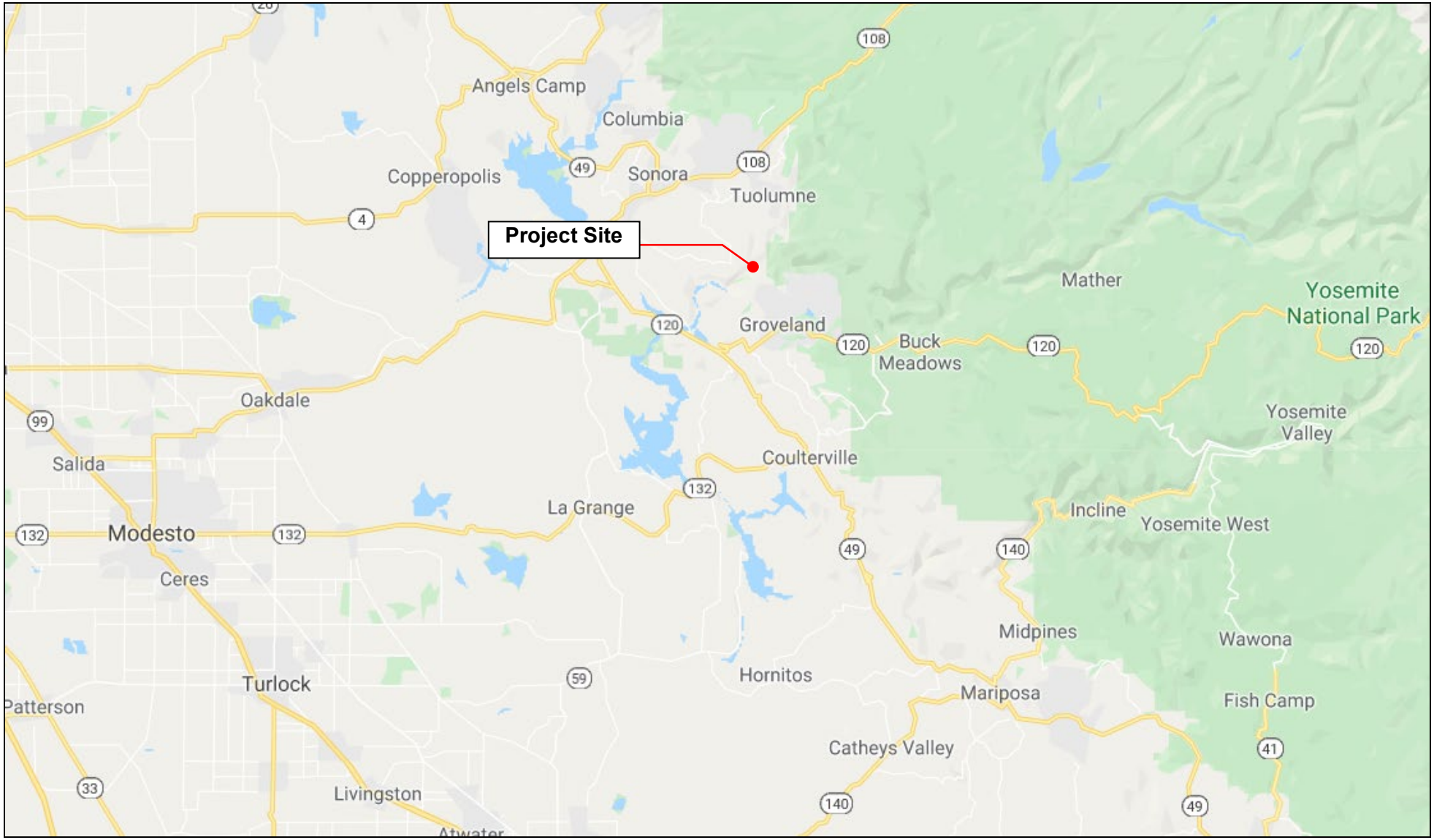


Figure 1: Project Vicinity Map

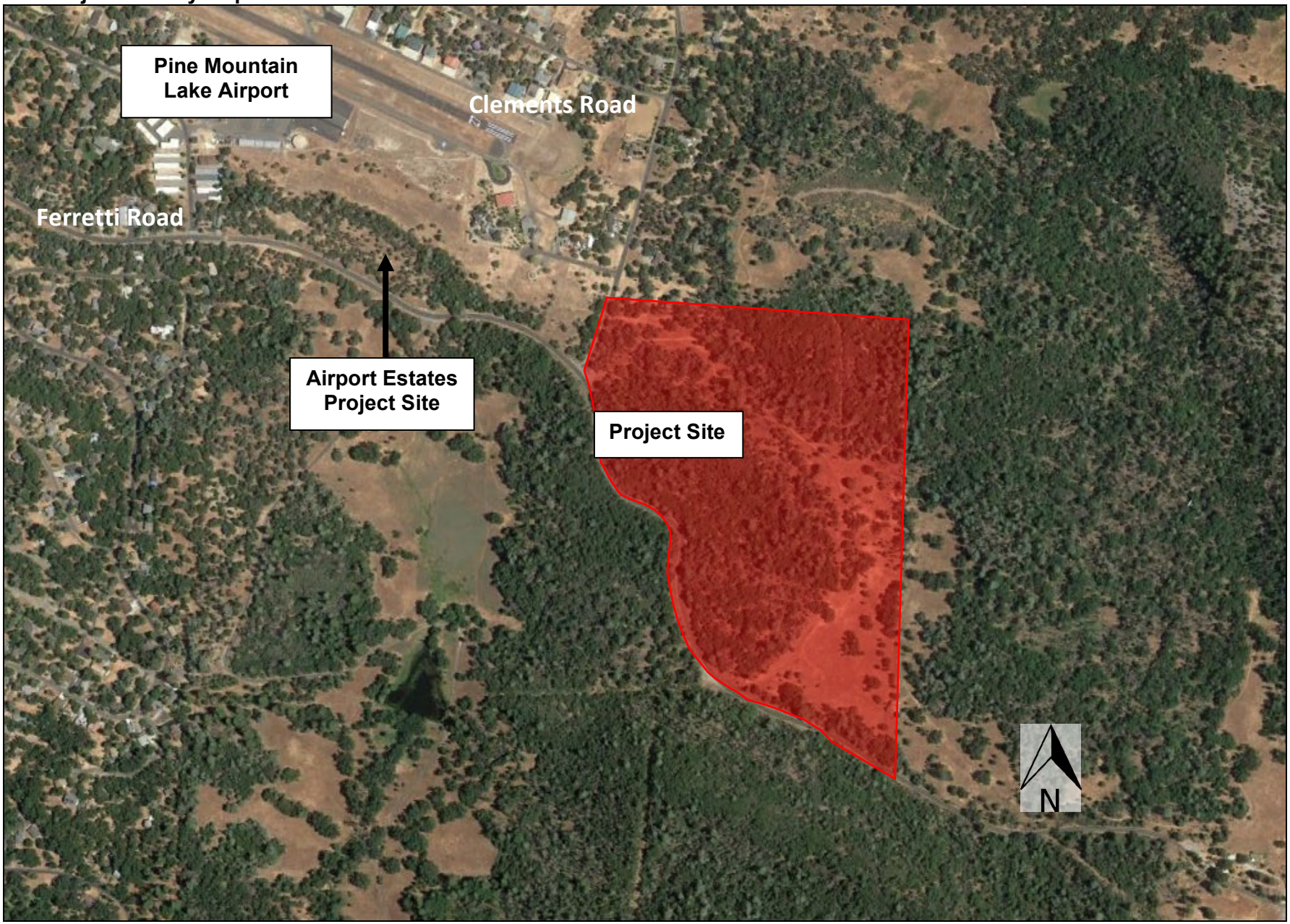


Figure 3: Project Site

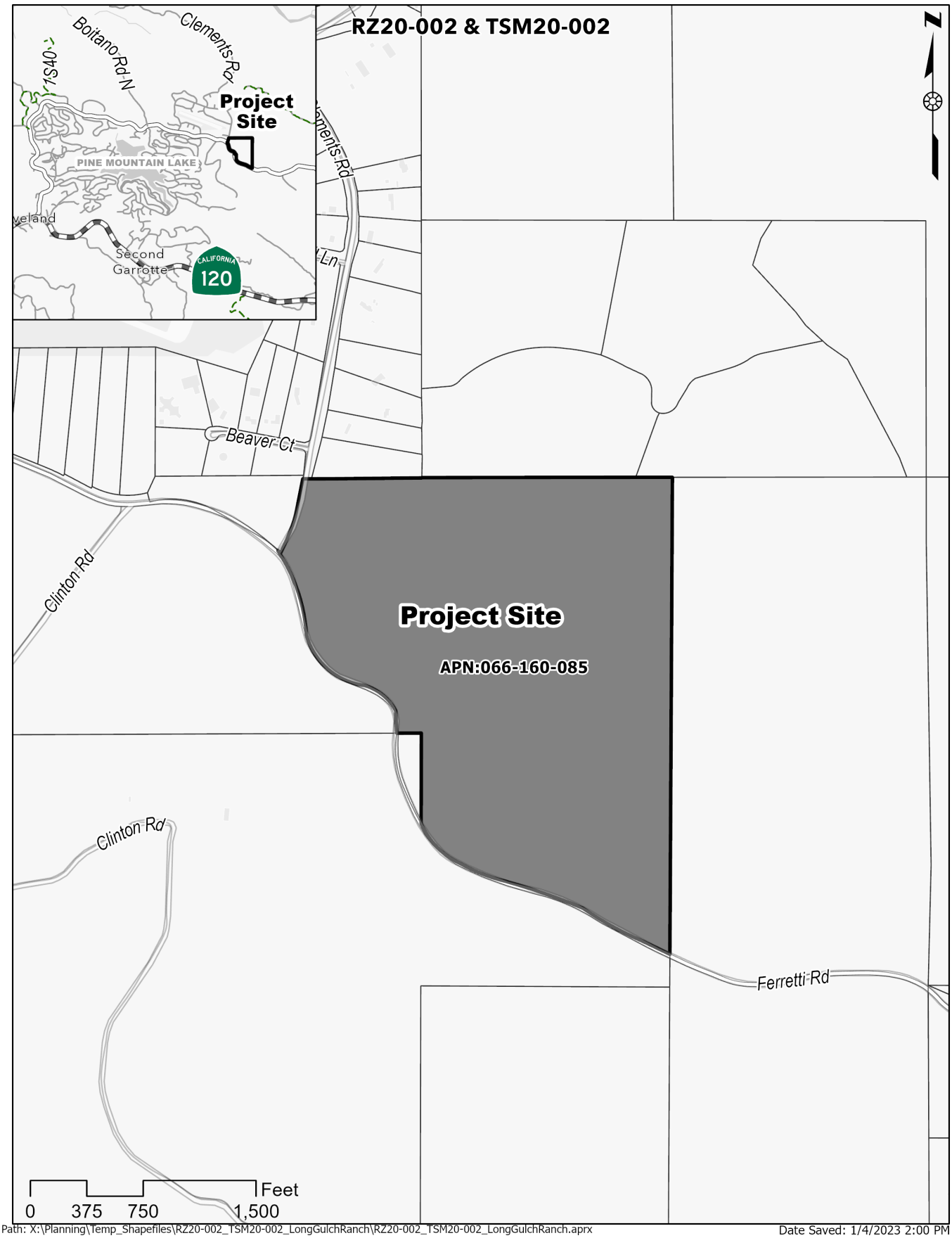
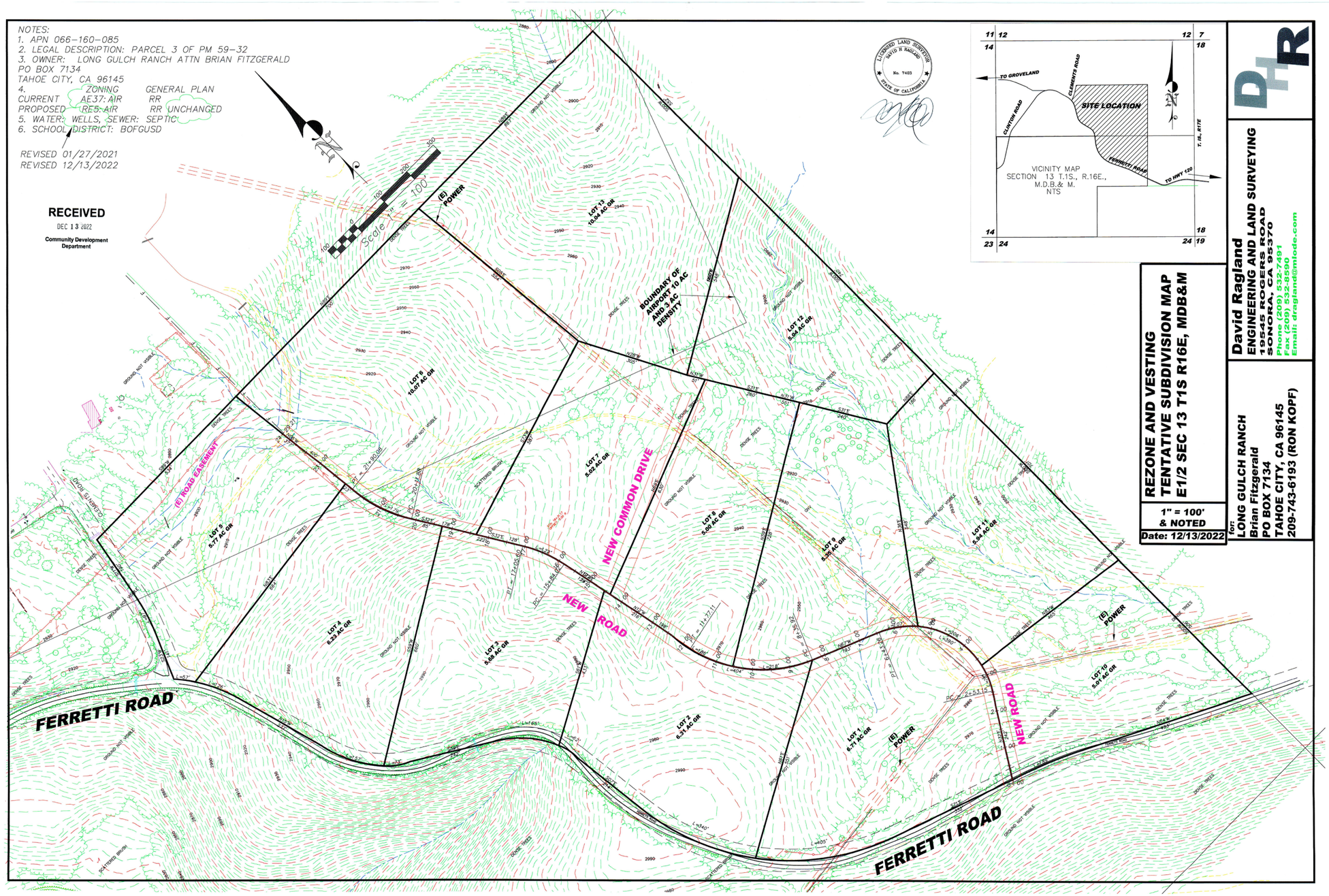


Figure 4: Project Site Plan and Tentative Subdivision Map



ENVIRONMENTAL EVALUATION

TERMINOLOGY DEFINITIONS: The following terminology from Appendix G of the *State CEQA Guidelines* is used in this environmental analysis to describe the level of significance of potential impacts to each resource area:

- ***Potentially Significant Impact.*** This term applies to adverse environmental consequences that have the potential to be significant according to the threshold criteria identified for the resource, even after mitigation strategies are applied and/or an adverse effect that could be significant and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared consistent with CEQA.
- ***Less-than-Significant Impact with Mitigation.*** This item applies to adverse environmental consequences that have the potential to be significant but can be reduced to less-than-significant levels through the application of identified mitigation strategies that have not already been incorporated into the proposed project.
- ***Less-than-Significant Impact.*** This term applies to potentially adverse environmental consequences that do not meet the significance threshold criteria for that resource. Therefore, no mitigation measures are required.
- ***No Impact.*** This term means no adverse environmental consequences have been identified for the resource or the consequences are negligible or undetectable. Therefore, no mitigation measures are required.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards and 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
☒ None with Mitigation Implemented		

DETERMINATION (To be completed by the Lead Agency) on the basis on the initial evaluation:

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

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

☐ I find that the proposed project MAY have a significant effect on the environment, 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 the 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 DECLARTION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Quincy Yaley

02-05-2024

Quincy Yaley, AICP
Environmental Coordinator

Date

OFFICE OF ENVIRONMENTAL COORDINATOR

Quincy Yaley, AICP
Environmental Coordinator

48 W. Yaney Avenue, Sonora
Mailing: 2 S. Green Street
Sonora, CA 95370
209 533-5633
209 533-5616 (fax)
209 533-5909 (fax – EHD)
www.tuolumnecounty.ca.gov

NOTICE OF DETERMINATION

PROJECT TITLE: Long Gulch Ranch Rezone RZ20-002 and Tentative Subdivision Map TSM20-002 (SCH#)

PROJECT PROPONENT: Long Gulch Ranch
Brian Fitzgerald
PO Box 7134
Tahoe City, CA. 96145

LOCATION: The project site is located east of the intersection of Ferretti Road and Clements Road, in Groveland on the north side of Ferretti Road. The site is identified by Assessor's Parcel Number (APN) 066-160-085.

PROJECT DESCRIPTION: Zone Change RZ20-002 to rezone the 82.2-acre site from Exclusive Agricultural, Thirty-Seven Acre Minimum: Airport Combining (AE-37:AIR) to Residential Estate, Five-Acre Minimum: Airport Combining (RE-5:AIR) under Title 17 of the Tuolumne County Ordinance Code (TCOC).

Tentative Subdivision Map T20-002 to divide the 82.2-acre parcel into 13 residential lots, ranging in size from 5.0 acres to 10.07 acres.

The Community Development Department Director for the County of Tuolumne on _____, has approved the project described above and has made the following determinations:

1. The project will not have a significant effect on the environment.
2. A Mitigated Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures were included as conditions of project approval.
4. A mitigation reporting or monitoring plan was adopted for this project.
5. A statement of Overriding Considerations was not adopted for this project.
6. Findings relative to significant environmental effects identified in an Environmental Impact Report were not made pursuant to Section 15168 of the State CEQA Guidelines.

Staff Contact: Cheydi Gonzales Approving Agency: Tuolumne County

This is to certify that the final EIR with comments and responses and record of project approval, or the Negative Declaration and all documents referenced in the Negative Declaration for the project described above, and all project documents, are available at the Community Development Department, Monday through Thursday, 8:00 a.m. to 3:00 p.m., 48 West Yaney Avenue, Sonora, California.

Signature: _____ **Date:** _____
Quincy Yaley, AICP
Environmental Coordinator

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EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

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

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

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

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

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

AESTHETICS:

Issues and Supporting Information Sources		*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:					
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 experiences 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?	☐	☒	☐	☐

Environmental Setting:

Visual or aesthetic resources are generally defined as the natural and built features of the landscape that can be seen. The combination of landform, water, and vegetation patterns represents the natural landscape that defines an area's visual character, whereas built features such as buildings, roads, and other structures reflect human or cultural modifications to the landscape. These natural and built landscape features or visual resources contribute to the public's experience and appreciation of the environment. Depending on the extent to which a project's presence would alter the perceived visual character and quality of the environment, visual or aesthetic impact may occur. It should be noted that visual change in and of itself does not necessarily represent an adverse impact, and in some cases may result in a beneficial visual effect.

The aesthetic analysis is based on field observations and the review of information including site maps, drawings, technical data, and aerial and ground level photographs of the area. In addition, as part of this study, planning documents pertinent to visual quality including the Tuolumne County General Plan were reviewed. The analysis also responds to the California Environmental Quality Act (CEQA) guidelines for visual impact analysis as well as the goals, programs, and implementation programs outlined in the Tuolumne County General Plan and the Tuolumne County Ordinance Code.

The project site is currently undeveloped. PG&E electrical lines cut through the site from Ferretti Road in a northerly direction. The site consists of gentle rolling terrain with scattered vegetation consisting of oak trees, conifers, brush, and annual grasses.

Potentially affected viewers in the area includes motorists and other viewers along Ferretti Road and Clements Road, both of which are publicly dedicated, County-maintained roads. Motorists would represent the largest of the affected viewer groups and include the public views of the project site.

Discussion:

a,b. The project site is currently undeveloped and primarily consists of hills and slopes and a long meadow, partly covered in dense vegetation. At least two seasonal drainages run

through the valley, as well as a historical ditch. Vegetation within the site includes scattered native pines and oaks, as well as dense grasses, plants, and brush that consists of manzanita, poison oak, toyon, and blackberry and buck brush Clements Road borders the northwestern edge of the project site, beyond which exists the site of a recently approved residential development (Airport Estates Project), the Pine Mountain Lake Airport, and Pine Mountain Lake Subdivision. Ferretti Road boarders the site to the south. Single-family residences are located to the north and northwest of the site, along Clements Road and Beaver Court. The nearest residence to the site is approximately 230 feet from the closest point of the project site boundary. The surrounding areas to the northeast, east, and south consist of vacant land and contain the RR and AG General Plan designation. Parcels directly surrounding the site would be utilized for single family residential or rural residential uses. The proposed project would include the subdivision of the 82.2-acre site into 13 residential lots ranging in size from 5.0 acres to 10.07 acres.

Scenic vistas are generally considered to be areas where the public can experience unique or high-quality views. Typical examples of scenic vistas include mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. In general, a project would result in an impact to a scenic vista if development of the project would substantially change or remove a scenic vista. Three officially designated vista points exist within the County and are located on State Route (SR) 120 at miles 19 and 21, which overlook Don Pedro Lake, and mile 44, which overlooks a canyon containing the South Fork of the Tuolumne River. The project site is not located within the vicinity of the officially designated scenic vistas and would not be visible from one.

According to the California Scenic Highway Mapping System, the project site is not located within the vicinity of an officially designated State Scenic Highway.[1] SR 120, located approximately two miles south of the site is an Eligible State Scenic Highway; however, SR 120 has not been officially designated. Furthermore, due to the topography and existing vegetation in the area, the project site is not visible from SR 120. Therefore, the proposed project would not have the potential to alter the scenic nature of SR 120. In addition, locally designated scenic routes do not exist within the vicinity of the project site pursuant to the Tuolumne County General Plan.

Based on the above, the proposed project would not have a substantial adverse effect on a scenic vista and would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway. Therefore, a ***less-than-significant*** impact would occur.

c. The project site is located within a rural residential area of Tuolumne County. The site is located within the identified community of Groveland, pursuant to the Tuolumne County General Plan. The project area is primarily characterized by sloping hills with a substantial number of trees and vegetation. Public views of the site include views from Ferretti Road and Clements Road to the west of the site. The proposed project would include the subdivision of the 82.2-acre site into 13 residential lots ranging in size from 5.0 acres to 10.07 acres. Following implementation of the proposed project, the project site would

1 California Department of Transportation. *California Scenic Highway Mapping System*. Available at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed August 2020.

undergo a visual change from that of undeveloped oak woodland and ruderal grasses, to a 13-lot single-family residential subdivision.

The General Plan EIR anticipated build out of the project site with residential uses at the proposed density, as the site contains the RR General Plan designation. The project also involves a Zone Change consistent with the General Plan designation. Thus, general impacts from developing to the proposed density were considered in the General Plan EIR. In addition, the proposed project would be visually compatible with the recently approved Airport Estates Project to the northwest, residences within the Pine Mountain Lake Subdivision adjacent to the site, and rural parcels to the south, north, and east of the project site.

The parcels would be a minimum of 5.0 acres in size, which would preserve the rural nature of the site. This parcel size and zoning is which is consistent with other parcels within the vicinity located south, north, and east of the project site. The large parcel sizes would allow for much of the mature vegetation to remain on site however, the development of the subdivision will require compliance with Tuolumne County's Chapter 8.14 Hazardous Vegetation Management ordinance.
There are no adopted design guidelines or criteria for the Groveland area.

As such, while the proposed project would result in a change to the visual character of the site, the proposed project would not substantially degrade the existing visual character or quality of public views of the site and a ***less-than-significant*** impact would occur.

d. Due to the undeveloped nature of the project site, the only existing sources of light and glare in the area are vehicles traveling along Ferretti Road and Clements Road, as well as the existing residences in the project vicinity. Future development of the proposed residential subdivision and internal roadways would introduce new potential sources of light and glare associated with interior light spilling through windows, exterior lighting and light reflected off windows.

Per the General Plan, the project site is designated for buildout with residential uses. Thus, the County has previously anticipated increased light and glare associated with buildout of the site. Furthermore, the light and glare created by future on-site residential development would be consistent with the levels of light and glare currently emitted from the existing residences in the vicinity of the site. However, given that residential development at the project site would incrementally increase light and glare, the approval of the proposed project would result in a ***potentially significant*** impact with respect to creating a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Implementation of Mitigation Measure I-1 would reduce the potential impact to a ***less-than-significant*** level.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

I-1 Prior to issuance of a building permit or addition of exterior lighting to the site, and subject to the review and approval of the Land Use and Natural Resources Division (LUNR) of the Tuolumne County Community Development Department (CDD), construction plans shall show that all lighting of roads, driveways, and the exterior of structures shall be designed to provide adequate illumination without a glaring effect

(aimed down and towards the site). Exterior lighting shall have the International Dark Sky fixture seal of approval. Fixtures shall have bulbs that are fully recessed and shielded and shall not emit light above the horizontal plane of the shielding.

Mitigation Monitoring:

Mitigation Measure I-1 shall be required prior to the issuance of a building permit or addition of exterior lighting. The plan will be reviewed and verified by the LUNR Division of CDD. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.

AGRICULTURAL AND FORESTRY RESOURCES:

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

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
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?	☐	☐	☒	☐

Environmental Setting:

Lands of agricultural importance in Tuolumne County are designated AG (Agricultural), TPZ (Timber Production), or O (Open Space) by the General Plan land use diagrams. Exclusive agricultural properties contain the AE-160 (Exclusive Agricultural, One Hundred Sixty Acre Minimum), AE-80 (Exclusive Agricultural, Eighty Acre Minimum), and AE-37 (Exclusive Agricultural, Thirty-Seven Acre Minimum) Zoning. Parcels within the Williamson Act Land Conservation Program must contain the Agricultural Preserve Combining (:AP) zoning, as required by Tuolumne County Resolution 106-04. Parcels approximately 1,350 feet east of the project site contain the AG (Agricultural) General Plan designation and parcels located approximately 2,750 feet east of the project site are zoned AE-37:AP, contain the AG General Plan designation, and are currently within the Williamson Act Land Conservation Program for livestock grazing.

Chapter 8 of the 2018 Tuolumne County General Plan contains the Goals, Policies, and Implementation Programs related to agriculture in Tuolumne County. The project was reviewed for consistency with the Agricultural Element of the General Plan. The project site is currently zoned AE-37:AIR and contains the RR General Plan land use designation.

Policy 8.A.4 of the Agricultural Element of the General Plan states the following relative to development adjacent to agricultural land:

> *Development proposed adjacent to land designated Agricultural by the General Plan land use diagrams shall provide a buffer from the agricultural land. The buffer shall be 200 feet in width and located on the development site. No residential or non-agricultural buildings may be erected in the buffer area as long as the adjacent land remains designated Agricultural. The buffer may be reduced in width by the Board of Supervisors after considering the recommendation of the Agricultural Advisory Committee if such a reduction is determined appropriate based upon the topography, vegetation, roads or other physical features of the buffer area or other factors considered by the Committee. If the General Plan land use designation of the adjacent land is amended in the future to a designation other than Agricultural, the need for the buffer area will be eliminated and the land use restrictions imposed pursuant to this Policy will cease at that time.*

The California Department of Forestry and Fire Protection (CalFire) regulates timber harvesting and logging on privately owned lands in California. Prior to the conversion of land to a land use other than growing timber, a Timberland Conversion permit must be reviewed and approved by CalFire. A Less Than Three Acre Conversion Exemption may be obtained from CalFire in lieu of a Timberland Conversion Permit.

The project site has not been mapped under the Farmland Mapping and Monitoring Program of the California Resources Agency. However, the project site has been mapped under the United States Department of Agriculture Natural Resources Conservation Service web soil survey maps. The project site contains the Nedsgulch-Wallyhill-Arpatutu Complex, 3 to 15 Percent Slopes and the Nedsgulch-Wallyhill-Arpatutu Complex, 15 to 30 Percent Slopes soil types. Neither of these soil types are identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

<u>California Land Conservation Act</u>

The California Land Conservation Act of 1965 (Williamson Act) enables local governments to enter into contracts with private landowners for preserving agricultural land or related open space uses. Land under agricultural production can have its annual assessed valuation for property tax calculation reduced if the owner agrees to place the land under a Williamson Act contract for 10 years, renewable annually. Tuolumne County Resolution 106-04, approved by the Board of Supervisors on June 15, 2004, contains the County's rules and regulations to govern land within Agricultural Preserves and land within the Williamson Act Land Conservation Program.

<u>Z'berg-Nejedly Forest Practice Act of 1976</u>

The project site is located on private property and as such for actions related specifically to potential impacts from forest resources could be subject to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (FPA) that have been promulgated as the California Forest Practice Rules. Land within Tuolumne County that is subject to the Z'berg-Nejedly Forest Practice Act of 1976 is demonstrated by the TPZ (Timberland Preserve) zoning district and the TPZ General Plan land use designation. The TPZ zoning district is utilized for the protection of timberland. The TPZ zoning district is for the protection of timberland and in order to prevent encroachment upon it by incompatible uses of land, and for the general welfare of the County as a whole. This zone is intended to qualify its land pursuant to Z'bergWarren-Keene-Collier Forest Taxation Reform Act of 1976 or such other legislative statutes or constitutional authorization as may be developed for defining a timberland preserve. Land within Tuolumne County that is subject to the Z'berg-Nejedly Forest Practice Act of 1976 is demonstrated by the TPZ (Timberland Preserve) zoning district and the TPZ General Plan land use designation.

Discussion

a,e. According to the State of California Department of Conservation Farmland Mapping and Monitoring Program, the project site does not contain lands designated as important farmland such as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.[2] Because the Department of Conservation has not mapped important farmland in Tuolumne County, the quantification of converted farmland is not possible. Given that the project site does not contain lands designated as important farmland, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or otherwise result in the loss of Farmland to non-agricultural use. Furthermore, the project site is not currently being used for agricultural purposes, and thus, the project would not result in conversion of active agricultural land. The nearest parcel with the AG General Plan is approximately 1,350 feet away and the nearest parcel within the Williamson Act Land Conservation program is approximately 2,750 feet away. These distances far exceed the 200-foot buffer recommended by Policy 8.A.4 of the Agricultural Element of the General Plan. Therefore***, a less-than-significant*** would occur.

b. The site is currently designated RR per the County's General Plan and zoned AE-37:AIR. While the site contains the AE-37 zoning, the County has already considered impacts associated with development of the site with non-agricultural uses as part of the General Plan EIR analysis. The proposed project would not result in any impacts in excess of what has already been considered by the County. In addition, the project site is not under a Williamson Act Contract. The nearest parcel with the AG General Plan is approximately 1,350 feet away and the nearest parcel within the Williamson Act Land Conservation program is approximately 2,750 feet away. These distances far exceed the 200-foot buffer recommended by Policy 8.A.4 of the Agricultural Element of the General Plan. Additionally, due to these distances, the project was not required to be considered by the Tuolumne County Agricultural Advisory Committee, pursuant to the Agricultural Element of the General Plan. Given that the County's General Plan EIR has already anticipated impacts related to the conversion of agricultural land, and the project site is not under a Williamson Act contract, a ***less-than-significant*** impact would occur.

c,d. According to Public Resources Code section 12220[g], "forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

As noted above, the project site is currently zoned AE-37:AIR. As such, the project site is not zoned forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or zoned timberland Production (as defined by Government Code section 51104[g]). The project site does not contain the TPZ zoning as indicated by Chapter 17.42 of the TCOC, nor would the parcel meet the minimum size requirement of 160 acres to be eligible for TPZ zoning. Therefore, the proposed project would not conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production.

2 Department of Conservation. *Farmland Mapping and Monitoring Program*. Available at: http://www.conservation.ca.gov/dlrp/fmmp. Accessed August 2020.

Pursuant to Section 17.52.170 of the County Code of Ordinances, the commercial growing and harvesting of timber encompassing more than three acres is a permitted use in all zoning districts, except O (Open Space) and O-1 (Open Space – 1), provided timber growing and harvesting is in conformance with the California Forest Practice Rules. Because the project site is located near existing and anticipated residential development, use of the project site for timberland harvesting would not be compatible with the existing and approved residential development in the area. Given that the project site does not allow for the management of one or more forest resources, including timber, aesthetics, fish, and wildlife, biodiversity, water quality, recreation, and other public benefits, the site is not considered forest land per Public Resources Code section 12220[g].

The project would be required to comply with applicable CalFire regulations, including securement of a Timberland Conversion permit or Less Than Three Acre Conversation Exemption.

Furthermore, as indicated in Figure 2 of this report, a substantial number of trees would remain in the immediate vicinity of the project site and the larger parcel sizes would allow for more mature vegetation to remain when each lot is developed. Thus, while future development would require tree removal, the proposed project would have a ***less-than-significant*** impact with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

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:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Where available, the significance criteria established by the Tuolumne County Air Pollution Control District has been relied upon to make the following determinations. Would the Proposed Project:				
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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Environmental Setting:

This section describes the impacts of the proposed project on local and regional air quality. It describes existing air quality in the foothills; project related direct and indirect emissions; health effects; and the impacts of these emissions on both the project and cumulative/regional scale.

The U.S. Environmental Protection Agency (EPA) designated Tuolumne County as “attainment/unclassified” for the 2008 eight-hour federal ozone standard on July 20, 2012. Tuolumne County is “attainment/unclassified” for all other federal ambient air quality standards. With respect to State ambient air quality standards, Tuolumne County is classified as “nonattainment” for ozone and “attainment/unclassified” for all other State standards. The State ozone “nonattainment” status is due to overwhelming transport of ozone precursors from upwind, urban areas.

Air pollution is directly related to a region’s topographic features, and the California Air Resources Board (CARB) has divided California into regional air basins according to topographic air drainage features. The Mountain Counties Air Basin (MCAB) includes Plumas, Sierra, Nevada, Placer (middle portion), El Dorado (western portion), Amador, Calaveras, Tuolumne, and Mariposa Counties. While the MCAB encompasses such an expansive territory, the population of the entire air basin is less than 500,000 (472,991 in 2010). The basin lies along the northern Sierra Nevada Mountain Range, close to or contiguous with the Nevada border, and covers an area of roughly 11,000 square miles.

Elevations range from over 10,000 feet at the Sierra crest down to several hundred feet above sea level at the Stanislaus County boundary. Throughout the MCAB basin, the topography is highly variable, and includes rugged mountain peaks and valleys with extreme slopes and differences in elevation in the Sierras, as well as rolling foothills to the west.

The general climate of the MCAB varies considerably with elevation and proximity to the Sierra

ridge. The terrain features of the basin make it possible for various climates to exist in relative proximity. The Sierra Nevada receives large amounts of precipitation in the winter, with lighter amounts in the summer. Precipitation levels are high in the highest mountain elevations but decline rapidly toward the western portion of the basin. Winter temperatures in the mountains can be below freezing for weeks at a time, and substantial depths of snow can accumulate, but in the western foothills, winter temperatures usually dip below freezing only at night and precipitation is mixed as rain or light snow. In the summer, temperatures in the mountains are mild, with daytime peaks in the 70s to low 80s, but the western end of the basin can routinely exceed 100 degrees.

Local Climate and Sources of Air Pollution

The climate in Tuolumne County can be considered Mediterranean with moist and cold winters and warm and dry summers. The mean annual precipitation is 33 to 49 inches (838 to 1,245 millimeters). Mean annual temperature is 41 to 53 degrees F (5.0 to 11.7 degrees C). The frost-free period is 100 to 150 days.

The Tuolumne County Air Pollution Control District (TCAPCD) does not meet the state one-hour or eight-hour standard for ozone and does not meet the federal eight-hour standard for ozone. The District is either in attainment or in an unclassified area for the remainder of the pollutants in Table 1 below in this report, due to the lack of availability of data.

Local jurisdictions have the authority and responsibility to reduce air pollution through their policies, codes, and land use planning. The project was evaluated under the California Air Resource Board (CARB) air quality standards and area designations, and the Tuolumne County Air Pollution Control District's thresholds of significance, and the Tuolumne County Ordinance Code and Tuolumne County General Plan.

TCAPCD is the primary agency responsible for planning to meet National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) in the County and is responsible for implementing emissions standards and other requirements of federal and state laws regarding most types of stationary emission sources. In addition, TCAPCD has also set emissions thresholds for certain pollutants for the purposes CEQA. Pursuant to the State CEQA Guidelines, air quality impacts from project implementation would be significant if the project would:

- violate any air quality standard or contribute substantially to an existing or project air quality violation—for the purposes of the project locations, result in construction or operations of a project that generated emissions in excess of the following thresholds, except CO, used by TCAPCD (2017):
- reactive organic gases (ROG) – 1,000 pounds per day (lb/day) or 100 tons per year (tpy)
- oxides of nitrogen (NOX) – 1,000 lb/day or 100 tpy
- PM10 – 1,000 lb/day or 100 tpy
- CO – 1,000 lb/day or 100 tpy
- expose sensitive receptors to a substantial incremental increase in toxic air contaminant (TAC) emissions; or create objectionable odors affecting a substantial number of people

Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory) into the atmosphere. Primary criteria pollutants include carbon monoxide (CO), reactive organic gases (ROG), oxides of nitrogen (NO_X), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), and lead. Secondary criteria pollutants are created by atmospheric chemical and photochemical reactions; ROG together with NO_X form the building blocks for the creation of photochemical (secondary) pollutants. Secondary criteria pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). The characteristics, sources, and effects of the

criteria air pollutants of most concern are described below.

Carbon Monoxide, CO, is a local pollutant that is found in high concentrations only near the source. The major source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually found only near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Ozone is produced by a photochemical reaction (triggered by sunlight) between NO_X and ROG. NO_X is formed during the combustion of fuels, while ROG is formed during combustion and evaporation of fossil fuels and organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans, including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Nitrogen Dioxide, NO_2, is a byproduct of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of NO_X produced by combustion is NO, but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 part per million may occur. NO_2 absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

PM_{10} is respirable particulate matter (PM) measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine PM measuring no more than 2.5 microns in diameter. PM_{10} and $PM_{2.5}$ are mostly dust particles, nitrates, and sulfates. Both PM_{10} and $PM_{2.5}$ are byproducts of fuel combustion and wind erosion of soil and unpaved roads and are directly emitted into the atmosphere through these processes. They are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with respirable particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. Respirable particulates generally come from windblown dust and dust kicked up from mobile sources. Fine particulates are generally associated with combustion processes and are formed in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the PM_{10} and $PM_{2.5}$ that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Sulfur Dioxide, SO_2, is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid atmospheres, SO_2 can form sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting to produce sulfate particulates. This contaminant is the natural combustion product of sulfur or sulfur-containing fuels. Fuel combustion is the major source, while chemical plants, sulfur recovery plants, and metal processing are minor contributors. At sufficiently high concentrations, SO_2 irritates the upper respiratory tract. At lower concentrations, when in conjunction with particulates, SO_2 appears able to do still greater harm by injuring lung tissues. Sulfur oxides, in combination with moisture and oxygen, can yellow the leaves of plants, dissolve marble, and eat away iron and steel. Sulfur oxides can also react to form sulfates, which reduce visibility.

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory, and respiratory effects, nausea, vomiting, and headache). Odors within the vicinity of the project site would include those associated with residential uses, agricultural operations, and the Pine Mountain Lake Airport.

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, outdoor playgrounds, places of worship, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants. The only sensitive receptors located within the vicinity of the project site would be residential dwellings.

Discussion

a,b. Tuolumne County is located within the Mountain Counties Air Basin (MCAB) and is under the jurisdiction of the Tuolumne County Air Pollution Control District (TCAPCD). The Environmental Protection Agency (EPA) has determined that Tuolumne County is designated as a non-attainment area for the 8-Hour Ozone (2015) National Ambient Air Quality Standards (NAAQS).[3] The County is in attainment or unclassified for all other criteria pollutants. The non-attainment status of Tuolumne County regarding ozone is overwhelming due to the transport of ozone precursors from the Central Valley, rather than emissions generated in Tuolumne County. Therefore, the TCAPCD is relieved from preparing an attainment plan for ozone, and no other criteria air pollutant levels are high enough to require an attainment plan. Although the County is not subject to attainment plans, or other local plans specifically addressing air quality, Tuolumne County must conform to existing state and federal air quality standards. A clean air plan that addresses efforts to reduce ozone precursors within the County does not currently exist. However, the 2018 Tuolumne County General Plan contains an Air Quality Element which sets forth the following policies and implementation measures designed to address the potential air quality impacts of development projects in the County:

- **Policy 15.A**.1: Accurately determine and fairly mitigate the local and regional air quality impacts of land development projects proposed in the county.
  - ***Implementation Measure 15.A.a****:* Coordinate and cooperate with other local, regional and State agencies to develop a consistent and effective approach to air quality planning and management.
  - ***Implementation Measure 15.A.b****:* Require an air quality impact evaluation for development projects, as necessary, pursuant to the requirements of the Tuolumne County Air Pollution Control District. The air quality impact evaluation shall be the responsibility of the developer or proponent and prepared by a qualified consultant at their expense.
  - ***Implementation Measure 15.A.c****:* Require project applicants to identify alternatives or amendments for proposed projects that would reduce emissions of air pollutants, if air pollutant emissions exceed applicable air quality standards. Require all air quality mitigation to be real, feasible, cost effective, and enforceable.

3 U.S. Environmental Protection Agency. *Current Nonattainment Counties for All Criteria Pollutants*. Available at: https://www3.epa.gov/airquality/greenbook/ancl.html. Accessed August 2020.

According to the TCAPCD, a project would result in a significant environmental impact to air quality if emissions related to implementation of the project were to exceed the following thresholds of significance:

- 100 tons per year (tons/yr) or 1,000 pounds per day (lbs/day) of reactive organic gases (ROG);
- 100 tons/yr or 1,000 lbs/day of oxides of nitrogen (NOx);
- 100 tons tons/yr or 1,000 lbs/day of particulate matter (PM_{10}); or
- 100 tons/yr or 1,000 lbs/day of carbon monoxide (CO).

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2 – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates, vehicle mix, trip length, average speed, etc. Where project-specific information is available, such information should be applied in the model. Accordingly, the following project-specific information and inherent site design features, from the initial submittal of 19 lots were included in the modeling (current plan with 13 lots will have less than what was modeled):

- 38 single-family residential units would be constructed on 82.2 acres of land. Considering half of the potential future residences would be ADUs, this assumption is conservative;
- The entire 82.2-acre site was graded. Because specific development plans do not yet exist, this is the most conservative grading assumption;
- Soil import or export would not be required;
- Trips rates were left as defaults for single-family residences. As noted above, half of the proposed residences would be ADUs. ADUs typically generate fewer trips than single-family residences, so this assumption is conservative.
- The project would include the installation of rooftop solar panels sufficient to meet 100 percent of the project's electricity demands;
- A water conservation strategy of 20 percent was applied to indoor and outdoor water uses to reflect compliance with the 2019 CALGreen Code and Model Water Efficient Landscape Ordinance; and
- The project is assumed to comply with the 2019 California Building Standards Code (CBSC).

The proposed project's estimated emissions associated with construction and operations are presented and discussed in further detail below. A discussion of the proposed project's contribution to cumulative air quality conditions is provided below as well.

Construction Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated construction emissions as shown in Table 1 below.

Table 1

Maximum Unmitigated Construction Emissions					
	Proposed Project Emissions		Threshold of Significance		Exceeds
Pollutant	lbs/day	tons/yr	lbs/day	tons/yr	Threshold?
ROG	5.74	0.71	1,000	100	NO
NO_X	46.64	2.69	1,000	100	NO
PM_{10}	20.34	0.61	1,000	100	NO
CO	32.97	2.58	1,000	100	NO
Source: CalEEMod, September 2020.					

As shown in Table 1 above, the proposed project would result in construction emissions of criteria air pollutants below the applicable TCAPCD thresholds of significance. In addition, the project would be required to comply with all applicable TCAPCD regulations, including, but not limited to, Rule 202 regarding Visible Emissions, Rule 401 regarding construction permitting, which would further reduce construction-related emissions.

Operational Emissions

According to the CalEEMod results, the proposed project would result in maximum unmitigated operational emissions as shown in Table 2 below.

Table 2 Maximum Unmitigated Operational Emissions					
	Proposed Project Emissions		Threshold of Significance		Exceeds Thres
Pollutant	lbs/day	tons/yr	lbs/day	tons/yr	hold?
ROG	61.63	2.97	1,000	100	NO
NO_X	5.41	0.76	1,000	100	NO
PM_{10}	12.99	0.90	1,000	100	NO
CO	89.01	5.59	1,000	100	NO
Source: CalEEMod, September 2020.					

As shown in Table 2 above, the proposed project would result in operational emissions of criteria air pollutants below the applicable TCAPCD thresholds of significance.

Cumulative Emissions

Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By nature, air pollution is largely a cumulative impact. A single project is not sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, TCAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. The thresholds of significance presented above represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the MCAB's existing air quality conditions. If a project exceeds the designated significance thresholds, that project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the region's existing air quality

conditions. As presented above, the proposed project would be below all applicable thresholds for criteria pollutants during construction and operation. Thus, the project would not result in a cumulatively considerable contribution to the region's existing air quality conditions.

Conclusion

Because the proposed project would not result in construction-related or operational emissions of criteria air pollutants in excess of TCAPCD's thresholds of significance, conflicts with or obstruction of implementation of the applicable regional air quality plans would not occur. In addition, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State AAQS. Therefore, a ***less-than-significant*** impact would result.

c. Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptors would be the scattered single-family residences located along Clements Road and Beaver Court. The nearest single-family dwelling is approximately 230 feet north of the project site at its closest point to the project site boundary.

The primary pollutant of concern for the proposed project would be toxic air contaminant (TAC) emissions. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk.

The proposed residential development would not involve any land uses or operations that would be considered major sources of TACs, including DPM. As such, the project would not generate substantial pollutant concentrations during operations. However, short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be limited to approximately three years. All construction equipment and operation thereof would be regulated per the CARB's In-Use Off-Road Diesel Vehicle Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including

DPM.

In addition, during construction, only portions of the project site would be disturbed at a time. Operation of construction equipment would occur on such portions of the site intermittently throughout the course of a day over the overall construction period. Compliance with Mitigation Measure XIII-1 would ensure that construction activities only take place between 7:00 AM and 7:00 PM, Monday through Saturday. Because construction equipment on-site would not operate for any long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Research conducted by CARB indicates that DPM is highly dispersive in the atmosphere. Considering the nearest sensitive receptor is located approximately 300 feet away from the project site, the concentration of DPM would be lower at the receptor compared to the concentration at the source. Furthermore, any one nearby sensitive receptor would be exposed to varying concentrations of DPM emissions throughout the construction period.

Considering the short-term nature of construction activities, the regulated and intermittent nature of the operation of construction equipment, and the highly dispersive nature of DPM, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. For the aforementioned reasons, project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

Recent rulings from the California Supreme Court (including the Sierra Club v. County of Fresno (2018) 6 Cal. 5th 502 case regarding the proposed Friant Ranch Project) have underscored the need for potential health impacts resulting from the emission of criteria pollutants during operations of proposed projects. Although analysis of project-level health risks related to the emission of CO and TACs has long been practiced under CEQA, the analysis of health impacts due to individual projects resulting from emissions of criteria pollutants is a relatively new field.

In many cases, the concern regarding health risks from criteria pollutants is not related to the specific pollutant itself, such as ROG or NO_X, but the potential for the pollutant to undergo reactions within the atmosphere and form secondary pollutants, such as ozone. In such cases, the secondarily formed ozone is the pollutant of concern related to health risks, rather than the pollutant ROG or NO_X itself. The formation of ozone is dependent upon various regional factors, including the presence or absence of chemicals and elements in the atmosphere, geography of the given area, the presence of solar energy, as well as meteorological and climatological conditions. In addition, while PM can be emitted directly to the atmosphere by projects, PM can also be formed secondarily by precursor emissions. Thus, the formation of PM can similarly be dependent on regional atmospheric chemistry, geography, weather, and climate.

Considering the proposed project would result in emissions of criteria pollutants less than the adopted thresholds of significance, potential health impacts are concluded to be less than significant.

Based on the above, the proposed project would result in a ***less-than-significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Emissions of concern include those leading to odors, emission of dust, or emissions

considered to constitute air pollutants. Air pollutants have been discussed in sections “a” through “c” above. Therefore, the following discussion focuses on emissions of odors and dust.

The presence of an odor impact is dependent on a number of variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative analysis to determine the presence of a significant odor impact is difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed residential project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty trucks, which could create odors associated with diesel fumes that may be considered objectionable. However, construction activities would be temporary, and potential diesel odors would likely dissipate prior to reaching nearby receptors. In addition, the project would be required to comply with TCAPCD Rule 205, which prohibits the emission of any material that may cause a nuisance to a person or the public, including odors (with the exception of odors related to agricultural activities).

Site preparation and grading activities could result in emissions of dust. However, as noted above, dust emissions (i.e., PM_{10}) would not exceed the applicable TCAPCD thresholds of significance (see Table 1 above in this report). As such, construction activities are not expected to expose nearby receptors to a substantial amount of dust. Following project construction, vehicles operating within the project site would be limited to paved areas of the site, and non-paved areas would be landscaped. Additionally, conditions of approval incorporated into the conditions of Tentative Subdivision Map would address dust and require dust suppressant during construction activities. Thus, project operations would not include sources of dust that could adversely affect a substantial number of people.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would result.

BIOLOGICAL RESOURCES

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
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 the 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, and regulations or by the California Department of Fish and Game or the 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 Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting:

The project site is currently undeveloped and primarily consists of oak woodland and grasses. The site generally slopes to the southwest and includes two seasonal drainages that run through the valley, as well as a historical ditch near the southwestern site boundary. Vegetation on site includes foothill pine (*Pinus sabiniana*), ponderosa pine (*Pinus ponderosa*), interior live oak (*Quercus wislizeni*), blue oak (*Quercus douglasii*), manzanita, and various grass species.

The Tuolumne County Wildlife Maps and the California Department of Forestry and Fire Protection (CalFire) Fire and Resource Assessment Program (FRAP) Maps indicate that the site contains the blue oak pine (bop), annual grassland (ags), (mch), and (mhc), and montane hardwood (mhw) habitats. Pursuant to the Tuolumne County Wildlife Handbook (TCWH), the bop, mch, mhc, and mhw habitats are considered third priority habitats, which are common habitats that are of considerable value to wildlife. The ags habitat is considered a fourth priority habitat, which are common habitats that are of relatively low value to wildlife.

The California Natural Diversity Database (CNDDB) includes plants and animal species that are rare, threatened, or endangered within California. The CNDDB is an inventory of these species and the location of know occurrences of these species. The California Native Plant Society (CNPS) maintains a database of rare and endangered plants of California. The US Fish and Wildlife Service (USFWS) maintains an Information for Planning and Consultation (IPac) database, which includes threatened and endangered species, critical habitats, and other special status species and sensitive

habitats. These lists were consulted.

The Tuolumne County Geotechnical Interpretive System (GIS) Maps indicate that the special animal species the great gray owl (*Strix nebulosa*) and California spotted owl (*Strix occidentalis occidentalis*) have been known to occur within the vicinity of the project site on nearby USFS parcels. No other species listed on the CNDDB have been known to occur within the project site or within the vicinity.

Regulatory Setting:

Biological resources are regulated by federal, state, and local laws. In California and specifically in Tuolumne County, the Federal Engendered Species Act, Clean Water Act (CWA), California Endangered Species Act (CESA), Tuolumne County General Plan, the Tuolumne County Ordinance Code, and the Tuolumne County Wildlife Handbook are the primary regulations considered in this analysis.

Federal

Pursuant to the ESA, USFWS and the National Marine Fisheries Service (NMFS) have authority over projects that may affect the continued existence of federally listed (threatened or endangered) species. Section 9 of ESA prohibits any person from "taking" an endangered or threatened fish or wildlife species or removing, damaging, or destroying a listed plant species on federal land or where the taking of the plant is prohibited by state law. Take is defined under ESA, in part, as killing, harming, or harassing. Under federal regulations, take is further defined to include habitat modification or degradation where it results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. If a proposed project would result in take of a federally listed species, the project applicant must consult with USFWS or NMFS before the take occurs under Section 10(a) of ESA or Section 7 of ESA if another federal agency is involved in the action. Conservation measures to minimize or compensate for the take are typically required.

Section 404 of the CWA requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Many surface waters and wetlands in California meet the criteria for waters of the United States. In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold state water quality standards.

State

Pursuant to CESA, a permit from the California Department of Fish and Wildlife (CDFW) is required for projects that could "take" a species state-listed as threatened or endangered. Section 2080 of CESA prohibits take of state-listed species. Under CESA, take is defined as any activity that would directly or indirectly kill an individual of a species. The definition does not include “harm” or “harass” like the federal act. As a result, the threshold for take under CESA is higher than under ESA (i.e., habitat modification is not necessarily considered take under CESA). Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

The California Fish and Game Code identifies Fully Protected Species in Sections 3511, 4700,

5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take. DFW has informed nonfederal agencies and private parties that their actions must avoid take of any fully protected species. In addition, Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (e.g., hawks, owls, eagles, and falcons), including their nests or eggs.

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any action that would result in an impact on a river, stream, or lake.

The State Water Resources Control Board (SWRCB) and each of nine local RWQCBs have jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act, Water Code Section 13000 et seq., which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. SWRCB has issued general Waste Discharge Requirements regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The local RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the CWA for waters subject to federal jurisdiction.

Under CEQA, special-status species include those species meeting the following criteria:

- Plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal and State Endangered Species Acts. Both acts afford protection to listed species;

- California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue;
- U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern;
- Sensitive species included in USFWS Recovery Plans; and
- CDFW special-status invertebrates.

Although CDFW Species of Special Concern generally do not have special legal status, they are given special consideration under CEQA. In addition to regulations for special-status species, most birds in the U.S., including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal. In addition, plant species on the California Native Plant Society (CNPS) Lists 1 and 2 are considered special-status plant species and are protected under CEQA.

Local

The Tuolumne County Wildlife Handbook (TCWH) and its associated maps detail the distribution of various habitat types countywide, evaluate their relative biological value, and establish Tuolumne County's standards and thresholds for evaluating the potential biological impacts pursuant to CEQA (Tuolumne County 1987). The avoidance and mitigation measures provided in the TCWH are intended to facilitate a consistent, fair, and cost-effective approach to wildlife mitigation that provides the greatest protection for the most sensitive resources. However, if a site-specific biological evaluation is conducted by a qualified biologist the environmental analysis and mitigation measures can rely on the recommendations of the biologist in lieu of the TCWH recommendations. The applicant has agreed to utilize the measures as indicated in the Tuolumne County Wildlife Handbook.

The TCWH ranks highest priority habitats as first priority and lowest priority habitats as fourth priority. The bop, mch, mhc, and mhw habitats found on site are considered third priority habitats, which are common habitats that are of considerable value to wildlife. The ags habitat is considered a fourth priority habitat, which are common habitats that are of relatively low value to wildlife. The TCWH encourages protecting the highest priority habitats.

Implementation Program 16.B.i of the 2018 General Plan requires development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law:

- Species listed or proposed for listing as threatened, rare, or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA);
- Species considered as candidates for listing under the ESA or CESA;
- Wildlife species designated by CDFW as Species of Special Concern;
- Animals fully protected under the California Fish and Game Code; and
- Plants considered by CDFW to be "rare, threatened, or endangered in California" (California Rare Plant Ranks [CRPR] of 1A, presumed extinct in California and not known to occur elsewhere; 1B, considered rare or endangered in California and elsewhere; 2A, presumed extinct in California, but more common elsewhere and 2B, considered rare or endangered in California but more common elsewhere).
- Sensitive natural communities, including wetlands under Federal or State jurisdiction, other aquatic resources, riparian habitats, and valley oak (*Quercus lobata*) woodland.
- Important wildlife movement corridors and breeding sites.

- Oak woodlands, as provided in Implementation Program 16.B.j.

Implementation Programs 16.B.j, 16.B.j.1, and 16.B.j.2 found in the Tuolumne County General Plan provide direction on the County's oak woodland analysis. These Implementation Programs are as follows:

Implementation Program 16.B.j:

Establish thresholds of significance under the California Environmental Quality Act (CEQA) for the conversion of oak woodlands in Tuolumne County. The following provides the County's recommended standard guidelines for determining whether a project may result in a significant impact to oak woodlands, for purposes of review under the California Environmental Quality Act and Public Resources Code Section 21083.4.

- An oak woodland is defined in the General Plan as a woodland stand with 10% or greater native oak canopy cover. Tree removal from parcels with less than 10% native oak canopy cover is not considered a significant conversion or loss of oak woodland.
- For parcels with 10% or greater native oak canopy cover (i.e., parcels with oak woodland, as defined in the General Plan), a significant impact to oak woodland includes tree removal that reduces the total oak canopy cover onsite to below 10% (i.e., conversion to non-oak woodland), or a loss of 10% or greater of oak canopy woodland stand on the parcel, if the conversion or loss is determined by a trained professional to be substantial in consideration of, but not limited to, the following:
  - Total acres and amount of woodland stand removed or disturbed, and amount retained onsite.
  - Pattern of development or habitat loss onsite (e.g., clustered vs. dispersed).
  - Existing habitat functions and quality (e.g., intact/high-quality, moderately degraded, or severely degraded). o Stand age- or size-class structure.
  - Rarity.
  - Landscape position in relation to larger wildlife corridors, stream systems, or other important natural features.
  - Loss of valley oak (Quercus lobata) woodland, which is a sensitive habitat.
  - Proximity to other oak woodland patches and connectivity to large blocks of intact habitat.
  - Contribution to a cumulative loss, degradation, or fragmentation of oak woodland across the County
- Removal of valley oaks (Quercus lobata), regardless of woodland stand size or canopy cover, shall require evaluation and determination as set forth above, including consideration of any unique habitat value provided by valley oaks

Implementation Program 16.B.j.1:

When considering discretionary development proposals, the County, through CEQA reviews, will require that project applicants map oak woodland resources on the project site and, where feasible, establish buffers around existing oak woodland stands to prevent adverse effects. For mapping purposes, project applicants may use the County's existing oak woodland map (developed for the Recirculated Draft EIR) as an initial base map for project-specific ground truthing/field verification. The County will require implementation of BMPs while working near retained oak woodlands to avoid inadvertent damage to oak trees. BMPs will include establishment of no-disturbance buffers around the outer canopy edge to prevent root and crown damage, soil compaction, and standard management practices to reduce introduction and spread of invasive species and other indirect effects.

For those impacts on oak woodland that cannot be avoided, the County will require the project applicant to minimize adverse effects. If substantial conversion of oak woodland will occur based on Implementation Program 16.B.j, the County will require one or more of the following mitigation measures be implemented to mitigate the impact from loss of oak woodland habitat pursuant to Public Resources Code Section 21083.4, (which specifies certain projects, including commercial agricultural production, are exempt from the requirements of Section 21083.4):

- Conserve oak woodlands through the purchase of conservation easements.
- Plant acorns and container stock from a local seed source to replace oak woodland removed. The following parameters will be applied:
- Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees.
- Maintain trees for seven years after the trees are planted.
- Planting may not account for more than 50 percent of the required mitigation and must occur on lands that are subject to conservation easements, zoned open space, or similarly restricted from development.
- Mitigation through planting may be used to restore former or degraded oak woodlands.
- Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodland conservation easements, the Tuolumne County Oak Woodland Conservation Fund, or other appropriate established oak woodland conservation fund.

Implementation Program 16.B.j.2:

The County will require project applicants to develop a mitigation and monitoring plan to compensate for the loss of oak woodland habitat. The mitigation and monitoring plan will describe in detail how loss of oak woodlands shall be avoided or offset, including details on restoration and creation of habitat, compensation for the temporal loss of habitat, success criteria ensuring habitat function goals and objectives are met, performance standards to ensure success, remedial actions if performance standards are not met, and requirements for reporting implementation actions and progress to the County. The plan will include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment). If planting is used as part of compensatory mitigation, an oak planting plan will be developed by a qualified professional such as a professional biologist, arborist, or registered professional forester.

Discussion:

a. Special-status species are plants and animals that are legally protected under the State and/or Federal Endangered Species Act (FESA) or other regulations. The FESA of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species.

Special-status species include the following:

- Plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under FESA. Both acts afford protection to listed species;

- California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue;
- U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern;
- Sensitive species included in USFWS Recovery Plans; and
- CDFW special-status invertebrates.

Although CDFW Species of Special Concern generally do not have special legal status, they are given special consideration under CEQA. In addition to regulations for special-status species, most birds in the U.S., including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal. In addition, plant species on California Native Plant Society (CNPS) Lists 1 and 2 are considered special-status plant species and are protected under CEQA.

The CDFW Natural Diversity Database (CNDDB) was used to determine what special-status species are known to have occurred within a five-mile radius of the project site. The CNDDB query returned 14 total species have been recorded in the project area. Of the 14 species, 7 are plants and 7 are animals. The habitat requirements of all the identified species were subsequently compared to the habitat on the project site to determine the likelihood of each special-status species occurring at the project site.

Currently, the project site is currently undeveloped and primarily consists of oak woodland and grasses. The site generally slopes to the southwest and includes two seasonal drainages that run through the valley, as well as a historical ditch near the southwestern site boundary.

Special-Status Plants

Special-status plants generally occur in relatively undisturbed areas within vegetation communities such as vernal pools, marshes and swamps, chenopod scrub, seasonal wetlands, riparian scrub, and areas with unusual soil characteristics. Habitat requirements of the 7 special-status plant species known to occur in the region include chaparral, marsh, swamp, meadow, woodland, and grassland. For the majority of the 7 special-status species known to occur within the project region, the project site does not contain suitable habitat for the species. Habitat on the site is primarily limited to ruderal grasses. In addition, according to the CNDDB search results, special-status plants have not been recorded on the project site. Therefore, because special-status plants have not been recorded on the project site, the proposed project would not result in adverse effects to special-status plant species.

Special-Status Wildlife

Based on the results of the CNDDB search, a total of 7 special-status wildlife species have been recorded within the project region. Of the 7 special-status wildlife species, 3 are unlikely to occur on the site due to the absence of suitable habitat. For example, although the site could provide adequate aquatic habitat for California red-legged frog, western pond turtle, or foothill yellow-legged frog, compliance with Mitigation Measure IV-3 would require that the project avoid and minimize effects to the existing seasonal drainages. Furthermore, the aforementioned species have not been recorded on the project site. The site does not provide suitable forest/meadow edge habitat for special-status great gray owl, which is primarily known to inhabit more coniferous woodlands with open meadows at somewhat

higher elevations than the site. Furthermore, great gray owl would not be expected to occur, especially for nesting, in an area of substantial human activity, road traffic, and airport operations. However, the project site contains a number of trees and annual grasses that could potentially provide habitat for nesting raptors and migratory birds. In addition, some special-status bat species, including spotted bat, western mastiff bat, and western red bat, may use the oak trees within the site for roosting.

Conclusion

Based on the above, the proposed project would not result in significant adverse effects to special-status plant species. However, because the project site includes a substantial number of trees, the site presents suitable habitat for special status bat species, as well as nesting raptors and migratory birds. Tree removal and ground disturbance associated with future on-site development could result in adverse effects to the aforementioned species if the species are present on the site. Therefore, the proposed project could have an adverse effect, either directly or through habitat modifications, on species identified as special-status species in local or regional plans, policies, or regulations, or by the CDFW or the USFWS, and a ***potentially significant*** impact could occur. Implementation of the below mitigation measures would reduce impacts to a ***less-than-significant*** level.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Special-Status Bat Species

IV-1 In order to avoid impacts to maternity roosting bats, tree and snag trimming or removal on-site shall be avoided during the maternity roosting season (April 15 – August 31).

If tree and snag removal or trimming must occur during the maternity roosting season (April 15 – August 31) within the site, a qualified biologist shall conduct a pre-construction survey for maternity roosting bats within 14 days of the onset of these activities. Maternity roosting bat surveys shall include all trees and snags proposed to be impacted. Survey results shall be submitted to the Tuolumne County Community Development Department. If active maternity bat roosts are not found within the survey area, further mitigation is not required.

Should any active maternity bat roosts be discovered during the pre-construction survey in trees or snags proposed to be impacted, the biologist shall identify a suitable construction-free buffer around the maternity roost. An example of a suitable construction free buffer is 50 feet; however, each buffer distance should be determined on a case-by-case basis by the qualified biologist. The buffer shall be identified on the ground with flagging or fencing, and shall be maintained until a qualified biologist has determined that the tree and snag impacts would not adversely affect bat survival or survival of their young.

Nesting Raptors and Migratory Birds

IV-2

> *For construction activities expected to occur during the nesting season of raptors (February 1 to August 31) and migratory birds, a pre-construction survey by a qualified biologist shall be conducted to determine if active nests are present on or within 0.5 mile of the project site where feasible. Areas that are inaccessible due to private property restrictions shall be surveyed using binoculars from the nearest vantage point. The survey shall be conducted by a qualified biologist no more than seven days prior to the onset of construction. If no active nests are identified during the pre-construction survey, no further mitigation is necessary. If construction activities begin prior to February 1, it is assumed that no birds will nest in the project site during active construction activities and no pre-construction surveys are required. If at any time during the nesting season construction stops for a period of two weeks or longer, pre-construction surveys shall be conducted prior to construction resuming.*
>
> *If active nests are found on or within 0.5 mile of the project site, the applicant shall notify CDFW and explain any additional measures that a qualified biologist plans to implement to prevent or minimize disturbance to the nest while it is still active. Depending on the conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the 500-foot buffer without impacting the breeding effort. Appropriate measures may include restricting construction activities within 500 feet of active raptor nests and having a qualified biologist with stop work authority monitor the nest for evidence that the behavior of the parents have changed during construction. Nests that are inaccessible due to private property restrictions shall be monitored using binoculars from the nearest vantage point. Appropriate measures would be implemented until the young have fledged or until a qualified biologist determines that the nest is no longer active. Construction activities may be halted at any time if, in the professional opinion of the biologist, construction activities are affecting the breeding effort.*

b,c. Riparian habitats are described as the land and vegetation that is situated along the bank of a stream or river. Wetlands are areas where water covers the soil or is present either at or near the surface of the soil all year or for varying periods of time during the year. As noted above, two existing seasonal drainages run through the project site. Other than the seasonal drainages, the project site is absent of any other aquatic features. Although development plans for future residential development on the site have not yet been prepared, potential future development of the site could include disturbance of the on-site drainages. Therefore, the proposed project could have an adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, and regulations, as well as on State or federally protected wetlands. Thus, ***potentially significant*** impact could occur. Implementation of the following mitigation measures would reduce impacts to a ***less-than-significant*** level.

Mitigation Measure(s)

The following mitigation measures would reduce the above impact to a *less-than-significant* level.

IV-2 For construction activities expected to occur during the nesting season of raptors (February 1 to August 31) and migratory birds, a pre-construction survey by a qualified biologist shall be conducted to determine if active nests are present on or within 0.5 mile of the project site where feasible. Areas that are inaccessible due to private property restrictions shall be surveyed using binoculars from the nearest vantage point. The survey shall be conducted by a qualified biologist no more than seven days prior to the onset of construction. If no active nests are identified during the pre-construction survey, no further mitigation is necessary. If construction activities begin prior to February 1, it is assumed that no birds will nest in the project site during active construction activities and no pre-construction surveys are required. If at any time during the nesting season construction stops for a period of two weeks or longer, pre-construction surveys shall be conducted prior to construction resuming.

If active nests are found on or within0.5 mile of the project site, the applicant shall notify CDFW and explain any additional measures that a qualified biologist plans to implement to prevent or minimize disturbance to the nest while it is still active. Depending on the conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the 500-foot buffer without impacting the breeding effort. Appropriate measures may include restricting construction activities within 500 feet of active raptor nests and having a qualified biologist with stop work authority monitor the nest for evidence that the behavior of the parents have changed during construction. Nests that are inaccessible due to private property restrictions shall be monitored using binoculars from the nearest vantage point. Appropriate measures would be implemented until the young have fledged or until a qualified biologist determines that the nest is no longer active. Construction activities may be halted at any time if, in the professional opinion of the biologist, construction activities are affecting the breeding effort.

IV-3 Prior to issuance of grading permit, if wetland habitat cannot be avoided, a wetland delineation shall be prepared in accordance with the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region (Arid West Region Supplement). The wetland delineation shall be submitted to the USACE for review. If the existing drainages within the site are found to be jurisdictional under the USACE, RWQCB, or CDFW, then Mitigation Measure IV-4 shall be implemented. If the existing drainage features are not jurisdictional, then additional mitigation is not required.

IV-4 To the extent feasible, the future residential development shall be designed to avoid and minimize adverse effects to the existing drainage features within the project site. If impacts to the existing drainage features would occur as a result of implementation of the future residential development, then prior to issuance of any grading permits for lots on which construction could affect the seasonal drainages, the project applicant shall acquire a Section 404 permit for fill of jurisdictional wetlands, and mitigation for impacts to jurisdictional waters that cannot be avoided shall be provided in conformance with the USACE "no-net-loss" policy.

If a Section 404 permit is required, the applicant must also obtain a water quality certification from the Regional Water Quality Control Board (RWQCB) under Section

401 of the Clean Water Act (CWA) prior to issuance of any grading permits for lots on which construction could impact the seasonal drainages.

In addition, prior to issuance of any grading permits for lots on which construction would affect the existing drainage features, the applicant shall enter into a 1602 Streambed Alteration Agreement with CDFW. To avoid or minimize adverse impacts to downstream fish and wildlife resources, the applicant shall implement avoidance and minimization measures, which may include but not necessarily be limited to:

- *Prior to construction, the authorized construction limits shall be marked in coordination with a qualified biologist. Vegetation shall not be removed outside of this marked area and construction debris, equipment, or soils shall not be placed outside of the marked area.*
- *Throughout construction, all equipment storage, equipment maintenance, lighting, and staging, shall occur outside of CDFW jurisdictional habitat except for any work authorized through a 1602 Agreement.*
- *Debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof, asphalt, paint, oil or other petroleum products or any other substances which could be hazardous to aquatic life, or other organic or earthen material from any logging, construction, or other associated project-related activity shall not be allowed to contaminate the soil and/or enter into or placed where it may be washed by rainfall or runoff into, waters of the State.*

d. The project site is located adjacent to existing residential development to the north, approved residential development and Pine Mountain Lake Airport to the northwest, and Ferretti Road to the south. However, the project site is bordered to the east and south by open lands consisting of oak woodland and annual grasses, which could facilitate wildlife movement in the project area. In addition, per the County's General Plan, the site is designated for buildout with residential uses; thus, buildout of the site and associated effects related to migratory corridors have been anticipated by the County. In addition, although the site contains existing drainage features, the drainage features are seasonal and do not support resident or migratory fish species. As such, the project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites. Thus, a ***less-than-significant*** impact would occur.

e. The project site is primarily characterized by oak woodland and ruderal grasses. Section 21083.4 of the Public Resources Code requires counties to determine, through the environmental review process, the significance of impacts to native oak woodlands and, when appropriate, to mitigate those impacts. According to the Natural Resources Chapter of the Tuolumne County General Plan, oak woodland is defined as a stand of native vegetation containing predominately oak species where the canopy cover is 10 percent or greater. The 10 percent canopy cover may apply to the individual stand of vegetation and not to the entire project site. Implementation Program 16.B.j.1 of the County's General Plan identifies various measures that may be used to mitigate the impacts of development on the oak woodland, including conservation through the creation of conservation easements, replanting an appropriate number of trees, restoration of former oak woodlands, and the contribution of funds to the CDFW Oak Woodland Conservation Fund.

The County of Tuolumne has two programs that currently run hand in hand to reduce hazardous fuel reduction within the County. California Public Resources Code Section 4290 requires local jurisdictions in California to adopt General Plan Safety elements that meet Section 4290 standards or, in lieu of this regiment, local jurisdictions must adopt local fire safe ordinances addressing issues including emergency access, signing and building numbering, private water supply reserves for emergency fire use, and vegetation modification. The County currently has local fire safe ordinances in place in Titles 11, 15, and 16 of the Tuolumne County Ordinance Code. The California Board of Forestry and Fire Protection certified the County's fire safe ordinances in 2016.The Hazardous Vegetation Management Ordinance (Ord.3428) , currently Chapter 8.14 of the Tuolumne County Ordinance Code, is to provide for the removal of hazardous vegetation situated in the unincorporated areas of the county so as to reduce the potential for fire and to promote the safety and welfare of the community, including protection of lives, structures, private property, natural resources and the environment.

The County recognizes that the project site has an abundance of vegetation an oak woodland on-site. Chapter 8.14.040(D) of the Hazardous Vegetation Management Ordinance refers to the California Public Resources Code Section 4291 which requires a person or entity that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass covered lands, or land that is covered with flammable material, to maintain defensible space of 100 feet from each side and from the front and rear of the structure, and which provides for required fuel modification so as to ensure that a wildfire burning under average weather conditions would be unlikely to ignite the structure on the property. Therefore, the proposed project could have an adverse effect on oak woodland habitat and, and a ***potentially significant*** impact could occur. Implementation of the below mitigation measure would reduce impacts to a ***less-than-significant*** level.

f. The project site is not located within an area that is subject to an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the proposed project would have ***no impact***.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Oak Woodland Mitigation

IV-5 All oak trees subject to Implementation Program 16.B.j.1 located within the proposed lots shall be retained appropriately except when removal of said oaks is necessary pursuant to the requirements under California Public Resources Code Section 4291, Chapter 8.14.040(D) of the Hazardous Vegetation Management Ordinance and when needed for additional fuel reduction purposes on a case-by-case basis authorized by the Community Development Department Director.

CULTURAL RESOURCES:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the State CEQA Guidelines?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Environmental Setting:

The project site is located within the Groveland USGS Quadrangle, approximately 6 miles east of the townsite of Groveland. The area including the project site was historically occupied by the Central Sierra Miwok. An influx of miners came to the area starting in 1849. The townsite of Groveland was first established in 1848. Cattle ranching then became the town's economic foundation. Construction of the Hetch Hetchy dam began in 1915 and ended by 1925, with Groveland being the headquarters for the construction project. The project site was historically used for farming and ranching.

A cultural study was prepared by Peak and Associates, Inc. in July 2020. The study includes a pedestrian survey of the 82.2-acre site, search of previous literature and studies, and correspondence with Tribes. The pedestrian survey of the site was conducted on June 20 and 21, 2020. Previous studies and surveys have been conducted on the site.

Regulatory Setting:

State and Federal legislation requires the protection of historical and cultural resources. In 1971, the President's Executive Order No. 11593 required that all Federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places.

In 1980, the Governor's Executive Order No. B-64-80 required that State agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age, and which may qualify for listing on the National Register of Historic Places."

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resources Code (PRC) regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts to "tribal cultural resources" separately from archaeological resources (PRC §21074; 21083.09). The Bill defines "tribal cultural resources" in a new section of the PRC §21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC §21080.3.1, 21080.3.2, 21082.3). AB 52 consultation letters were sent to the Tuolumne Band of Me-Wuk and Chicken Ranch Rancheria Tribes on August 14, 2020. Neither tribe provided comments nor requested consultation.

Since the project initially included an application for a General Plan Amendment, consultation letters were sent in accordance with SB 18. The Native American Heritage Commission provided a list of two Tribes to include for consultation: the Tuolumne Band of Me-Wuk and Chicken Ranch Rancheria Tribes. The SB 18 consultation letters were mailed on August 26, 2020, to both Tribes. No response or request for consultation was received.

Cultural resources include prehistoric resources, historic resources, and Native American resources. Pre-historic resources include resources that represent the remains of habitation prior to European settlement and historic resources include resources that represent the remains of habitation after European settlement. Native Americans arrived in Tuolumne County approximately 2,000 years ago. Their villages and areas of temporary settlement typically centralized around drainages, springs, and creeks. Historic resources in Tuolumne County mostly consist of uses and sites centered around gold mining, early timber industry, or historic farming and ranching.

Discussion:

a-c. The following discussion is primarily based on a Cultural Resource Assessment for the project site conducted by Peak & Associates, Inc. on July 27, 2020. This report is on file with the Community Development Department and is available for viewing by qualified professionals. As part of the Cultural Resource Assessment, previous cultural resource surveys and maps of recorded sites within the project area were reviewed by the Central California Information Center of the California Historical Resources Information System (CHRIS). In addition, on June 20 and 21, 2020, a pedestrian survey of the project site was conducted by Peak and Associates, Inc.

Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region, or method of construction, or that have yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics. The results of the CHRIS records search of the project site area indicated that two recorded resources exists within the project site. The existing known resources include a sparse lithic scatter (P-55-4195) and the Humbug/Kanaka Ditch system (P-55-0059), a small portion of which is located within the southwestern portion of the site. These sites were identified during the June 2020 surveys. No additional resources were identified on site.

In order to determine whether the residences and dairy facility are historically significant, the structures were evaluated using the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR) eligibility criteria.

The NRHP and CRHR eligibility criteria include the following:

(1)/(A) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;

(2)/(B) It is associated with the lives of persons important to local, California, or national history;

(3)/C) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

(4)/D) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The P-55-4195 surface finding consisting of small chert, jasper, and obsidian flakes, was previously recorded and considered a minor site. Peak & Associates determined that the prehistoric artifacts could indicate that tool making and maintenance were practiced on the site; however, without diagnostic artifacts to aid the interpretation, the site is assumed to have been used as a temporary camp location and occupied briefly. According to the Cultural Resources Assessment, P-55-4195 does not have the content to contribute to our knowledge of prehistoric lifeways or technology in the vicinity. Thus, Peak & Associates, Inc. determined that P-55-4195 is not eligible for listing on the NRHP or CRHR.

According to the Cultural Resources Assessment, P-55-0059 consists of U-shaped, earthen ditch, approximately seven feet wide and two feet deep near the southwestern boundary of the site. Although the ditch does not contain any unique physical characteristics, the large extent and association with the mining industry indicates that the ditch is an historic property. Based on the above, P-55-0059 is potentially eligible for listing on the NRHP or CRHR. Consistent with the recommendations of the Cultural Resources Assessment, the project would establish a “no-construction zone” around the existing ditch. To ensure that future construction or occupancy of the site would not impact the ditch, a building setback will be required, as indicated by Mitigation Measure V-1.

Based on the above, P-55-4195 is not eligible for listing as a historic resource and the proposed project would not result in adverse effects to P-55-0059. However, considering that unknown archaeological resources, including human remains, and/or historic resources have the potential to exist on-site, ground-disturbing activity related to project construction could encounter such resources. Therefore, the proposed project could cause a substantial adverse change in the significance of a historic or archaeological resource pursuant to CEQA Guidelines Section 15064.5 and/or disturb human remains, including those interred outside of formal cemeteries during construction. Therefore, impacts could be considered ***potentially significant***. Implementation of the following mitigation measures would reduce impacts to a ***less-than-significant*** level.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

V-1 The Kanaka Ditch shall be identified on the Final Map and a 10-foot building setback from the edges of the ditch shall also be shown on the Final Map.

V-2 If any prehistoric artifacts or other indications of archaeological resources are found during grading and construction activities, all work within 100 feet of the find shall cease and the applicant shall retain a qualified archaeologist to evaluate the find(s). If the resource is determined to be eligible for inclusion in the California Register of Historical Resources and project impacts cannot be avoided, data recovery shall be undertaken. Pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically

consequential information from and about the resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation. The language of this mitigation measure shall be included on any future grading plans and/or utility plans approved by the County for future development on the project site.

V-3 If human remains are discovered during grading and construction activities occurring on the project site, further disturbance shall not occur within 100 feet of the vicinity of the find(s) until the Tuolumne County Coroner has made the necessary findings as to origin. (California Health and Safety Code Section 7050.5) Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Tuolumne County Coroner determines the remains to be Native American, the NAHC must be contacted within 24 hours. The NAHC must then identify the "most likely descendant(s)" (MLD). The landowner shall engage in consultations with the MLD. The MLD shall make recommendations concerning the treatment of the remains within 48 hours, as provided in Public Resources Code 5097.98. This language of this mitigation measure shall be included on any future grading plans approved by the County for future development on the project site.

ENERGY:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project:				
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?	☐	☐	☒	☐

Environmental Setting:

California relies on a regional power system composed of a diverse mix of natural gas, petroleum, renewable, hydroelectric, and nuclear generation resources. Natural gas provides one third of the electricity used in California, coming from both California-based power plants, as well as Pacific Northwest- and Southwest-based power plants outside the state. After natural gas generation, electricity in California is mostly generated by renewables (29 percent), large hydroelectric (15 percent), and nuclear (9 percent) (California Energy Commission [CEC] 2018a). The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of hydroelectric power that is available, and other factors.

Electricity in Tuolumne County is provided by Pacific Gas and Electric (PG&E). There is no natural gas consumption in Tuolumne County. However, there is propane consumption for residential uses.

Homes built between 2000 and 2015 used 14 percent less energy per square foot than homes built in the 1980s, and 40 percent less energy per square foot than homes built before 1950. However, the increase size of newer homes has offset these efficiency improvements. Primary energy consumption in the residential sector total 21 quadrillion Btu in 2009 (the latest year the U.S. Energy Information Administration's [EIA's] *Residential Energy Consumption Survey* was completed), equal to 54 percent of consumption in the buildings sector and 22 percent of total primary energy consumption in the U.S. Energy consumption increased 24 percent from 1990 to 2009. However, because of projected improvements in building and appliance efficiency, the EIA 2017 Annual Energy Outlook forecast a 5-percent increase in energy consumption from 2016 to 2040 (EIA 2017).

On-road vehicles use about 90 percent of the petroleum consumed in California. Based on the most recently available information, in 2008, the California Department of Transportation (Caltrans) projected 41.5 million gallons of gasoline and diesel would be consumed in Tuolumne County in 2015, an increase of approximately 4.7 million gallons of fuel from the projected 2010 levels (Caltrans 2008).

Energy consumption on the project site would include energy consumed for the construction of the roadways for the site, future construction of single-family dwellings, and residential consumption once the single-family dwellings are constructed and occupied. Each lot is able to be developed with a single-family dwelling and Accessory Dwelling Unit.

Regulatory Setting:

Federal and state agencies regulate energy consumption through various policies, standards, and programs. At the local level, individual cities and counties establish policies in their general plans

and climate action plans related to the energy efficiency of new development and land use planning and to the use of renewable energy sources.

Federal:

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation, is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with CAFE standards are determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, the U.S. Department of Transportation is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act (1992 and 2005) and Energy Independence and Security Act of 2007

The Energy Policy Act of 1992 was passed to reduce the country's dependence on foreign petroleum and improve air quality. The act includes several parts intended to build an inventory of alternative fuel vehicles in large, centrally fueled fleets in metropolitan areas. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

The Energy Independence and Security Act of 2007 increased the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel annually by 2022, which represents a nearly five-fold increase over current levels and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent. By addressing renewable fuels and CAFE standards, the Energy Independence and Security Act of 2007 will build on progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

State:

State of California Energy Plan

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 1997 California Energy Plan. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies strategies such as aiding public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs and encouraging urban design that reduces vehicle miles traveled (VMT) and accommodates

pedestrian and bicycle access.

Senate Bill 1078: California Renewables Portfolio Standard Program

Senate Bill (SB) 1078 (Chapter 516, Statutes of 2002) establishes a renewables portfolio standard (RPS) for electricity supply. The RPS originally required retail sellers of electricity, including investor-owned utilities and community choice aggregators to provide 20 percent of their supply from renewable sources by 2017, but SB 1078 moved that date forward to require compliance by 2010, although the state did not meet the target. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. As of 2016, the state sourced 34.8 percent of its electricity from certified renewable sources (CPUC 2018). The outcome of this legislation will affect regional transportation powered by electricity.

SB X1-2 of 2011 set a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. The state met the 2016 target and is on track to meet the 2020 target.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. It assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-06-06

Executive Order (EO) S-06-06, signed on April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The EO also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies barriers and recommends actions to address them so that the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- increase environmentally and economically sustainable energy production from organic waste;

- encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- create jobs and stimulate economic development, especially in rural regions of the state; and
- reduce fire danger, improve air and water quality, and reduce waste.

As of 2015, 3.2 percent of the total electricity system power in California was derived from biomass.

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation Plan. CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035. Implementation of SB 375 will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

The Tuolumne County Transportation Council (TCTC) serves as the federally designated rural transportation agency and the state-designated regional transportation planning agency for Tuolumne County. While the TCTC is required to prepare a Regional Transportation Plan, it is not required to prepare a Sustainable Communities Strategy, as it is not a federally designated MPO. However, the TCTC's *2016 Final Regional Transportation Plan* includes an optional Rural Sustainable Strategies chapter to help Tuolumne County comply with AB 32 and to reduce GHG emissions.

California Green Building Standards

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. Title 24 Part 6 was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy-efficiency standards for residential and nonresidential buildings. In 2013, CEC updated Title 24 standards with more stringent requirements, effective July 1, 2014. All buildings for which an application for a building permit is submitted on or after July 1, 2014, must follow the 2013 standards. Energy-efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC *Impact Analysis for California's 2013 Building Energy Efficiency Standards* estimates that the 2013 standards are 23.3 percent more efficient than the previous 2008 standards for residential construction and 21.8 percent more efficient for nonresidential construction. In 2016, CEC updated Title 24 standards again, effective January 1, 2017. CEC estimates that the 2016 standards are 28 percent more efficient than 2013 standards for residential construction (CEC n.d.) and are approximately 5 percent more efficient for nonresidential construction (CEC 2015).

The 2019 Title 24 Part 6 Building Energy Efficiency Standards were adopted by the CEC on May 9, 2018 and took effect on January 1, 2020. The standards are designed to move the state closer to its zero net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the site electricity needs of each residential unit (California Code of Regulations, Title 24, Part 6, Section 150.1(c)14). CEC estimates that the combination of mandatory on-site renewable energy and prescriptively required energy efficiency features will result in new residential construction that uses 53 percent less energy than the 2016 standards. Nonresidential buildings are anticipated to reduce energy consumption by 30 percent

compared to the 2016 standards primarily through prescriptive requirements for high-efficacy lighting (CEC 2018b). The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards are demonstrated to be cost effective and exceed the energy performance required by Title 24 Part 6.

Assembly Bill 32, Climate Change Scoping Plan and Update

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons of carbon dioxide–equivalent ($MMTCO_2e$) emissions, or approximately 21.7 percent from the state's projected 2020 emission level of 545 $MMTCO_2e$ under a business-as-usual scenario (this is a reduction of 47 $MMTCO_2e$, or almost 10 percent, from 2008 emissions). In May 2014, CARB released and has since adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching AB 32 goals and evaluate progress that has been made between 2000 and 2012 (CARB 2014:4–5). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (CARB 2014:ES-2). The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

After releasing multiple versions of proposed updates in 2017, CARB adopted the final version titled *California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan), which lays out the framework for achieving the 2030 reductions as established in more recent legislation (discussed below). The 2017 Scoping Plan identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030.

Executive Order B-30-15

On April 20, 2015, Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming to below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. Achievement of these goals will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2016).

Local:

2018 Tuolumne County General Plan:

The 2018 Tuolumne County General Plan provides a framework for addressing issues related to energy efficiency. The Community Development and Design, Housing, Transportation, Economic Development, Water, Air Quality, and Climate Change Elements contain goals and policies that would reduce energy consumption. Specific Goals, Policies, and implementation Programs related to energy that are applicable to the project are as follows:

Implementation Program 18.A.a: Include specific GHG emissions reduction measures in the CAP. Examples include, but are not limited to, the following:

- Require compliance with CALGreen Tier 1 Green Building standards and Tier 1 Building Energy Efficiency Standards for eligible alterations or additions to existing buildings;
- Require compliance with CALGreen Tier 1 Green Building standards and Tier 1 standards for all new construction, and phase in Zero Net Energy (ZNE) standards for new construction;
- Require new or replacement residential water heating systems to be electrically powered and/or alternatively fueled systems;
- Promote recycling to reduce waste and energy consumption;
- Refine protection guidelines for existing riparian lands to establish a no-net-loss goal;

Policy 18.A.5: Promote energy efficiency and alternative energy while reducing energy demand.

2022 Climate Action Plan:

The Board of Supervisors approved the Climate Action Plan (CAP) on November 8, 2022. The CAP identifies existing and projected GHG emissions, sets GHG reduction targets, establishes policies and actions to meet reduction targets, integrates climate adaptation and resilience strategies, engages the community, and provides an implementation program.

Discussion:

a, b. The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2019 California Green Building Standards Code (CALGreen Code) and the Building

Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to energy demand during construction and operations are provided below.

California Green Building Standards Code

The 2019 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11) is a portion of the California Building Standards Code (CBSC), which became effective on January 1, 2020.[4] The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The CALGreen standards regulate the method of use, properties, performance, types of materials used in construction, alteration repair, improvement and rehabilitation of a structure or improvement to property. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of electric vehicle charging infrastructure in residential and non-residential structures;
- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.
- For some single-family and low-rise residential structures developed after January 1, 2020, mandatory on-site solar energy systems capable of producing 100 percent of the electricity demand created by the residence(s). Certain residential developments, such as developments that are subject to substantial shading, rendering the use of on-site solar photovoltaic systems infeasible, may be exempted from the foregoing requirement on a case-by-case basis.

Building Energy Efficiency Standards

The Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy efficiency measures from the 2016 Building Energy Efficiency Standards.

Energy reductions relative to previous Building Energy Efficiency Standards are achieved through various regulations, including requirements for the use of high efficacy lighting, improved water heating system efficiency, and high-performance attics and walls. For residential buildings, compliance with the 2019 standards will result in approximately seven percent less energy due to energy efficiency measures compared to homes built under the 2016 standards.[5] The Building Energy Efficiency Standards require residential buildings that

4 California Building Standards Commission. *California Green Building Standards Code*. 2019.
5 California Energy Commission. *Title 24 2019 Building Energy Efficiency Standards FAQ*. November 2018.

are three stories or less to include solar photovoltaic systems. Once solar electricity generation is factored in, homes built under the 2019 standards will use approximately 53 percent less energy than those under the 2016 standards.

Construction Energy Use

Construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid.

Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. In addition, all construction equipment and operation thereof would be regulated pursuant to the CARB In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. In addition, as a means of reducing emissions, construction vehicles are required to become cleaner through the use of renewable energy resources. The In-Use Off-Road Diesel Vehicle Regulation would therefore help to improve fuel efficiency for equipment used in construction of the proposed project. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to further reduce demand on oil and limit emissions associated with construction.

The CARB prepared the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan),[6] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals. The examples provided include, but are not limited to, enforcing idling time restrictions for construction vehicles, utilizing existing grid power for electric energy rather than operating temporary gasoline/diesel-powered generators, and increasing use of electric and renewable fuel-powered construction equipment. The In-Use Off-Road Diesel Vehicle Regulation, with which the proposed project must comply, would be consistent with the intention of the 2017 Scoping Plan and the recommended actions included in Appendix B of the 2017 Scoping Plan.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, the proposed

6 California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.

project would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Energy use associated with operation of the proposed project would be typical of residential uses, requiring electricity for interior and exterior building lighting, heating, ventilation, and air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. As noted above, the project would be required to include a solar photovoltaic system in accordance with the Building Energy Efficiency Standards. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed residential development.

The proposed project would be subject to all relevant provisions of the most recent update of the CBSC, including the CALGreen Code and the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed structure would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. In addition, California has set energy-use reduction goals targeting zero-net-energy use in all new homes.[7] The CALGreen Code requires that new residential buildings use a combination of energy efficiency and distributed renewable energy generation to meet all annual energy needs. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, the proximity of the project site to commercial and employment opportunities would further reduce VMT, thereby reducing transportation energy use.

Conclusion

Based on the above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

7 California Energy Commission. *Title 24 2019 Building Energy Efficiency Standards FAQ*. November 2018.

GEOLOGY AND SOILS:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project:				
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 of 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?	☐	☒	☐	☐

Environmental Setting:

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion.

Tuolumne County is located primarily within the Sierra Nevada geomorphic province, with an extremely small portion (less than 10 percent) of the western boundary within the Great Valley province. The Sierra is a tilted fault block nearly 400 miles long. Its east face is a high rugged multiple scarps, contrasting with the gentle western slope that disappears under the sediments of the Great Valley to the west. Deep river canyons are cut into the western slope. Their upper courses, especially in massive granites of the higher Sierra, have been modified by glacial activity, forming such scenic features as Yosemite Valley. The high crest in the Sierra culminates in Mt. Whitney with an elevation of 14,495 feet above sea level near the eastern scarp. The metamorphic bedrock contains gold-bearing veins in the northwest trending Mother Lode. The northern Sierra boundary is marked where bedrock disappears under the Cenozoic volcanic cover of the Cascade Range.

Tuolumne County is located in central California, which is a region known to have limited fault zones and seismic activity. There are four “capable” faults, which are faults with tectonic displacement within the last 35,000 years which could produce a quake, located within Tuolumne County: Negro Jack Point, Bowie Flat, Rawhide Flat West, and Rawhide Flat East. These faults are located primarily in the western and southwestern portion of the County. Historically, earthquake activity in Tuolumne County has been substantially below the California State average.

In addition to the Tuolumne County General Plan and Ordinance Code, the project was evaluated using the Tuolumne County Multi-Jurisdiction Hazard Mitigation Plan, the USDA/CDF Cooperative Soil-Vegetation Survey of Tuolumne County, and the California Geological Survey’s geotechnical maps.

The project site was mapped using the USDA Natural Resource Conservation Service (NRCS) soil survey maps. The project site contains the Nedsgulch-Wallyhill-Arpatutu Complex, 3 to 15 Percent Slopes and the Nedsgulch-Wallyhill-Arpatutu Complex, 15 to 30 Percent Slopes soil types. The site consists of approximately 99.3% of the Nedsgulch-Wallyhill-Arpatutu Complex, 15 to 30 Percent Slopes and approximately 0.7% of the Nedsgulch-Wallyhill-Arpatutu Complex, 15 to 30 Percent Slopes.

Ground shaking

Earthquake activity within Tuolumne County is significantly below the California state average (Tuolumne County 2018). Over the past century, a total of five historical earthquakes within recorded magnitudes of 3.5 or greater have occurred. Further, there is an approximate 28 percent chance of a major earthquake within 50 kilometers of Tuolumne County within the next 50 years. The probability of a moderate earthquake occurring in the next 30 years is low. there are four “capable” faults (i.e., faults with tectonic displacement within the last 35,000 years which could produce a quake) located within Tuolumne County: Negro Jack Point, Bowie Flat, Rawhide Flat West, and Rawhide Flat East. The nearest of these faults is located approximately 14 miles west of the project site.

Geologic hazards in Tuolumne County are primarily associated with potential seismic activity along the Foothills fault zone and associated ground shaking. Tuolumne County is located approximately 12 miles east of the Foothills fault system. There are two primary fault zones within the Foothills fault system: the Melones fault zone along the east side of the system and the Bear Mountain fault zone on the west. The estimated maximum capability for this fault is Magnitude 6.5 (Tuolumne County 2018).

The Alquist-Priolo Earthquake Fault Zoning Act was signed into California law on December 22, 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Act only applies to structures for human occupancy (houses, apartments, condominiums, etc.). The project site is not located within a delineated fault zone or located within a known liquefaction zone or seismic landslide zone as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map.

The California Building Code (CBC) identifies seismic factors that must be considered in structural design. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, while Chapter 18A regulates construction on unstable soils, such as expansive soils and areas

subject to liquefaction. Appendix J of the CBC regulates grading activities, including drainage and erosion control. The CBC also contains a provision that provides for a preliminary soil report or geotechnical report to be prepared to identify "…the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects" (CBC Chapter 18 Section 1803.1.1.1). Additionally, the state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes.

Landslides, Subsidence and Liquefaction

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Due to the nature of the soils, groundwater conditions, and low seismicity in the County, the risk and danger of liquefaction and subsidence occurring within the County is considered to be minimal (Tuolumne County 2018).

Naturally occurring landslides do not typically occur in the County. Slopes disturbed by grading or development have failed, especially during periods of heavy rainfall, and have resulted in the destruction of County infrastructure. Within the County, there is a considerable amount of area where the topography can be considered steep to very steep. In the vast majority of this area, the underlying rock formation is very stable, and the soil found on these slopes is shallow and held in place by deep rooted vegetation. These slopes do not typically fail unless disturbed by grading or development (Tuolumne County 2018). Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation)
- Geologic structure or orientation of a surface along which slippage could occur
- Water (adds weight to a potentially unstable mass or influence strength of a potential failure surface)
- Topography (amount of slope in combination with gravitation forces

Expansive Soils

Clays are present in some soils both as a weathering product and as native sediments. Clays have the potential for expansion and contraction when they go through wet/dry cycles. Expansive soils (also known as shrink-swell soils) are soils that contain expansive clays that can absorb significant amounts of water into their crystalline structure. The presence of clay makes the soil prone to large changes in volume in response to changes in water content. The quantity and type of expansive clay minerals affects the potential for the soil to expand or contract. Wetting can occur naturally in a number of ways, (e.g., absorption from the air, rainfall, groundwater fluctuations, lawn watering and broken water or sewer lines). When an expansive soil becomes wet, water is absorbed, and it increases in volume, and as the soil dries it contracts and decreases in volume. This (often repeated) change in volume can produce enough force and stress on buildings and other structures to damage foundations and walls.

In hillside areas, as expansive soils expand and contract, gradual downslope creep may occur, eventually causing landslides (see below for more information on landslides and other forms of mass

wasting). Clay soils also retain water and may act as lubricated slippage planes between other soil/rock strata, also producing landslides, often during earthquakes or by unusually moist conditions. The shrink-swell characteristics of soils can vary widely within short distances, depending on the relative amount and type of clay. Soils with clay content have been mapped throughout the County and may be susceptible to expansion (USDA 1964). There are no expansive soils identified on the project site.

Paleontological Resources

Based on geologic mapping, the majority of the County is not considered sensitive for paleontological resources. Paleozoic marine rocks occur in the western portion of the County and may contain fossils of marine invertebrates. Records of paleontological finds maintained by the University of California Museum of Paleontology state that there are 72 localities at which fossil remains have been found in Tuolumne County. These occur primarily in the Mehrten geologic formations (Tuolumne County 2018).

Erosion:

Erosion is the process by which soil and rock at the earth's surface is gradually broken down and transported to a different location. Erosive processes include rainfall, surface runoff, glacial activity, wind abrasion, chemical dissolution, and gravity in the form of mass wasting (described below). Under normal conditions, these erosive processes, together with physical characteristics of the material being eroded, control the rate at which erosion occurs. Development activities can accelerate that rate, causing excessive erosion and a wide variety of detrimental effects on the environment including sedimentation of waterways (see Section 3.10, "Hydrology and Water Quality"), slope instability, ground instability, loss of agricultural productivity through the removal of topsoil, or even desertification.

The potential for erosion increases as a function of slope steepness. Areas within the County where slopes exceed 30 percent are generally considered to have a high potential for erosion. The majority of development in Tuolumne County is not located on such terrain, and there are no steep slopes exceeding 30 percent identified on the site or immediate vicinity of the project site. Erosion problems in developed regions of the County are generally limited to areas where grading has resulted in steep slopes where deposits of fill have not stabilized, or where slope stabilization practices have not been employed following grading activities. Rain and runoff have also produced incidents of excessive erosion on burn scars that have not yet sufficiently revegetated. However, by comparison with other areas of the state, such as the coastal mountains, erosion has proven to be a modest hazard in Tuolumne County.

Grading would mainly be associated with the roadway infrastructure for the site. Minor grading would be required for construction of the single-family dwellings on site and associated utilities.

The project proponent is required to submit a Notice of Intent (NOI) to the State Water Resources Control Board Water Permitting Unit to obtain coverage under the General Construction Activity Stormwater Permit for the disturbance of one acre or more. A stormwater pollution prevention plan (SWPPP) would be required by the Central Valley Regional Water Quality Control Board (RWQCB) and would be prepared before construction and implemented throughout project construction to comply with National Pollutant Discharge Elimination System (NPDES) requirements. The project would also comply with the California Building Code (CBC) and Title 12 of the Tuolumne County Ordinance Code to reduce any potential slope, soil, or erosion impacts.

Discussion:

a, c. Potential seismic activity and ground shaking associated with the Foothills fault zone represents the primary source of geologic hazards in Tuolumne County. According to the California Department of Conservation, Tuolumne County is not listed within an Alquist-Priolo earthquake fault zone.[8] In addition, the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan indicates that Tuolumne County is within a portion of the state that does not have any record of damaging shaking events since 1800, and earthquake activity throughout the County is substantially below the California State average. As such, the proposed project would not cause substantial adverse effects related to rupture of a known earthquake fault or strong seismic ground shaking.

Furthermore, the future residential buildings would be required to be designed in accordance with the CBSC, which includes engineering standards appropriate for the seismic area in which the project site is located. Projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage, 2) resist moderate earthquakes without structural damage but with some nonstructural damage, and 3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance with the design standards is enforced through building plan review and approval by the Tuolumne County Community Development Department prior to the issuance of building permits. Proper engineering of future residential buildings would ensure that seismic-related effects would not cause substantial impacts.

Liquefaction typically occurs during or following an earthquake. Due to the low risk of severe earthquakes to occur in the County, the risk and danger of liquefaction occurring within the project site is considered low. In addition, subsidence potential is also known to be minimal throughout Tuolumne County, and the County has very "Low" to "Moderate" risk for landslides.[9] Lateral Spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. Given that the risk of liquefaction at the project site is relatively low, the potential for lateral spreading to occur at the project site is considered to be low. The Tuolumne County General Plan Safety Element includes policies intended to minimize the risks associated with ground shaking, fault rupture, ground failure, liquefaction, subsidence, lateral spreading, and slope instability. For example, General Plan Policy 6.E.2 requires that the stability of any slope that would be altered by grading operations is not adversely affected during construction activities.

Based on the above, the proposed project would not be subject to risks related to rupture of a known earthquake fault or strong seismic ground shaking. In addition, adherence to General Plan policies and the standards of the CBSC would ensure that the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving subsidence or settlement. Furthermore, the proposed project would not 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 subsidence, liquefaction, or collapse. As a result, a ***less-than-significant*** impact would occur.

b. Approval of the proposed project would subdivide the 82.2-acre site into 13 lots allowing for

8 California Department of Conservation. *Earthquake Zones of Required Investigation.* Available at: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed August 2020.

9 Tuolumne County. *Tuolumne County General Plan Update Draft EIR* [pg. 4.6-4]. December 2015.

future residential development. Future residential development would include grading and construction of building pads on the parcels along with access improvements. Grading for the required access improvements and building pads would be reviewed and approved by the Engineering Division and the Division of Building and Safety, respectively. Pursuant to Section 12.20.050(C) of the Tuolumne County Ordinance Code, an Erosion Control Plan is required and must be reviewed and approved by the Engineering Division of the Department of Public Works. All soils disturbed by grading must be reseeded, hydromulched or stabilized as soon as possible before October 15th of the construction year. In the absence of such approved and implemented plans, all construction must cease on or before October 15th of each year.

Ground-disturbing activities associated with future residential development within the project site would be required to adhere to the requirements contained in Chapter 12.20 of the Tuolumne County Ordinance Code. In addition, the project proponent or subsequent developer(s) must comply with all applicable County regulations governing erosion control which are designed to minimize impacts.

Given that the proposed project would comply with applicable County Code ordinances and regulations, the proposed project would not result in substantial soil erosion or the loss of topsoil. Therefore, a ***less-than-significant*** impact would occur.

d. Expansive soils are those possessing clay particles that react to moisture changes by shrinking or swelling. If structures are underlain by expansive soils, foundation systems must be capable of tolerating or resisting any potentially damaging soil movements and building foundation areas must be properly drained.

In order to determine the expansive potential of the on-site soils, the project site was evaluated using the Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey program.[10] According to the NRCS, soils with a linear extensibility rating of between three and six percent and a clay content of 25 to 35 percent are characterized by a moderate shrink-swell class (i.e., moderate expansive potential). Soils with a linear extensibility rating of between six and nine percent with a clay content of 35 to 45 percent are characterized by a high shrink-swell class.

The Web Soil Survey program indicates that mapped soils within the project site consist of Nedsgulch-Wallyhill Complex, 3.0 to 15.0 Percent Slopes and Nedsgulch-Wallyhill Complex, 15 to 30 Percent Slopes. Table 3 below provides a summary of the extensibility and clay content of the site soils, along with the corresponding shrink-swell class. As shown in the table, based on the NRCS calculated coefficients of linear extensibility, the project site contains soils that would not be considered expansive.

Given that the on-site soils are considered to be within the low shrink-swell class, the proposed project would not be subject to risks related to expansive soils. Therefore, a ***less-than-significant*** impact would occur related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code, thereby creating substantial direct or indirect risks to life or property.

10 Natural Resources Conservation Service. *Web Soil Survey.* Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed September 2019.

Table 3 Soil Properties				
Soil Type	**Percent of Project Site**	**Linear Extensibility Rating**	**Percent Clay Content**	**Shrink-Swell Class**
Nedsgulch-Wallyhill Complex, 3.0 to 15.0 Percent Slopes	99.3	1.3	28.5	**Low**
Nedsgulch-Wallyhill Complex, 15 to 30 Percent Slopes	0.7	1.2	27.8	**Low**
Source: Natural Resources Conservation Service, Web Soil Survey, 2020.				

e. As noted previously, the proposed project would be served by individual septic systems within the project site. Pursuant to the purpose of the RE-5 zoning contained in Section 17.28.010 of the TCOC, Chapter 3 "Utilities" of the General Plan, and Chapter 13.08 of the TCOC, the project site is not required to connect to public sewer. Tuolumne County Ordinance Code Chapter 13.04 requires the applicant, prior to approval of the TSM, prove that safe, long-term sewage treatment and disposal for a single-family dwelling is possible, using a standard or special-design septic tank and leach field system. The Tuolumne County Environmental Health Division would be required to review and approve the septic report and percolation test results provided from the applicant identifying that safe, long-term sewage treatment and disposal for single-family residential is possible for the lots within the project site. Site and soil information is required for each individual parcel and would be required prior to the approval of the Final Map. Future construction and maintenance of the septic systems are required to comply with Chapters 13.04 and 13.08 of the TCOC, and applicable State Codes. Given compliance with the Chapter 13.04 and 13.08 of the Tuolumne County Ordinance Code and applicable State Codes, the project would result in a ***less-than-significant*** impact regarding the capability of soil to adequately support the use of septic tanks or alternative wastewater disposal systems.

f. According to the County's General Plan EIR, areas of Tuolumne County may contain sensitive cultural or paleontological resources. Grading activities associated with buildout of the General Plan could disturb archeological or paleontological resources or human remains from historic populations, in addition to paleontological resources such as fossils.[11] The General Plan puts forth policies and programs designed to reduce impacts to such resources, such as Implementation Program 9.B.q, which requires discretionary entitlements for new development projects subject to CEQA with the potential to impact subsurface cultural resources to comply with provisions set forth in Public Resources Code Sections 21083.2 and 21084.1.

Similar to the discussion in Section V, Cultural Resources, of this IS/MND, unknown paleontological resources have the potential to exist within the project site and ground-disturbing activity associated with project construction could encounter such resources. As such, the proposed project could have a ***potentially significant*** impact by directly or indirectly destroying a unique paleontological resource or site or unique geologic feature. Implementation of the below mitigation measures from the "Cultural Resources" section of this report would result in a ***less-than-significant*** impact.

11 Tuolumne County. *Tuolumne County General Plan Update Draft EIR.* [pg. 4.5-9]. December 2015.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

VII-1 Implement Mitigation Measures V-2 and V-3 as indicated in the "Cultural Resources" Section above.

GREENHOUSE GAS EMISSIONS:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant with Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
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?	☐	☒	☐	☐

Environmental Setting:

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. GHGs are responsible for "trapping" solar radiation in the earth's atmosphere, a phenomenon known as the greenhouse effect. Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change 2014).

The different types of GHGs have varying global warming potentials (GWPs) (Table 4). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere. Because GHGs absorb different amounts of heat, a common reference gas, usually carbon dioxide, is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "CO_2 equivalent," and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a GWP of one. By contrast, methane (CH_4) has a GWP of 21, meaning its global warming effect is 21 times greater than carbon dioxide on a molecule per molecule basis.

Table 4
Global Warming Potentials (GWPs)

Gas	Global Warming Potential
Carbon Dioxide	1
Methane	21
Nitrous Oxide	310
HFC-23	11,700
HFC-134a	1,300
HFC-152a	140
PFC: Tetrafluoromethane (CF4)	6,500
PFC: Hexafluoroethane (C2F6)	9,200
Sulfur Hexafluoride (SF6)	23,900

Source: http://epa.gov/climatechange/emissions/downloads09/Introduction.pdf

As noted above, the earth needs a certain amount of greenhouse gases in order to maintain a livable temperature. However, it is believed by many that global climate change may occur as a result of excess amounts of GHG, which, in turn, may result in significant adverse effects to the environment that will be experienced worldwide. The effects may include the melting of polar ice caps and rising sea levels, increased flooding in wet areas, droughts in arid areas, harsher storms, problems with agriculture, and the extinction of some animal species. Regardless of whether the rise in GHG is caused by natural cyclic events or not, it is widely believed production of additional GHG should be reduced in order to maintain a "healthy" level of GHG in the atmosphere.

Regulatory Setting:

State Legislation

GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015:3).

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste).

Tuolumne County Regional Blueprint Greenhouse Gas Study

In 2012, the Tuolumne County Transportation Council (TCTC) conducted a regional blueprint planning effort, which presented the results of a countywide (including incorporated and unincorporated areas) GHG emissions inventory, which evaluated existing (2010) GHG emissions, and projected (2020, 2030, and 2040) emissions for three growth scenarios. It also identified policies and measures Tuolumne County and land use project applicants can implement to reduce GHG emissions consistent with AB 32 and prepare for the potential impacts of climate change. In 2010, Tuolumne County emitted approximately 782,846 metric tons of CO2 equivalent GHG emissions (MTCO2e) as a result of activities and operations that took place within the transportation, residential (energy consumption), nonresidential (energy consumption), off-road vehicles and equipment, agriculture and forestry, wastewater, and solid waste sectors. This equates to 9.8 MTCO2e per resident and employee in Tuolumne County's service population (service population is defined as the total County resident population + people employed in the County). Because the project completed a project-specific GHG study, it does not need to rely on the evaluation and mitigations in the Blueprint GHG Study.

2022 Climate Action Plan

The Board of Supervisors approved the Climate Action Plan (CAP) on November 8, 2022. The CAP identifies existing and projected GHG emissions, sets GHG reduction targets, establishes policies

and actions to meet reduction targets, integrates climate adaptation and resilience strategies, engages the community, and provides an implementation program.

Significance Criteria

Tuolumne County and the Tuolumne County Air Pollution Control District (TCAPCD) do not have an adopted GHG threshold for the purposes of determining significance under CEQA. California Air Resources Board's California's 2017 Climate Change Scoping Plan (Scoping Plan) states that, for project-level GHG thresholds,

Absent conformity with an adequate geographically specific GHG reduction plan as described in the preceding section above, CARB recommends that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development. (CARB 2017:101)

Therefore, the project would be considered significant if it results in a net increase in GHG emissions compared to existing conditions. This threshold is specific to the proposed project and may not necessarily apply to other projects in the county.

Discussion:

Analysis:

a,b) Consistency with 2017 Scoping Plan

IN addition to utilizing the County's Climate Action Plan, a qualitative assessment of the project's compliance with the recommended mitigation measures within the 2017 Scoping Plan has been provided as an alternative means of assessing a project's potential impacts related to GHG emissions, based on discussions with the TCAPCD.[12]

Appendix B to the CARB's 2017 Scoping Plan provides examples of potentially feasible mitigation measures that could be considered to assess a project's compliance with the State's 2030 GHG emissions reductions goals set forth pursuant to SB 32. Thus, general compliance with the Local Actions within the 2017 Scoping Plan could be considered to demonstrate the project's compliance with the State's 2030 GHG emissions reductions goals of SB 32. The project's consistency with the applicable Local Actions within the 2017 Scoping Plan is assessed in Table 6 below.

Table 6
Project Consistency with the 2017 Scoping Plan

Suggested Measure	Consistency Discussion
Construction	
Enforce idling time restrictions for construction vehicles.	CARB's In-Use Off-Road Vehicle Regulations include restrictions that limit idling time to five minutes under most situations. Construction fleets and all equipment

13 Van Dyken, Scott. Air Pollution Control Specialist, TCAPCD. Personal communication [email] with Briette Shea, Associate/Air Quality Technician, Raney Planning and Management, Inc. August 27, 2020.

Table 6 Project Consistency with the 2017 Scoping Plan	
Suggested Measure	**Consistency Discussion**
	operated as part of on-site construction activities would be subject to CARB's idling restrictions. As such the proposed project would be required to comply with this measure.
Require construction vehicles to operate with the highest tier engines commercially available.	The project applicant has not committed to using construction equipment that complies with the highest tier engines commercially available. As a result, project compliance with this measure is uncertain. However, implementation of Mitigation Measure VIII-1, which requires use of Tier 3 or better engines, would ensure that the project would comply with this measure.
Divert and recycle construction and demolition waste and use locally-sourced building materials with a high recycled material content to the greatest extent feasible.	The CALGreen Code requires the diversion of construction and demolition waste, and the proposed project would be required to comply with the requirements within the most up-to-date CALGreen Code. Thus, the project would be considered to comply with the suggested measure.
Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators.	The contractor would use existing grid electricity to the extent feasible. However, the possibility exists that temporary generators would be used for electricity in instances where grid electricity is not accessible. Overall, the project would be considered to generally comply with the suggested measure.
Require diesel equipment fleets to be lower emitting than any current emission standard.	The project applicant has not committed to reducing emissions from the construction fleet beyond any current emissions standards. However, implementation of Mitigation Measure VIII-1, which requires use of Tier 3 or better engines, would ensure that the project would generally comply with this measure.
Operations	
Comply with lead agency's standards for mitigating transportation impacts under SB 743.	As noted in Section XVII, Transportation, of this IS/MND, the project would result in a less-than-significant impact related to VMT. The proximity of the project site to commercial and employment opportunities, as well as the County's Dial-A-Ride service would act to reduce VMT associated with project operations. Thus, project would be considered to comply with the suggested measure.
Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals.	Per the 2019 CALGreen Code, residential projects are required to install a listed raceway to accommodate a dedicated 208/240-volt branch circuit for each unit, which would be suitable for EV charging. Compliance with the 2019 CALGreen Code would ensure that the proposed project provides sufficient EV charging infrastructure to comply with

Table 6 Project Consistency with the 2017 Scoping Plan	
Suggested Measure	**Consistency Discussion**
	this suggested measure.
Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in an applicable bicycle and/or pedestrian master plan.	On- and off-site infrastructure improvement plans are unknown at this time. However, due to the sloping terrain and rural nature of Tuolumne County, bicycle and pedestrian facilities are fairly in the area, and existing bicycle and pedestrian facilities are not located in the project vicinity. As such, the suggested measure does not apply. Nonetheless, future residents would have access to public transit served by Tuolumne County Transit, dial-a-ride, SkiBUS, and YARTS. Refer to Section XVII, Transportation, of this IS/MND for a more detailed discussion of bike, pedestrian, and transit connections.
Require on-site renewable energy generation.	The CBSC requires that residential structures that are three stories or less in height be constructed with renewable energy systems sufficient to provide 100 percent of the electricity required for the residence. The proposed single-family residences would be subject to such requirements. Due to the CBSC's requirements regarding renewable energy systems for residential land uses, the proposed project would include on-site renewable energy generation and would comply with this measure.
Prohibit wood-burning fireplaces in new development and require replacement of wood-burning fireplaces for renovations over a certain size development.	The proposed project may include wood-burning fireplaces. The applicant has indicated that the proposed fireplaces would be EPA certified inserts, which would help reduce emissions associated with wood-burning fireplaces.
Require cool roofs and "cool parking" that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing.	The 2019 CBSC contain requirements for the thermal emittance, three-year aged reflectance, and Solar Reflectance Index (SRI) of roofing materials used in new construction and re-roofing projects. Such standards, with which the project would be required to comply, would help to reduce heating and cooling costs associated with the proposed project. In addition, the proposed single-family residences would include rooftop solar and other features as required by the 2019 CBSC and CALGreen. As such, the project would comply with this suggested measure.
Require solar-ready roofs.	The 2019 CBSC requires that new residential structures be built with rooftop solar. Therefore, the proposed project would be required to provide solar-ready roofs and would comply with this suggested measure.
Require organic collection in new developments.	As noted in Chapter 7.24 of the County Code, yard service is available to residents in Tuolumne County.

Table 6 Project Consistency with the 2017 Scoping Plan	
Suggested Measure	**Consistency Discussion**
	Therefore, future residents would have access to organic collection service. Nonetheless, compliance with this measure is uncertain at this time.
Require low-water landscaping in new developments (see CALGreen Divisions 4.3 and 5.3 and the Model Water Efficient Landscape Ordinance [MWELO], which is referenced in CALGreen). Require water efficient landscape maintenance to conserve water and reduce landscape waste.	Landscaping within the project site would be required to comply with the CALGreen Code and all water efficiency measures therein, including the MWELO and the standards set forth in Chapter 15.28, Landscaping Requirements, of the County Code. Accordingly, the proposed project is anticipated to comply with this measure.
Achieve Zero Net Energy performance building standards prior to dates required by the Energy Code.	Through the 2019 CBSC requirements, the proposed single-family residences are anticipated to achieve Zero Net Energy. Therefore, the proposed project is anticipated to comply with this measure.
Encourage new construction, including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program, LEED rating system, or Living Building Challenge.	The project applicant has not committed to achieving any third-party green building certifications. Consequently, compliance with the suggested measure is uncertain at this time.
Require the design of bike lanes to connect to the regional bicycle network.	Considering the rural nature of the project site, a regional bicycle network does not exist in the project vicinity, and the suggested measure is not applicable to the proposed project.
Expand urban forestry and green infrastructure in new land development.	The project would include landscaping consistent with the Landscaping Requirements set forth in Chapter 15.28 of the County Code. Therefore, the project would comply with the suggested measure.
Require preferential parking spaces for park and ride to incentivize carpooling, vanpooling, commuter bus, electric vehicles, and rail service use.	The measure relates to multi-family residential development and commercial land uses, and the proposed project includes only single-family residential development. As a result, the measure does not apply to the proposed project.
Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans.	The proposed project would be required to comply with the 2019 CBSC, which includes standards related to installation of energy-efficient appliances and building features such as water heaters and ventilation systems. Thus, the project would generally comply with the suggested measure.
Require each residential and commercial building equip buildings [sic] with energy efficient AC units and heating systems with programmable thermostats/timers.	The proposed project would be required to comply with the 2019 CBSC, which includes standards related to energy-efficient heating and cooling systems. Thus, the project would generally comply with the suggested measure.

Table 6 Project Consistency with the 2017 Scoping Plan	
Suggested Measure	**Consistency Discussion**
Require large-scale residential developments and commercial buildings to report energy use and set specific targets for per-capita energy use.	The proposed project is not considered a large-scale residential development. Accordingly, the suggested measure is not applicable to the proposed project.
Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets (see CALGreen Divisions 4.3 and 5.3 as well as Appendices A4.3 and A5.3).	The proposed project would be required to comply with the residential water efficiency regulations within the CALGreen Code. Thus, the proposed project would comply with the suggested measure.
Require the use of energy-efficient lighting for all street, parking, and area lighting.	All proposed exterior lighting would be LED type, consistent with the 2019 CBSC. Thus, the proposed project would comply with the suggested measure.
Require the landscaping design for parking lots to utilize tree cover and compost/mulch.	Parking lots are not included as part of the proposed development. Consequently, this measure does not apply to the proposed project.
Incorporate water retention in the design of parking lots and landscaping, including using compost/mulch.	Parking areas are not proposed as part of the project. Accordingly, this measure does not apply to the project.
Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from California Air Pollution Control Officers Association (CAPCOA), the California Air Resources Board, or other similar entities determined acceptable by the local air district. The project may alternatively purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry (ACR), Climate Action Reserve (CAR) or other similar carbon credit registry determined to be acceptable by the local air district.	The suggested mitigation measures included in the 2017 Scoping Plan are not considered to be requirements for local projects under CEQA, but instead represent options for projects to demonstrate compliance with the 2017 Scoping Plan. The inclusion of GHG off-set mitigation projects or the purchase of carbon credits is typically dependent on a project's exceedance of the previously identified quantitative GHG thresholds. However, the TCAPCD has not identified quantitative thresholds, and the project is generally consistent with the measures listed above as well as the measures within the TCRBGGS. Considering that the project has been shown to be generally consistent with the foregoing measures, the County, in its discretion as lead agency, has chosen not to require the project to implement an off-site mitigation project or purchase GHG reduction credits.
Source: California Air Resources Board. AB 32 Scoping Plan [Appendix B]. Accessible at: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm. Accessed August 2020.	

Construction

Construction associated with the proposed project include site excavation, grading for the building pads, on-site roads and parking areas, and installation of utilities. Homes would either be stick built on the property or manufactured off site and assembled on a specific property by a future homeowner. Construction would expect to occur over a period of years, rather than a full buildout on all parcels simultaneously. Typical construction equipment would include dozers, excavators, loaders/backhoes, paving equipment, forklifts, and haul trucks.

As shown in Table 2 in the Air Quality section above in this report, criteria air pollutant emissions generated by project construction would not exceed TCAPCD's significance thresholds. Therefore, impacts related to construction would be less than significant.

Operation

Operation of the proposed project would consist of overnight stays by guests in the guest cabins. The yoga dome and other amenities would be reserved for use by guests only. The main source of emissions would be from vehicular traffic associated with guests and employees going to and leaving the site. As shown in Table 2 in the Air Quality section above in this report, criteria air pollutant emissions generated by project operation would not exceed TCAPCD's significance thresholds.
As shown in Table 6, the proposed project would comply with the majority of the suggested measures and, thus, the proposed project would be considered generally consistent with the 2017 Scoping Plan. Because the 2017 Scoping Plan is the CARB's strategy for meeting the State's 2030 emissions goals established by SB 32, the project would be considered to comply with the goals of SB 32.

The project would be consistent with the Tuolumne County Regional Blueprint Greenhouse Gas Study, 2022 Climate Action Plan, and Air Quality Element of the General Plan. Therefore, there is a less than significant impact.

Mitigation Measures:
Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

VIII-1- Prior to issuance of a grading permit, the project applicant shall show on the grading plans via notation that the contractor will comply with the following requirements, to the maximum extent feasible determined by the County:

- *To the maximum extent feasible, off-road heavy-duty diesel-powered equipment (e.g., rubber-tired dozers, excavators, graders, scrapers, pavers, paving equipment, and cranes) to be used for each phase of construction of the project (i.e., owned, leased, and subcontractor vehicles) shall meet CARB Tier 3 emissions standards or cleaner*
- *To the maximum extent feasible, temporary power necessary for construction activities shall be supplied by the existing power grid, as opposed to portable generators; and*
  Alternatively-fueled construction equipment and renewable diesel shall be used for on-site construction, if such equipment is commercially available.

a, b. Emissions of greenhouse gases (GHGs) contributing to global climate change are

attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

In September 2006, Assembly Bill (AB) 32, the California Climate Solutions Act of 2006, was enacted. The CARB is the lead agency for implementing AB 32, which requires California to reduce its GHG emissions to 1990 levels by 2020. In response to AB 32, the Tuolumne County Regional Blueprint Greenhouse Gas Study (TCRBGGS) was prepared in January 2012. The purpose of the TCRBGGS is to determine the sources of greenhouse gas emissions in Tuolumne County, identify any direct, indirect, and/or cumulative impacts, and suggest mitigation measures, if necessary, to aid Tuolumne County in meeting the 2006 greenhouse gas emissions standard and reduce overall carbon emissions.

The Board of Supervisors approved the Climate Action Plan (CAP) on November 8, 2022. The CAP identifies existing and projected GHG emissions, sets GHG reduction targets, establishes policies and actions to meet reduction targets, integrates climate adaptation and resilience strategies, engages the community, and provides an implementation program.

On September 8, 2016, Senate Bill (SB 32) was enacted with the goal of providing further control over GHG emissions in the State. SB 32 built on previous GHG reduction goals by requiring that the CARB ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by the year 2030. The CARB has prepared the *2017 Climate Change Scoping Plan Update* (2017 Scoping Plan),[13] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix B of the 2017 Scoping Plan includes examples of local actions (municipal code changes, zoning changes, policy directions, and mitigation measures) that would support the State's climate goals.

Considering the legislative progress that has occurred regarding statewide reduction goals since the adoption of the TCRBGGS, compliance with the measures within the TCRBGGS would determine whether a proposed project would be in compliance with the 2020 emissions reductions goals of AB 32, but would not necessarily demonstrate whether a project would be in compliance with SB 32. As such, the following analysis relies on consistency with the TCRBGGS to assess compliance with AB 32, and relies on consistency with the 2017 Scoping Plan to assess compliance with SB 32.

13 California Air Resources Board. *The 2017 Climate Change Scoping Plan Update.* January 20, 2017.

HAZARDS AND HAZARDOUS MATERIALS:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
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 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?	☐	☐	☒	☐

Environmental Setting:

Hazardous substances and wastes that are likely to be generated from the project would include hydraulic fluids, solvents, diesel, and fluids used in construction. Hazardous materials and waste would also be generated by household uses after occupancy of the residences, which would include oils, used paint, pesticides, cleaning products and other chemicals that are commonly used. All hazardous substances and wastes are highly regulated by federal, state, and local regulations regarding the use, storage, transportation, handling, processing, and disposal. All hazardous substances and waste are required to be stored, transported, handled, processed, and disposed of in accordance with these regulations.

To address compliance of these regulations in the home, Tuolumne County adopted the Household Hazardous Waste Element of the Tuolumne County Integrated Waste Management Plan. This plan aims to reduce the amount of household hazardous waste generated within Tuolumne County through reuse and recycling, to divert household hazardous waste from landfills, to promote alternatives to toxic household products, and to educate the public regarding household hazardous waste management. Household hazardous waste is collected at the Cal Sierra Transfer Station in East Sonora and the Groveland Transfer Station in Groveland. Tuolumne County also holds collection events for household hazardous waste which is organized by the Solid Waste Division of the Department of Public Works.

The project site is located within the Big Oak Flat/Groveland Unified School District. The nearest school to the site is Tioga High School located approximately 3.5± miles west of the site. Tenaya

Elementary School is located approximately 6.0± miles southwest of the project site. Both of these schools are public schools. There are no new schools proposed within the vicinity of the project site or within the Groveland area.

The California Department of Toxic Substance Control (DTSC) maintains a list of cleanup sites and hazardous waste permitted facilities on its EnviroStor database. The State Water Resources Control Board regulates spills, leaks, investigation, and cleanup sites and maintains an online GeoTracker database. The GeoTracker database tracks regulatory data about leaking underground storage tank (LUST) sites, fuel pipelines, and public drinking water supplies. These databases were consulted for the project site.

There are two airports located within Tuolumne County. One is located within the community of Columbia and the other airport is the Pine Mountain Lake Airport located in the community of Groveland. Parcels that are subject to the Tuolumne County Airport Compatibility Plan are designated with the Airport Overlay (-AIR) General Plan land use designation the :AIR (Airport Combining) zoning district.

The project site is located approximately 750± feet at its nearest point to the Pine Mountain Lake Airport. The site is located within the influence area of the airport and is within Compatibility Zones B1 and B2 associated with the airport. The site contains the :AIR zoning and is subject to the Airport Land Use Compatibility Plan. A portion of the site contains the 55dB noise contour associated with the airport. Figure 5 below includes noise information and criteria within the noise contours and Figure 6 below shows compatibility criteria for the Airport Compatibility Zones. Both figures are contained within the Airport Land Use Compatibility Plan.

Information on emergency response plan and evacuation plan is contained in the Natural Hazards Element of the 2018 Tuolumne County General Plan and the Tuolumne County Multi-Jurisdiction Hazard Mitigation Plan. Tuolumne County does not have a static emergency plan or evacuation plan due to the dynamic nature of emergencies. In the event of an emergency, the Tuolumne County Sheriff Office is the responsible entity for declaring and directing evacuations in the case of emergencies. The Sherriff's Department will inform members of the public via the Everbridge Emergency Notification System, local media, and door-to-door when feasible.

The project site is located within a State Responsibility Area (SRA) and is rated as very high fire hazard severity zone. This rating is based on factors of slope, vegetation, and annual summer weather patterns. These zones, referred to as Fire Hazard Severity Zones (FHSZ), provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. The zones also relate to the requirements for building codes designed to reduce the ignition potential to buildings in the wildland-urban interface zone.

Regulatory Setting:

Federal:

Toxic Substances Control Act

The 1976 Toxic Substances Control Act regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. The Model Accreditation Plan, adopted under Title II of the Act, requires that all persons who inspect for asbestos-containing material (ACM) or design or conduct response actions with respect to friable asbestos obtain accreditation by completing a prescribed training course and passing an exam. Section 403 of the Toxic Substances Control Act establishes standards for LBP hazards in paint, dust, and soil.

Resource Conservation and Recovery Act

RCRA (42 U.S. Code [USC] 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave"). EPA has authorized DTSC to enforce hazardous waste laws and regulations in California. Under RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. Generators must ensure that their wastes are disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills).

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

EPCRA requires states and local emergency planning groups to develop community emergency response plans for protection from a list of extremely hazardous substances (40 CFR 355 Appendix A). In California, EPCRA is implemented through the Cal ARP program.

Hazardous Materials Transportation

DOT regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials regulations are enforced by the Federal Highway Administration, the Federal Railroad Administration, and the Federal Aviation Administration.

Comprehensive Environmental Response, Compensation, and Liability Act

Brownfield sites are areas with actual or perceived contamination and that may have potential for redevelopment or reuse. Brownfields are often former industrial facilities that were once the source of jobs and economic benefits to the community but lie abandoned due to fears about contamination and potential liability. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over 5 years, $1.6 billion was collected and the tax went into a fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA was amended in January of 2002 with passage of the Small Business Liability Relief and Brownfields Revitalization Act. This Act provides some relief for small businesses from liability under CERCLA. It authorizes $200 million per fiscal year through 2006 to provide financial assistance for brownfield revitalization. CERCLA also facilitated a revision of the National Contingency Plan, which provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The plan also established the generation of EPA's National Priorities List, a list of all the sites with known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. According to the National Priorities List database, there are no Superfund sites within Tuolumne County (EPA 2018).

National Emissions Standards for Hazardous Air Pollutants

The asbestos regulations under NESHAP control work practices during the demolition and renovation of institutional, commercial, or industrial structures. Following identification of friable

asbestos, OSHA requires that asbestos trained and certified abatement personnel perform asbestos abatement and all ACM removed from on-site structures shall be hauled to a licensed receiving facility and disposed of under proper manifest by a transportation company certified to handle asbestos.

Clean Water Act

The U.S. Environmental Protection Agency (EPA) is the federal agency primarily responsible for water quality management. The CWA establishes the basic structure for regulating discharges of pollutants into "waters of the United States." The Act specifies a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Some of these tools include:

Section 311 details the Spill Prevention and Countermeasure Control (SPCC) rule, which requires facilities to prepare and maintain a SPCC plan. A facility falls under federal jurisdiction and the SPCC rule if it has an aggregate aboveground oil storage capacity greater than 1,320 U.S. gallons or a completely buried storage capacity greater than 42,000 U.S. gallons and there is a reasonable expectation of an oil discharge into or upon navigable waters of the U.S. or adjoining shorelines. A SPCC plan describes oil handling operations, spill prevention practices, discharge or drainage controls, and the personnel, equipment, and resources at a facility that are used to prevent oil spills from reaching navigable waters or adjoining shorelines.

State:

California Accidental Release Prevention Program

Cal ARP (CCR Title 19, Division 2, Chapter 4.5) covers certain businesses that store or handle more than a specified volume of regulated substances at their facilities. The Cal ARP program regulations became effective on January 1, 1997, and include the provisions of the federal Accidental Release Prevention program (Title 40, CFR Part 68), with certain additions specific to the state pursuant to Health and Safety Code Section 25531 et seq. The list of regulated substances is found in 19 CCR Section 2770.5 of the Cal ARP program regulations. Businesses that use a regulated substance above the noted threshold quantity must implement an accidental release prevention program, and some may be required to complete RMPs. An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The purpose of an RMP is to decrease the risk of an off-site release of a regulated substance that might harm the surrounding environment and community. An RMP includes the following components: safety information, hazard review, operating procedures, training, maintenance, compliance audits, and incident investigation. The RMP must consider the proximity to sensitive populations located in schools, residential areas, general acute care hospitals, long-term health care facilities, and child day-care facilities, as well as external events such as seismic activity.

California Government Code Section 65962.5

California Government Code Section 65962.5 requires DTSC to compile and maintain lists of potentially contaminated sites located throughout the State of California. This "Cortese List" includes hazardous waste and substance sites from DTSC's database, LUST sites from the SWRCB's database, solid waste disposal sites with waste constituents above hazardous waste levels outside of the waste management unit, Cease and Desist Orders and Cleanup and Abatement Orders concerning hazardous wastes, and hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.

There are no sites in unincorporated Tuolumne County on DTSC's database of hazardous waste

and substance sites, and there are no solid waste disposal sites in the County with waste constituents above hazardous waste levels outside of the waste management unit. There are six Cease and Desist Orders and Cleanup and Abatement Orders in the unincorporated County area, but none are apparently concerning hazardous waste. As described above, there are several records of LUST sites in the County (DTSC 2018).

Hazardous Waste Control Act

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act, Health and Safety Code Section 25100 et seq. and Title 26 of the CCR, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with DTSC.

Hazardous Materials Release Response Plans and Inventory Law

The Hazardous Materials Release Response Plans and Inventory Law, Health and Safety Code Section 25500 et seq., aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on site, to prepare an emergency response plan, and to train employees to use the materials safely.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted DOT regulations for the movement of hazardous materials originating within the state and passing through the state. State regulations are contained in Title 26 of the CCR. State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the CHP and Caltrans. Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

The State of California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the California Office of Emergency Services, which coordinates the responses of other agencies in the area.

Worker and Workplace Hazardous Materials Safety

Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers are informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, material safety data sheets are to be available in the workplace, and employers are to properly train workers.

California State Aeronautics Act

At the state level, Caltrans's Division of Aeronautics administers Federal Aviation Administration regulations. The division issues permits for hospital heliports and public-use airports, reviews potential and future school sites proposed within 2 miles of an airport and authorizes helicopter landing sites at or near schools. In addition, it administers noise regulation and land use planning laws, which regulate the operational activities and provides for the integration of aviation planning on a regional basis.

CAL FIRE Regulations

Title 14 of the CCR establishes regulations for CAL FIRE in areas where CAL FIRE is responsible for wildfire protection. These regulations constitute the basic wildland fire protection standards of the California Board of Forestry and Fire Protection. They have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in state recreation areas. Additionally, Title 14 sets forth the minimum standards for emergency access, fuel modification, setback, signage, and water supply.

Emergency Services Act

Under the Emergency Services Act, Government Code Section 8550 et seq., the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an important part of the plan, which is administered by the California Office of Emergency Services. The office coordinates the responses of other agencies, including EPA, the CHP, regional water quality control boards, air quality management districts, and county disaster response offices.

International Building Code

In January of 2008, California officially switched from the Uniform Building Code to the International Building Code. The International Building Code specifies construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire.

2010 Strategic Fire Plan for California

The 2010 Strategic California Fire Plan is the state's road map for reducing the risk of wildfire. By emphasizing fire prevention, the Fire Plan seeks to reduce firefighting costs and property losses, increase firefighter safety, and to contribute to ecosystem health.

Local:

Certified Unified Program Agency

Pursuant to Senate Bill 1082 (1993), the State of California adopted regulations to consolidate six hazardous materials management programs under a single, local agency, known as the Certified Unified Program Agency. In addition to conducting annual facility inspections, the Hazardous Materials Program is involved with hazardous materials emergency response, investigation of the illegal disposal of hazardous waste, public complaints, and storm water illicit discharge inspections. In January 1997, the Tuolumne County Environmental Health Division was designated as the Certified Unified Program Agency by the Secretary of the California Environmental Protection Agency for Tuolumne County. Accordingly, it is the Environmental Health Division's responsibility to prevent public health hazards in the community and to ensure the safety of water and food. The Environmental Health Division coordinates activities with federal, state, and regional agencies when planning programs that deal with the control of toxic materials, housing conditions, nuisance complaints, protection of food and water supply, public bathing areas, and sewage and solid waste.

Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan

Implementation of the *Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan* (HMP) (2018) is a coordinated effort between Tuolumne County, the City of Sonora, the Tuolumne Utilities District, the Sonora Union High School District, the Groveland Community Services District, Twain Harte Community Services District, Mi-Wuk Sugar Pine Fire Protection District, Belleview Elementary School District, Big Oak Flat-Groveland Unified School District, Jamestown Sanitary District, Columbia Fire Protection District, Columbia Union School District, Curtis Creek School District, Jamestown Elementary School District, Sonora Elementary School District, Summerville

Elementary School District, Summerville Union High School District, Twain Harte Long Barn School District, and the Tuolumne Band of Me-Wuk Indians to effectively deal with natural catastrophes that affect the County. The HMP addresses risks associated with numerous hazards, including wildfire, earthquake, flooding, sinkholes, and extreme weather.

Tuolumne County Emergency Operations Plan

The Tuolumne County Emergency Operations Plan delineates the County's procedures and policies in response to a significant disaster, including extreme weather, flood or dam failure, earthquakes, hazardous materials, terrorism or civil disturbance, transportation accidents, and wildland fires.

County 4290 In Lieu Regulations

California Public Resources Code Section 4290 requires local jurisdictions in California to adopt General Plan Safety elements that meet Section 4290 standards or, in lieu of this regiment, local jurisdictions must adopt local fire safe ordinances addressing issues including emergency access, signing and building numbering, private water supply reserves for emergency fire use, and vegetation modification. The County currently has local fire safe ordinances in place in Titles 11, 15, and 16 of the Tuolumne County Ordinance Code. The California Board of Forestry and Fire Protection certified the County's fire safe ordinances in 2016.

2018 Tuolumne County General Plan

The 2018 General Plan contains goals, policies, and implementation programs related to wildland fires, emergency services, and hazardous materials within the Safety Element and the Public Safety Element. These are contained within Chapters 9 and 17 of the 2018 General Plan.

Waste associated with construction (treated wood waste, organic vegetation waste, rock), and waste associated with project operation (ash, municipal solid waste), would be disposed of at the approved facilities. The project would not produce excessive hazardous waste, solid waste for landfills, and may be served by existing facilities.

Discussion:

a. Residential land uses such as the proposed project are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future residents of the proposed residential subdivision may use common household cleaning products, fertilizers, and herbicides on-site, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations governing use of such products and the amount utilized on the site, routine use of such products would not represent a substantial risk to public health or the environment. Therefore, 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. The following discussion provides an analysis of potential hazards related to the proposed construction activities and existing on-site conditions.

   Construction Activities

   Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used at the

project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes and local County ordinances regulating the handling, storage, and transportation of hazardous and toxic materials. Thus, construction of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Existing On-Site Hazardous Conditions

As discussed previously, the project site is currently undeveloped and primarily consists of hills and slopes and a long meadow, partly covered in dense vegetation. At least two seasonal drainages run through the valley, as well as an historical ditch. Vegetation within the site includes scattered native pines and oaks, as well as dense grasses, plants, and brush that consists of manzanita, poison oak, toyon, and blackberry and buck brush. Given that the project site has not been subject to prior development, the site does not contain any hazardous materials or other contaminants. Thus, development of the site would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.

Conclusion

Based on the above, the project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment during construction or operations, and a ***less-than-significant*** impact would occur.

c. The project site is not located within a quarter mile of any existing or proposed schools. The nearest school to the project site is Tioga Highschool, located approximately 3.5± miles west of the site. Therefore, the proposed project would have ***no impact*** related to hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. A review of the Department of Toxic Substances Control (DTSC) database, EnviroStor, which includes lists of hazardous materials sites compiled pursuant to California Government Code Section 65962.5, did not identify any sites on or adjacent to the project site that have included operations that used, stored, disposed of, or released hazardous materials.[14] Therefore, the project would not create a significant hazard to the public or the environment associated with such, and ***no impact*** would occur.

e. The project site is located adjacent to the Pine Mountain Lake Airport and is within the airport influence area boundaries identified by the Tuolumne County Airport Land Use Compatibility Plan.[15] According to Exhibit 5E of the Tuolumne County Airport Land Use Compatibility Plan, Noise Impact Area - 2015, the northeastern portion of the project site is located within the general traffic pattern envelope. Aircraft flying over this area are at altitudes of less than approximately 600 feet. A portion of the project site is located within

14 California Department of Toxic Substances Control. *EnviroStor*. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed August 2020.

15 Tuolumne County. *Tuolumne County Airport Land Use Compatibility Plan* [pg. 5-1]. Adopted January 22, 2003.

the 55 decibel (dB) noise contour associated with air traffic from the airport. Noise levels 55dB to 60dB Noise levels of 55 dB or lower are considered normally acceptable for residential uses in the vicinity of the airports within Tuolumne County.

The project was considered by the Tuolumne County Airport Land Use Commission to ensure the project's compliance with the rules and regulations contained in the Tuolumne County Airport Land Use Compatibility Plan (Combability Plan) and to ensure that the project would not result in significant hazards associated with the proximity to the airport. Figures below were utilized in the review of the project with the Compatibility Plan.

The ALUC recommended approval of the project and determined the project would comply with the Compatibility Plan with the incorporation of the following conditions. These conditions have been incorporated into the conditions of approval for Tentative Subdivision Map T20-002.

> All parcels located within or partially within Compatibility Zone B1 shall be a minimum of ten gross acres in size, consistent with the density policies of the Airport Land Use Compatibility Plan (Compatibility Plan). All parcels located within Compatibility Zone B2 shall be a minimum of three gross acres, consistent with the density policies of the Compatibility Plan. This shall be verified prior to the approval of the Final Map.
>
> A deed restriction shall be recorded for each parcel to acknowledge the proximity of the Pine Mountain Lake Airport and the requirement to comply with the Tuolumne County Airport Land Use Compatibility Plan. The restrictions shall include information that parcels with higher elevations may have height limits imposed on future structures. This would trigger additional review by the ALUC.
>
> All building permits for proposed parcels 5, 6, and 13 located within Compatibility Zone B1 will be subject to review by the Tuolumne County Airport Land Use Commission prior to issuance of a Building Permit. Noise attenuation measures will be required for construction of single-family dwellings within these parcels. This information shall be included within the deed restriction or on the Final Map.

With the incorporation of the conditions provided by the ALUC listed above and compliance with the Compatibility Plan**,** a ***less-than-significant*** impact related to a safety hazard for people residing or working in the project area would occur.

Figure 2: Airport Noise Impact Area Criteria

Land Use Category	CNEL (dB) 50–55	55–60	60–65	65–70	70–75
Residential					
single-family, nursing homes, mobile homes	+	o	–	– –	– –
multi-family, apartments, condominiums	++	+	o	– –	– –
Public					
schools, libraries, hospitals	+	o	–	– –	– –
churches, auditoriums, concert	+	o	o	–	– –
halls	++	++	++	+	o
transportation, parking, cemeteries					
Commercial and Industrial					
offices, retail trade	++	+	o	o	–
service commercial, wholesale trade,	++	++	+	o	o
warehousing, light industrial	++	++	++	+	+
general manufacturing, utilities, extractive industry					
Agricultural and Recreational					
cropland	++	++	++	++	+
livestock breeding	++	+	o	o	–
parks, playgrounds, zoos	++	+	+	o	–
golf courses, riding stables, water	++	++	+	o	o
recreation	++	+	+	o	–
outdoor spectator sports amphitheaters	+	o	–	– –	– –

Land Use Acceptability		Interpretation/Comments
++	*Clearly Acceptable*	The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure.
+	*Normally Acceptable*	Noise is a factor to be considered in that slight interference with outdoor activities may occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities.
o	*Marginally Acceptable*	The indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged.
–	*Normally Unacceptable*	Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided.
– –	*Clearly Unacceptable*	Unacceptable noise intrusion upon land use activities will occur. Adequate structural noise insulation is not practical under most circumstances. The indicated land use should be avoided unless strong overriding factors prevail and it should be prohibited if outdoor activities are involved.

Table 2b Noise Compatibility Criteria 2-25

Figure 6: Airport Compatibility Criteria

Zone	Location	Maximum Densities: Residential (du/ac) [1]	Maximum Densities: Other Uses (people/ac) [2]	Additional Criteria: Prohibited Uses	Additional Criteria: Other Development Conditions
A	Runway Protection Zone or within Building Restriction Line	0	10	* All structures except ones required by aeronautical function * Assemblages of people * Objects exceeding FAR Part 77 height limits * Aboveground bulk storage of hazardous materials * Hazards to flight [4]	*Deed notice recordation [3]
B1	Approach Departure Zone and Adjacent to Runway	0.1 (10-acre parcel)	25	* Children's schools, day care centers, libraries Hospitals, nursing homes * Highly noise-sensitive uses (e.g., outdoor theaters) * Aboveground bulk storage of hazardous materials [5] * Hazards to flight [4]	* Locate structures away from extended runway centerline * Additional NLR required for some uses [6] * Airspace review required for all objects (B1 zone) * Deed notice recordations [3]
B2	Extended Approach/Departure Zone	0.33 (3-acre parcel)	50		
C	Common Traffic Pattern	0.33 (3-acre parcel)	75	* Children's schools, day care centers, libraries * Hospitals, nursing homes * Hazards to flight [4]	* Deed notice recordations [3]
D	Other Airport Environs	No Limit	No Limit	* Hazards to flight [4]	* Deed notice recordations [3]
	Critical Height Zone Overlay [7]	Same as Underlying Compatibility Zone		Tall objects on high terrain [8]	* Deed notice recordations [3]
	Height Caution Zone Overlay [7]	Same as Underlying Compatibility Zone		Same as Underlying Compatibility Zone	* Airspace review required for objects taller than 50 ft. AGL [9] * Deed notice recordations [3]

Table 2A-Primary Compatibility Criteria 2-18

f. The County adopted the *Emergency Operations Plan for Tuolumne County* in June 2012.[16] The plan provides a basis for future responses to a wide range of countywide hazards and vulnerabilities. The plan outlines the general authority, organization, and response actions for County staff when disasters occur. Tuolumne County does not have a static emergency plan or evacuation plan due to the dynamic nature of emergencies. In the event of an emergency, the Tuolumne County Sheriff Office is the responsible entity for declaring and directing evacuations in the case of emergencies. The Sherriff's Department will inform members of the public via the Everbridge Emergency Notification System, local media, and door-to-door when feasible.

In the event of an emergency, individuals would travel east of west on Ferretti Road towards State Route 120. Implementation of the proposed project would involve the construction of a new roadway that would provide internal access by way of Ferretti Road and Clements Road. Construction of the road would not result in any substantial modifications to the existing roadway system and, thus, would not physically interfere with the Emergency Plan. Furthermore, the proposed project would not include land uses or operations that could impair implementation of the plan. Therefore, the proposed project would not interfere with an emergency evacuation or response plan, and a ***less-than-significant*** impact would occur.

g. According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is located within a Very High Fire Hazard Severity Zone in a State Responsibility Area.[17] As discussed in further detail in the Wildfire Section, of this IS/MND, the proposed project has been reviewed by the Fire Prevention Division of the Tuolumne County Fire Department. Because the project would allow future development, approval of the proposed project could create a significant adverse impact on the Tuolumne County Fire Department's ability to provide service. Therefore, to reduce any potential adverse effects, the Tuolumne County Fire Prevention Division has provided several recommendations and conditions to reduce the risk of fire at the site, including the preparation of a fuel modification program and compliance with driveway construction standards, standards for residential gates, and residential identification standards found in Titles 11, 12, 15 and 16 of the Ordinance Code, which include standards set by the California Building Code and the California Fire Code. These conditions have been incorporated into the conditions of approval for Tentative Subdivision Map T20-002.

In addition, as noted in the County's General Plan EIR, the Strategic Fire Plan for the Tuolumne/Calaveras Unit provides guidance to reduce structural ignitability and decrease wildfire fie risk in the County. Furthermore, adherence to CBSC Chapter 7A, Fire Hazard Severity Zones and Building Standards and Materials, and Public Resource Code 4291, requiring property owners to maintain clearance of flammable vegetation of 100 feet from structures, would also reduce the risk of fire. Compliance with such standards would help to minimize fire risks for future residential development at the project site.

Based on the above, the proposed project would not expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, and a ***less-than-significant*** impact would occur.

16 Tuolumne County. *Emergency Operations Plan for Tuolumne County*. June 2012.

17 California Department of Forestry and Fire Protection. *California Fire Hazard Severity Zone Viewer*. Available at: https://egis.fire.ca.gov/FHSZ/. Accessed August 2020.

HYDROLOGY AND WATER QUALITY:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project:				
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 or surface runoff in a manner which would create 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?	☐	☐	☒	☐

Environmental Setting:

The project site is located within the Tuolumne River watershed. The project site includes two seasonal drainages that run through the valley, as well as a historical ditch near the southwestern site boundary. The drainage eventually flows into the Tuolumne River and Lake Don Pedro Reservoir.

The project site would be served via individual, onsite private wells and private on-site sewage disposal systems. The site is not located within a groundwater basin that is subject to the Sustainable Groundwater Management Act or subject to a Groundwater Sustainability Plan.

A Water Quality Plan was prepared for Tuolumne County in 2007 and contains a comprehensive program that addressed a wide range of water quality concerns within the county and emphasizes mechanisms for maintaining and improving surface water quality (Tuolumne County 2007). The project site is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB).

Regulatory Setting:

The Federal Water Pollution Control Act was adopted to protect the quality of surface waters of the Country and is implemented through the National Pollutant Discharge Elimination System (NPDES). In California, the NPDES is implemented through the Storm Water Permitting Unit of the State Water Resources Control Board. Pursuant to State regulations, land development projects which

disturb one acre or more must submit a Notice of Intent (NOI) to obtain coverage under the General Construction Activity Storm Water Permit. A Stormwater Pollution Prevention Plan (SWPPP) is required to be submitted with the NOI. The SWPP is required to be prepared by a qualified professional and includes Best Management Practices (BMPs) to be implemented during project construction to minimize stormwater runoff, erosion, and sediment movement.

The Federal Emergency Management Agency (FEMA) provides information on flood hazards for communities based on its Flood Insurance Rate Maps (FIRM). The project site is located with Flood Zone X, which are areas of minimal flood hazards. Chapter 15.24 of the TCOC provides regulations related to flood hazards. The purpose of Chapter 15.24 is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions ins specific areas by legally enforceable regulations applied uniformly throughout the County to all publicly and privately owned land within flood prone or flood relation erosion areas.

Chapter 13.20 of the TCOC provides guidance on management of groundwater within Tuolumne County. The purpose of Chapter 13.20 is to establish an effective county policy that will assure that the overall economy and environment of Tuolumne County are protected from the impacts of the exportation of groundwater out of the county. All wells within Tuolumne County must be constructed and maintained in accordance with Chapter 13.16 and 13.20 of the TCOC. Water would be provided to the project site via private, on-site wells.

A hydrogeologic report for the proposed project was prepared by GeoResource Management in February 2021. Additional correspondence was provided by GeoResource Management in May 2023 as additional documentation to the hydrogeologic report. Additionally, the wells logs were provided for the parcel directly north of the project site. Pursuant to Section 16.26.230 of the TCOC, Reasonable Proof of Groundwater must be provided to the Environmental Health Division prior to the approval of the Final Map. The Environmental Health Division has adopted guidelines for the Reasonable Proof of Groundwater.

Discussion:

a. During the early stages of construction activities, topsoil would be exposed due to grading and excavation of the portions of the site identified for development. After grading and prior to overlaying the ground surface with impervious surfaces, landscaping, and future residences, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality downstream.

Construction

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. The County's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project. Because the future residential development would disturb greater than one acre of land, the proposed project would be subject to the requirements of the State's General Construction

Permit, including preparation of a SWPP and submittal of a Notice of Intent (NOI). In addition, development would be required to comply with applicable provisions of the County's Grading Ordinance. For example, Section 12.20.150 requires plans be drawn to show the property limits and accurate contours of existing ground features, detailing terrain and drainage in the project area. Furthermore, Section 12.20.350 requires that faces of cut and fill slopes be prepared and maintained to control against erosion.

Based on the above, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during future construction activities.

Operation

Relative to the current project site conditions or conditions during construction, future residential development would result in an increase of impervious surfaces and exposed topsoil would be decreased. As a result, the potential for impacts to water quality resulting from exposed topsoil would be reduced. However, impervious surfaces on the project site could contribute incrementally to the degradation of downstream water quality through the release of pollutants during storm events. Typical urban pollutants that would likely be associated with future development include sediment, pesticides, oil and grease, metals, and trash. However, future residential development within the site would be require to comply with County Code Section 16.26.180, which requires a drainage study be prepared for the project and submitted to the Engineering Division of the Department of Public Works for review and approval. The drainage study would ensure that drainage structures are installed or improved as necessary to treat and convey stormwater from the site to natural drainage points.

The project site would be served via septic systems. The systems would be constructed and maintained in accordance with Title 13 of the Tuolumne County Ordinance Code, which includes appropriate sizing, location, and setbacks. Therefore, the septic systems would be constructed and maintained in a way to not impact surface or ground water.

Conclusion

Based on the above, the proposed project would not result in the violation of water quality standards and degradation of water quality during construction or operation, and a ***less-than-significant*** impact would occur.

b,e. The proposed project would utilize on site, private wells to provide water. A Hydrogeologic report was prepared by GeoResource Management in February 2021. Supplemental correspondence was provided by GeoResource Management in May 2021. The analysis below is based on these reports provided. These reports are attached as appendix B to this report.

Precipitation data for Groveland was reviewed between the years 2001 through 2022 (with the years 2013 and 2021 missing). This period included dry and drought cycles. The annual precipitation totals ranged from 19.79 inches in 2020 to 55.10 inches in 2010. The reports indicate that utilizing the average precipitation data, use of septic systems, the size of the project site, and assumptions regarding infiltration that an average of 61,938 gallons a day would infiltrate the overall site. Utilizing the lowest amount of precipitation data within this period provided an estimated 30,255 gallons per day. Even utilizing the lowest amount of

precipitation within this period, an estimated 30,255.

A Parcel Map was recently recorded for the parcel directly north of the project site. The Final Parcel Map was subject to the Reasonable Proof of Groundwater testing described above. The results of those tests are included within Appendix B of this report. The results showed adequate ground water yields and surpassed the Reasonable Proof of Groundwater requirements.

The Tuolumne Utilities District estimates that the average household uses 377 gallons of water per day, which is the amount utilized in the reports. For an allowable density of each parcel being one single family dwelling and one ADU, the total consumption of the project site at full build out is estimated to be 9,802 gallons of water per day. This consumption amount is below the expected infiltration of the site, even during a historic dry year.

Pursuant to Section 16.26.230 of the TCOC, Reasonable Proof of Groundwater must be provided to the Environmental Health Division prior to the approval of the Final Map. The Environmental Health Division has adopted guidelines for the Reasonable Proof of Groundwater. These guidelines require that a minimum of one well per four proposed lots be drilled by a licensed professional, in accordance with Title 13 of the TCOC. The wells shall be testing between June 1 and October 31, which are generally drier months. A pump test shall be performed on each of the wells and each well shall yield a minimum of four gallons per minute over a 72-hour testing period. For a 24-hour pump test, the well shall yield 11-49 gallons per minute. For a 12-hour pump test, the well shall yield 50 gallons per minute or more. Hourly readings during the test are required to show that the well does not significantly draw down. Results meeting this requirement must be provided to the Environmental Health Division by a qualified professional prior to the approval of the Final Map.

In an effort to reduce the use of groundwater in the area, the applicant is proposing that if feasible, that fewer wells be drilled to serve the future residences. If wells can be established with adequate capacity to serve two parcels rather than just one, less groundwater will be extracted for domestic use. If well capacity is 15 gallons per minute or greater, than that well will be used to serve two lots. If well capacity is not more than 15 gallons per minute, shared wells will not be feasible. This requirement will be a Condition of Approval for the project.

Based on the above, the proposed project would not substantially decrease groundwater supplies, substantially interfere with groundwater recharge, or conflict with or obstruct implementation of a water quality control plan and a ***less-than-significant*** impact would occur.

ci-ciii. Public stormwater systems are not located near the project site. Existing storm drainage features on and in the vicinity of the project site are limited to roadside ditches and culverts which conduct storm drainage across existing roadways to the natural drainage system. Because project operation would increase the amount of impervious surfaces on the project site, the potential exists for an increase in surface water runoff from the project site to occur, such that flooding on- or off-site could occur.

Per the County's Phase II MS4 permit, new development is required to reduce pollutant and runoff flows using BMPs to the maximum extent practicable. MS4 Permittees must also comply with Low Impact Development (LID) standards. Development projects are typically

required to demonstrate hydromodification management of stormwater such that post-project runoff is maintained equal to or below pre-project flow rates for the 2-year, 24-hour storm event, generally by way of infiltration, rooftop, and impervious area disconnection, bio-retention, or other LID measures that result in post-project flows that mimic pre-project conditions.

As stated above, future residential development within the site would be required to submit a drainage study to the Engineering Division of the Department of Public Works for review and approval. Drainage structures would be installed or improved as necessary to treat and convey stormwater from the site to the natural drainage points that can adequately contain the stormwater. Such specifications would ensure that the drainage study meets the County's Phase II MS4 Permit standards and that the project would not increase the rate or amount of runoff leaving the site.

Given that the proposed project would be required to comply with the County's Phase II MS4 permit to ensure that post-project runoff resulting from future residential development would remain unchanged from pre-project conditions, the proposed project would result in a ***less-than-significant*** impact.

civ. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the project site, the project site is located within an Area of Minimal Flood Hazard (Zone X).[18] The site is not classified as a Special Flood Hazard Area or otherwise located within a 100-year or 500-year floodplain. Therefore, development of the proposed project would not impede or redirect flood flows and a ***less-than-significant*** impact would result.

d. As discussed under question 'civ' above, the project site is not located within a flood hazard zone. Tsunamis are defined as sea waves created by undersea fault movement, whereas a seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir. The project area is not located in proximity to a coastline and would not be potentially affected by flooding risks associated with tsunamis. The project site is located approximately 1.5 miles from Pine Mountain Lake, which could be prone to seiches due to seismic activity. Given the distance from Pine Mountain Lake and the sloping topography of the area, the project site is not anticipated to be exposed to the impacts of seiches. Based on the above, the proposed project would not pose a risk related to the release of pollutants due to project inundation due to flooding, tsunami, or seiche, and a ***less-than-significant*** impact would occur.

18 Federal Emergency Management Agency. *Flood Insurance Rate Map 06109C1225C.* Effective April 16, 2009.

LAND USE AND PLANNING:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
a) Physically divide an established community?	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation of an agency with jurisdiction over the project (adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental Setting:

The project site consists of an 82.2± acre parcel zoned AE-37:AIR and contains the RR General Plan land use designation. The project site is currently undeveloped and vacant of any structures. Zone Change RZ20-001 proposes to rezone the site to RE-5:AIR in order to divide the parcel into 13 residential lots. Table 1.3 of the Technical Background Report of the Tuolumne County General Plan indicates that the proposed RE-5:AIR zoning is compatible with the RR General Plan land use designation.

The RR General Plan designation provides country-estate type living conditions while maintaining large areas of open space dedicated to agricultural pursuits, grazing, or left undisturbed. This designation is found in areas which have limited public services and serves as a buffer between urban and urbanizing areas and agricultural land. Typical uses allowed in the RR designation include one single family dwelling per parcel, one secondary Accessory Dwelling Unit per parcel, agricultural uses, and public facilities. The minimum parcel size under this designation is five gross acres.

Zone Change RZ20-001 proposes to rezone the project site to RE-5:AIR. Allowable uses within the RE-5 zoning district are indicated in Chapter 17.28 of the TCOC. Each parcel zoned RE-5 can be developed with one single-family dwelling and one Accessory Dwelling Unit. The purpose of the RE-5 zoning is to provide a low-density residential zoning classification offering country-estate type living conditions while maintaining large areas of open space dedicated to agricultural pursuits, grazing, or left undisturbed. The RE-5 district is intended for areas where public services are limited. The minimum parcel size within the RE-5 district is five gross acres in area and 200 feet in width at the front setback.

The purpose of the :AIR Combining zoning is:

A. To protect public health, safety and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses; and
B. To implement the policies of the Tuolumne County airport land use compatibility plan adopted January 22, 2003, as may be amended from time to time; and
C. To inform property owners and prospective purchasers of property within areas around airports of the proximity of the airport and aircraft use associated with the airport and that land development must comply with the Tuolumne County airport land use compatibility plan in addition to development regulations contained in the Tuolumne County General Plan and this code.

The project site is therefore subject to the regulations contained in the Tuolumne County Airport

Land Use Compatibility Plan. The project was reviewed by the Airport Land Use Commission on October 1, 2020, in accordance with the Compatibility Plan and :AIR zoning.

Subdivision Map applications are processed in accordance with Chapter 16.26 of the TCOC.

Discussion:

a. A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. The project site is currently undeveloped and vacant of any structures. The proposed project would not alter the existing general development trends in the area or isolate an existing land use. As such, the proposed project would not physically divide an established community and a ***less-than-significant*** impact would occur.

b. The current General Plan land use designation for the project site is RR. The proposed project would require a rezone of the site from AE-37:AIR to RE-5:AIR.

The RR General Plan designation The RR General Plan designation provides country-estate type living conditions while maintaining large areas of open space dedicated to agricultural pursuits, grazing, or left undisturbed. This designation is found in areas which have limited public services and serves as a buffer between urban and urbanizing areas and agricultural land. Typical uses allowed in the RR designation include one single family dwelling per parcel, one secondary Accessory Dwelling Unit per parcel, agricultural uses, and public facilities. The minimum parcel size under this designation is five gross acres. Each of the proposed parcels under Tentative Subdivision Map T20-002 would meet the minimum parcel size for the RR designation. Each parcel would be able to be developed with a single-family dwelling and an Accessory Dwelling Unit. Table 1.3 of the Technical Background Report of the Tuolumne General Plan indicates that the proposed RE-5:AIR zoning is compatible with the RR designation.

The following Goals, Policies and Implementation Programs of the 2018 Tuolumne County General pertain to this project.

Goal 1.A: *Protect and enhance the quality of life for all residents of Tuolumne County while facilitating growth and development to meet the present and future needs of the County's residents, visitors and businesses.*

Approval of the project would allow the development of 13 residential lots to help facilitate growth and allow for additional housing options for residents of Tuolumne County. Each lot can be developed with a single-family dwelling and ADU.

Policy 1.A.3: *Address the impacts associated with new development on cultural resources and protect such resources.*

A Cultural Resource Study was conducted for the property. Please see the "Cultural Resources" section of this report.

Policy 1.E.1 *Encourage and promote the development of housing for all income levels.*

Approval of the project would allow the development of 13 residential lots to help facilitate growth and allow for additional housing options for residents of Tuolumne County. Each lot can be developed with a single-family dwelling and ADU.

Consistency with Goals, Policies, and Implementation programs found in Chapter 9 Public Safety and Chapter 17 Natural Hazards of the General Plan are discussed is the "Hazards and Hazardous Materials" and "Wildfire" sections of this report. Consistency with Implementation programs found in Chapter 16 Natural Resources are discussed in the "Biological Resources" section of this report.

Zone Change RZ20-001 proposes to rezone the site to RE-5:AIR. Allowable uses within the RE-5 zoning district are indicated in Chapter 17.28 of the TCOC. Each parcel zoned RE-5 can be developed with one single-family dwelling and one Accessory Dwelling Unit. The purpose of the RE-5 zoning is to provide a low-density residential zoning classification offering country-estate type living conditions while maintaining large areas of open space dedicated to agricultural pursuits, grazing, or left undisturbed. These uses are compatible with other parcels in the vicinity located south and east of the project site. The RE-5 district is intended for areas where public services are limited. The project would be served via private septic systems and private wells. The minimum parcel size within the RE-5 district is five gross acres in area and 200 feet in width at the front setback. Each of the proposed parcels under Tentative Parcel Map T20-002 would meet the minimum size requirements of the RE-5 zoning.

The purpose of the :AIR Combining zoning is:

A. To protect public health, safety and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses; and
B. To implement the policies of the Tuolumne County airport land use compatibility plan adopted January 22, 2003, as may be amended from time to time; and
C. To inform property owners and prospective purchasers of property within areas around airports of the proximity of the airport and aircraft use associated with the airport and that land development must comply with the Tuolumne County airport land use compatibility plan in addition to development regulations contained in the Tuolumne County General Plan and this code.

The project site is therefore subject to the regulations contained in the Tuolumne County Airport Land Use Compatibility Plan. The project was reviewed by the Airport Land Use Commission on October 1, 2020, in accordance with the Compatibility Plan and :AIR zoning. Conditions were added by the ALUC in accordance with the regulations of the Compatibility Plan. Please see the "Hazards and Hazardous Materials" Section for additional information regarding their review and conditions that were added.

The project would also comply with Chapter 16.26 of the TCOC regarding Subdivision Maps. Section 16.26.180 of the County's Ordinance Code requires preparation of a drainage study to ensure the treatment of stormwater and to ensure that stormwater infrastructure can accommodate stormwater within the project site. In addition, the project would comply with the County's Grading Ordinance, Chapter 12.20. Furthermore, as discussed throughout this IS/MND, the proposed project would not result in any significant environmental effects that cannot be mitigated to a less-than-significant level by the mitigation measures provided herein.

As indicated above, the project would comply with the Tuolumne County General Plan and Tuolumne County Ordinance Code. Based on the above, the proposed project would not 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, and a ***less-than-significant*** impact would occur.

MINERAL RESOURCES:

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

Environmental Setting:

Tuolumne County has an extensive history as a mining community. Tuolumne County was historically mined for gold during the early 1850s. Current mining operations within Tuolumne County mine for limestone and dolomite, and various crushed rock, gravel, and sand products.

Regulatory Setting:

The California Surface Mining and Reclamation Act of 1975 (SMARA) requires classification of land in the state according to the known or inferred mineral resource potential of that land, which is provided direction under the State Geologist. The California Department of Conservation Division of Mines and Geology has developed Mineral Resource Zones (MRZ) to classify the areas where significant mineral resources occur or are likely to occur. Areas classified as MRZ-2a or MRZ-2b have been identified as having demonstrated or inferred significant mineral resources. The project site is identified as MRZ-3b for carbonate, aggregate, and precious minerals, which are minerals of undetermined significance.

The Mineral Preserve Overlay (MPZ) General Plan land use designation is used to identify land that has been classified as either Mineral Resource Zone MRZ-2a or MRZ-2b by the State Mining and Geology Board under the State Classification System and meets criteria for relationship to surrounding land uses, access, and other issues. The MPZ overlay General Plan designation is found along the Mother Lode gold ore zone, the carbonate belt from Columbia to Algerine, and the Table Mountain basalt as an aggregate source. The MPZ Overlay is used to direct the development potential towards the types of development that are compatible with possible mineral resource extraction. The MPZ (Mineral Preserve) zoning district is for the protection of lands best suited for mineral or aggregate extraction from the encroachment of incompatible uses and to preserve such land for resource production.

Discussion:

a., b. According to the United States Geological Survey, known mineral resource recovery sites have not been identified in the immediate project vicinity.[19] The project site does not contain the MPZ overlay designation or the MPZ zoning, nor do any parcels within the vicinity of the site. The site is identified as MRZ-3b for carbonate, aggregate, and precious minerals, which are minerals of undetermined significance. Additionally, the General Plan EIR determined that buildout of the planning area, including the project site, would not result in

19 Unites States Geological Survey. *Mineral Resources Online Spatial Data.* Available at https://mrdata.usgs.gov/general/map-us.html#home. Accessed August 2020.

the loss of availability of known mineral resources that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local general plan. Therefore, a ***less-than-significant*** impact to mineral resources would occur as a result of the project.

NOISE:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project Result in:				
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 groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located with the vicinity of a private airstrip or an airport land use plan or, where such 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?	☐	☐	☒	☐

Environmental Setting:

Noise (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz) (Tuolumne County 2018). In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress.

One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (L_{eq}). The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (Tuolumne County 2018). Typically, L_{eq} is summed over a one-hour period. The maximum instantaneous noise level (L_{max}) can be used to describe short noise events (e.g., construction activities, car pass-by). In addition, the community noise equivalent level (CNEL), is typically used for describing ambient noise levels and sources that generate noise over extended periods of time (e.g., roadway noise). The CNEL is a weighted noise level over a 24-hour period that applies a penalty of 5 dB during the evening hours (7:00 p.m. to 10:00 p.m.) and a 10-dB penalty during the nighttime hours (10:00 p.m. to 7:00 a.m.).

The sound pressure level is measured on a logarithmic scale with the 0-dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Decibels cannot be added arithmetically, but rather are added on a logarithmic basis. Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3-dB change in community noise levels is noticeable, while 1–2 dB changes generally are not perceived. Quiet suburban areas typically have exterior noise levels in the range of 40–50 dBA, while those along arterial streets are in the 50–60+ dBA range. Normal conversational levels are in the 60–65 dBA range and ambient noise levels greater than that can interrupt conversations (Tuolumne County 2018).

Discretionary projects are evaluated utilizing Chapter 5 of the Tuolumne County General Plan relating to Noise. The following definitions are from the Glossary of the Tuolumne County General

Plan and are used in the Noise Element of the General Plan:

- CNEL: Community Noise Equivalent Level means a 24-hour energy equivalent level derived from a variety of single-noise events, with weighing factors of approximately 4.8 and 10 decibels applied to the evening (7:00 PM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM) periods, respectively, to allow or the greater sensitivity to noise during these hours.

- Ldn: the day/night average sound level. The Ldn is the average equivalent sound level during a 24-hour day, obtained after addition of ten (10) decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

- dBA: is the "A-weighted" scale for measuring sound in decibels. It weighs or reduces the effects of low and high frequencies in order to simulate human hearing. Every increase of 10 dBA doubles the perceived loudness though the noise is actually ten times more intense.

- A-Weighted Sound Level: All sound levels referred to in this document are in A-weighted decibels. A weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A weighting, as it provides a high degree of correlation with human annoyance and health effects.

Decibel: means a unit used to express the relative intensity of a sound as it is heard by the human ear. The decibel scale expresses sound level relative to a reference sound pressure of 20 micronewtons per square meter, which is the threshold of human hearing. Sound levels in decibels (dB) are calculated on a logarithmic basis. An increase of 10 decibels represents a 10-fold increase in acoustic energy, and an increase of 20 decibels corresponds to a 100-fold increase in acoustic energy. An increase of 10 dB is usually perceived as a doubling of noise.

Equivalent Sound Level (Leq)**:** The equivalent sound level is the sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1, 8 and 24-hour sample periods.

Leq is the energy equivalent level, defined as the average sound level on the basis of sound energy (or sound pressure squared). The Leq is a "dosage" type measure and is the basis for the descriptors used in current standards, such as the 24-hour CNEL used by the State of California. The hourly Leg is measure over a 1-hour sample period.

Lmax: is the highest sound level measured over a given period of time.

The ambient noise environment in Tuolumne County is largely affected by traffic on highways and County roadways, commercial and industrial uses, agricultural uses, railroad operations, and aircraft. The most prominent sources of noise in the project vicinity are motor vehicles (e.g., automobiles, buses, trucks, and motorcycles) and industrial operations from adjacent land uses.

Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to noise sensitive uses. In general, corridors throughout Tuolumne County consist of one or two lanes in each direction with varying speed limits ranging from 35 miles per hour (mph) to 55 mph.

Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a

common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

Receptors sensitive to noise such as schools, day care facilities, hospitals, or senior nursing facilities, are not located within 0.25 mile of the project. Noise generated by the project would consist of noise associated with site construction of the roads and future single-family dwellings, which would be temporary in nature. Operational noise would consist of noise consistent with rural and residential uses.

The site is located within Compatibility zones B1 and B2 of the Pine Mountain Lake Airport. A portion of the site in is located within the 55 dB noise contour associated with the airport. This would include portions of proposed lots 5, 6,and 13. Figure 5 above in the "Hazards and Hazardous Materials" section above shows uses that are considered compatible with the various noise levels of the airport.

Table 7
MAXIMUM ALLOWABLE NOISE EXPOSURE-STATIONARY NOISE SOURCES[1]

	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB[2]	50	45
Maximum level, dB[3]	70	65

[1] This table applies to noise exposure as a result of stationary noise sources. For a development project or land use change involving a noise-sensitive land use, the noise from nearby noise sources will be considered during design and approval of the project, or in determining whether the land use change is appropriate. For development projects which may produce noise, land use changes and project review will consider the effects of the noise on possible noise-sensitive land uses. When considering modification or expansion at a site that already produces noise levels which exceed these standards at noise-sensitive land uses, the modification or expansion shall be reviewed to consider if the proposed action will further raise the existing noise levels received at the noise-sensitive land use(s).
Noise-sensitive land uses include urban residential land uses, libraries, churches, and hospitals, in addition to nursing homes or schools which have over 6 beds or students, respectively. Transient lodging establishments which are considered noise sensitive land uses include hotels, motels, or homeless shelters, but not bed and breakfast establishments located in rural areas, campgrounds, or guest ranches.
[2] The sound equivalent level as measured or modeled for a one-hour sample period. The daytime or nighttime value should not be exceeded as determined at the property line of the noise-sensitive land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
[3] Similar to the hourly L_{eq}, except this level should not be exceeded for any length of time.

Table 8
SIGNIFICANCE OF CHANGES IN CUMULATIVE NOISE EXPOSURE[1]

Ambient Noise Level Without Project[2] (Ldn or CNEL)	Significant Impact if Cumulative Level Increases By:
<60 dB	+ 5.0 dB or more
60-65 dB	+ 3.0 dB or more
>65 dB	+ 1.5 dB or more

[1]These standards shall be applied when considering the noise impacts from projects that could cause a significant increase in the cumulative noise exposure of existing noise-sensitive land uses. If it is likely that existing noise-sensitive land uses could experience these increases in cumulative noise exposure, as measured in CNEL or Ldn, then an acoustical analysis that meets the requirements of Table 6 shall be accomplished and the results considered in project design.

[2]Ambient Noise is defined as the composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
Source: Federal Interagency Committee on Noise (FICON), Federal Agency Review of Selected Airport Noise Analysis Issues, August 1992.

Discussion:

a. Some land uses are considered more sensitive to noise than others, and, thus, are referred to as sensitive noise receptors. Land uses often associated with sensitive noise receptors generally include residences, schools, libraries, hospitals and passive recreational areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise. In the vicinity of the project site, the nearest existing noise sensitive land uses include a single-family residence, located 230 feet north of the project site at its closest point to the project site boundary. The existing noise environment in the project vicinity is primarily defined by vehicle traffic on the local roadway network and air traffic from the Pine Mountain lake Airport to the west. Issues related to air traffic noise are addressed under question 'c' below.

Sound levels are presented in various ways with the standard unit of measurement being the dB. Typically, a change in three dB is considered barely perceptible, a change in five dB is considered noticeable, but not a dramatic change, and a change in 10 dB is considered a reduction by half or doubling in loudness. To correlate sound levels measured using a microphone with the manner in which humans perceive noise, an A-weighted filter is applied. The A-weighted filter de-emphasizes low-frequency and very high-frequency sounds in a similar manner as human hearing. The abbreviation dBA is used when the A-weighted sound is used.

The Tuolumne County General Plan Noise Element establishes an exterior noise level standard of 60 dB and an interior noise level standard of 45 dB as normally acceptable at residential land uses. The County's General Plan Noise Element considers the following significance criteria for noise impacts:

- Where existing noise levels are less than 60 dB day-night average sound level ($L_{dn)}$ at the outdoor activity areas of noise-sensitive uses, a 5 dB L_{dn} increase in cumulative noise levels will be considered significant;
- Where existing noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a 3 dB L_{dn} increase in cumulative noise levels will be considered significant; and
- Where existing noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise sensitive uses, a 1.5 dB L_{dn} increase in cumulative noise levels will be considered significant.

Operational Noise

The noise environment surrounding the project site is primarily influenced by vehicle traffic traveling along Ferretti Road and Clements Road to the west.

As discussed in Section XVII, Transportation, of this IS/MND, the proposed project would generate approximately 362 average daily vehicle trips. Generally, a doubling in traffic volumes is required to increase traffic noise levels by 3.0 dB, which is considered to be the threshold for a significant increase per the Federal Interagency Committee on Noise

(FICON). The proposed project would not double traffic volumes on local roadways and, thus, would not substantially increase traffic noise in the project vicinity.

The primary on-site stationary noise source from operation of the proposed project would be heating, ventilation, and air conditioning (HVAC) equipment. The nearest existing use that would be exposed to HVAC noise would be the existing residence located approximately 230 feet north of the project site at its closest point to the project site boundary. Standard construction practices for residential developments typically result in an exterior to interior noise reduction of 25 dB. In combination with the distance from the site, such reductions would limit noise levels associated with any HVAC equipment. Therefore, the proposed project would not result in a substantial increase in noise levels related to HVAC equipment.

Based on the above, the proposed project would not generate a 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.

Construction Noise

During construction of the proposed project, heavy-duty equipment would be used for grading, excavation, paving, and building construction, which would result in temporary noise level increases. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. Standard construction equipment, such as backhoes, dozers, and dump trucks would likely be used on-site.

Table 9 below shows the predicted construction noise levels for development of the proposed project. Based on the table, activities involved in typical construction would generate maximum noise levels up to 90 dB at a distance of 50 feet.

Table 9
Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Pneumatic Tools	85

Source: Federal Highway Administration, Roadway Construction Noise Model User's Guide, January 2006.

As distance increases between equipment, or increases separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of combining separate noise sources. The noise levels from a source will decrease at a rate of approximately 6 dB per every doubling of distance from the noise source. The nearest sensitive receptors to the project site would be the existing residence, located approximately 230 feet north of the project site at its closest point to the project site boundary. There are

other single-family residences located along Clements Road and Beaver Court that are within 500 feet of the project site. Because the nearest residence is 230 feet from the project site, noise levels would decrease by approximately 16 dB from the levels shown in Table 9 above in this report, resulting in a maximum noise level of 76 dB. Although construction activities could exceed the County's noise level standard of 60 dB, construction activities would be temporary in nature and are anticipated to occur during normal daytime hours, between 7:00 AM and 7:00 PM Monday through Saturday, as required by Mitigation Measure XIII below.

Although construction activities are temporary in nature and would occur during normal daytime working hours, construction-related noise could exceed the County's noise level standards at the single-family residence. In addition, because the exact type of construction equipment is not known at this time, the potential exists for equipment to be louder than the levels presented in Table 9 above in this report. Therefore, impacts resulting from the 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 during construction could be potentially significant.

Conclusion

Based on the above, operation of the proposed project would not result in the generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the County's General Plan. However, considering the potential for construction activities to result in temporary increases, a ***potentially significant*** impact could occur. Implementation of the mitigation measure below would reduce impacts to a ***less-than-significant*** level.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

XIII-1 Prior to approval of a grading permit, and subject to the review and approval of the Engineering Division of the Department of Public Works and Land Use and Natural Resources Division of the Community Development Department, construction plans shall require a notation limiting construction activities to the following:

- *Construction activities shall be restricted to the hours between 7:00 AM and 7:00 PM Monday through Saturday.*
- *Construction activities shall be prohibited on Sundays and County holidays.*
- *All noise-producing project equipment and vehicles using internal combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.*
- *All mobile or fixed noise-producing equipment used in the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity and must be located as far as is feasible from sensitive receptors.*
- *Sound attenuation devices shall be required on construction vehicles and equipment.*

b. Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surfaces. As with noise, vibration consists of an amplitude and frequency. A person's perception of the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration is measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 10 below, which was developed by the California Department of Transportation (Caltrans), shows the vibration levels that would normally be required to result in damage to structures. As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

Table 10
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and paving occur. Table 11 below shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. Use of vibratory compactors/rollers could be required during construction of the proposed project. The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration. Although noise and vibration associated with the construction phases of the project would add to the noise and vibration environment in the immediate project vicinity, construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. Specifically, per Mitigation Measure XIII-1, construction activities would only occur between 7:00 AM and 7:00 PM Monday through Saturday.

Potential operation of vibratory compactors/rollers used for construction of the proposed access road for internal project circulation would operate at a distance of at least 300 feet or further from the nearest existing structure. Thus, per the vibration levels shown in Table 11 below, groundborne vibrations would be below the 0.10 in/sec PPV threshold established by Caltrans for annoyance to sensitive receptors.

Table 11 Vibration Levels for Various Construction Equipment		
Type of Equipment	**PPV at 25 feet (in/sec)**	**PPV at 50 feet (in/sec)**
Large Bulldozer	0.089	0.031
Loaded Trucks	0.076	0.027
Small Bulldozer	0.003	0.001
Auger/drill Rigs	0.089	0.031
Jackhammer	0.035	0.012
Vibratory Hammer	0.070	0.025
Vibratory Compactor/roller	0.210 (less than 0.20 at 26 feet)	0.074
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006.		

Based on the above, the proposed project would not expose people to or generate excessive groundborne vibration or groundborne noise levels, and a ***less-than-significant*** impact would occur.

c. The project site is located adjacent to the Pine Mountain Lake Airport, and therefore, within the airport influence area boundaries identified by the Tuolumne County Airport Land Use Compatibility Plan.[20] The site is located within Compatibility zones B1 and B2 of the Pine Mountain Lake Airport. A portion of the site in is located within the 55 dB noise contour associated with the airport. This would include portions of proposed lots 5, 6,and 13. Figure 5 above in the "Hazards and Hazards Materials" section of this report shows uses that are considered compatible with the various noise levels of the airport. Noise levels within the 55-60dB range are considered marginally acceptable for residential uses. Pursuant to Figure 5 above, the noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed).

The project was reviewed by the Tuolumne County Airport Land Use Commission on October 1, 2020. Conditions were provided by the ALUC to ensure compliance with the Airport Land Use Compatibility Plan. These have been incorporated into the conditions of approval for Tentative Parcel Map T20-002. Specifically, the conditions below address noise and the proximity of the airport to future buyers of the lots:

> A deed restriction shall be recorded for each parcel to acknowledge the proximity of the Pine Mountain Lake Airport and the requirement to comply with the Tuolumne County Airport Land Use Compatibility Plan. The restrictions shall include information that parcels with higher elevations may have height limits imposed on future structures. This would trigger additional review by the ALUC.
>
> All building permits for proposed parcels 5, 6, and 13 located within Compatibility Zone B1 will be subject to review by the Tuolumne County Airport Land Use Commission prior to issuance of a Building Permit. Noise attenuation measures will be required for construction of single-family dwellings within these parcels. This information shall be included within the deed restriction or on the Final Map.

Therefore, with the incorporation of the above conditions and review of future development under the Airport Land Use Compatibility Plan, the proposed project would not expose people residing or working the project area to excessive noise levels associated with airports, and a ***less-than-significant*** impact would occur.

20 Tuolumne County. *Tuolumne County Airport Land Use Compatibility Plan* [pg. 5-1]. Adopted January 22, 2003.

POPULATION AND HOUSING:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
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?	☐	☐	☒	☐

The population in Tuolumne County in 2018 was at 55,365 for the entire County including the City of Sonora. Between 2010 and 2018 Tuolumne County's growth rate was less than 1% and was negative for some years, as indicated in Figure 5 in the Housing Element found in the Technical Background Report of the 2018 General Plan. The projected population for Tuolumne County in 2024, including the City of Sonora, is estimated at 54,390, which is a decrease from its current population.

The proposed project includes a Zone Change to the RE-5:AIR zoning district, consistent with the existing General Plan designation RR and a Tentative Subdivision Map to divide the 82.2-acre site into 13 residential lots. Each parcel zoned RE-5 could potentially be developed with a single-family dwelling and Accessory Dwelling Unit. The project proponent would sell the individual lots before they are developed with residential uses. The project site is currently vacant.

Discussion:

a, b. The proposed project would subdivide the 82.2-acre site into 13 single-family residential lots. The project would require a rezone to change the site's zoning designation from AE-37:AIR to RE-5:AIR. The estimated average household size within the County is approximately 2.24 persons per household.[21] Thus, the proposed project could lead to an increase in the population growth of approximately 58 people. The Department of Finance estimates the 2024 population of Tuolumne County to be approximately 54,390. The increase in population resulting from the project would constitute an approximately 0.11 percent increase in the County's population. A 0.11 percent increase in population would not be considered substantial growth. Furthermore, as discussed in Section XVII, Utilities and Service Systems, of this IS/MND, the project would not require substantial expansion of off-site utilities or other infrastructure to serve the site.

In addition, the project site is currently undeveloped. Therefore, construction activities associated with the proposed project would not displace existing people or housing. The project would allow up to 13 single family dwellings and 13 Accessory Dwelling Units within the 82.2-acre site.

Based on the above, implementation of the proposed project would not result in substantial unplanned population growth or the displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Thus, the proposed project would have a ***less-than-significant*** impact.

21 California Department of Finance. *E-5 City/County Population and Housing Estimates.* Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/. January 1, 2020.

PUBLIC SERVICES:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of these public services:				
Fire Protection?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other Public Facilities?	☐	☐	☒	☐

Environmental Setting:

Fire Protection

Fire and emergency response is provided to this site by the County of Tuolumne, with support from regional partners including Groveland Community Services District (GCSD). The GCSD provides mutual aid to the Tuolumne County Fire Department, CAL FIRE and the USFS under its CAL FIRE Schedule A contract, including mutual aid as needed from the CAL FIRE Groveland Station when staffed during the summer fire season and under the Amador Plan Agreement.

The Groveland Fire Station is staffed on a full-time basis. The Schedule A contract provides for five (5) fire fighters total that rotate; one (1) captain and four (4) engineers. When the State declares the official end to a fire season, funding is paused for the CAL FIRE Schedule B station located on Merrell Rd. Prior to the 2020/21 fiscal year, the District funded the staffing of two (2) fire fighters at this station through its Amador Plan contract. The financial obligation for the cost of the Amador Plan contract was assumed by the County of Tuolumne effective July 1, 2020.

The GCSD Fire Department currently provides fire protection services and emergency response to a population of approximately 4,500 in the winter months to about 9,000 on holiday weekends in the summer. The GCSD provides Mutual Aid to the Tuolumne County Fire Department, CAL FIRE and the USFS. There are two fire stations within the District. The GCSD Station # 78 houses two Type-1 engines and one Type-3 engine, while the CAL FIRE Groveland Station houses two Type-3 engines

Police Protection

Law enforcement services in the unincorporated portion of Tuolumne County are provided by the Tuolumne County Sherriff's office. The nearest station to the project site is located at 28 Lower Sunset Drive in Sonora.

Response times for the entire county averages between 5 minutes to 35 minutes depending on day of the week, time, and the location of the incident. An average of six deputies patrols the county at any given time. Dispatch prioritizes calls based on the significance and priority of the call.

The California Highway Patrol (CHP) provides additional enforcement along State Highways and County roadways. The CHP offers other services as needed to support the safety of county residents of the. The nearest CHP office to the project site is located at 18437 Fifth Avenue in Jamestown.

Schools

The project site is within the Big Oak Flat Groveland Unified School District. The nearest school to the site is Tioga High School located approximately 3.5± miles west of the site. Tioga High School serves grades 9th through 12th. Tenaya Elementary School is located approximately 6.0± miles southwest of the project site. Tenaya Elementary serves Kindergarten through 8th grade. Both are public schools.

Parks

Tuolumne County has a variety of recreational opportunities for the public, including Yosemite National Park, Stanislaus National Forest, State parks, and other Federal and State government agencies such as the U.S. Bureau of Reclamation and the Bureau of Land Management. Community based recreation and park districts include the Tuolumne County Recreation Department and the City of Sonora Recreation Department. Tuolumne County operates and maintains approximately 341± acres of parks.

The nearest public recreational facility to the project site includes Mary Laveroni Community Park. The park is approximately 2.3 acres in size and includes a child playground, grass field, picnic areas, and a skate park. Parcels directly adjacent to the project site and within the vicinity are open public lands under the jurisdiction of the USFS.

Discussion:

a. Fire protection services are currently provided to the site by the Tuolumne County Fire Department (TCFD), which is a cooperative fire department with the California Department of Forestry and Fire Protection (CAL FIRE). The General Plan EIR determined that new development associated with the General Plan would be serviced by existing fire stations and would not compromise TCFD response times. Given that the General Plan currently designates the project site for buildout with residential uses, the proposed project would not require extension of fire protection services to an area that has not already been anticipated for service per the County and CAL FIRE. Therefore, construction of a new fire station would not be triggered by the project.

Additionally, the proposed project has been reviewed by the Fire Prevention Division of the TCFD. In order to ensure that that the TCFD can adequately service the project site, the TCFD has provided several recommendations and conditions to reduce the risk of fire, including the preparation of a fuel modification plan, driveway construction standards, residential gates, and residential identification found in Titles 11, 12, 15, and 16 of the Ordinance Code, which include standards set by the California Building Code and the California Fire Code. In addition, the required fire flow would be required to be on-site, tested, and approved by the TCFD prior to approval of the final subdivision map. These conditions have been incorporated into the conditions of approval for Tentative Subdivision Map T20-002. Application and enforcement of the above-mentioned code requirements and conditions of approval would ensure that the project would not require the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts. Therefore, the proposed project would result in a ***less-than-significant*** impact.

Groveland Community Services District provided an advisory response for the project. The response identifies the potential expected responsibility of GCSD fire services to respond to calls at the project location. Additionally, the comment letter indicated connection to GCSD's water system as the project is adjacent to existing connections and located within the Sphere of Influence. Furthermore, the letter suggests that newly created parcels be served via by a system of fire hydrants thus emphasizing the need for connection to public water.

As discussed within the Utilities and Services System section of this report, water would be provided via on-site private wells and sewer services would be provided via a private on-site sewage disposal system. Based on the General Plan and Zoning designations, connection to public water and public sewer would not be required for the current project even though the project falls within the Sphere of Influence of Groveland Community Services District. The County General Plan and ordinance code do not require a project with the proposed parcel sizes to connect to public water or sewer.

Tuolumne County and GCSD have a signed Cooperative Fire Protection Agreements, and therefore fire protection will be provided via the CALFIRE and Tuolumne County Fire Department Cooperative Agreement. Should an emergency arise, fire protection is ensured under these two agreements. The project is not required to receive fire protection services from GCSD since they are not located within their district. Fire protection will be provided to the site as it currently receives services under either agreement, and annexation is not required to the site to receive fire protection response.

b. Law enforcement services are provided to the unincorporated area of Tuolumne County by the Tuolumne County Sheriff's Department (TCSD). The single TCSD station is located approximately 30 miles northwest of the project site at 28 Lower Sunset Drive in the City of Sonora. Currently, 135 deputies provide law enforcement services to 54,337 residents in the County. The TCSD has indicated that similar projects in the past would not in and of themselves create a significant adverse impact on the department and the ability to provide services; however, the cumulative impact of the proposed project in combination with other projects throughout the County could create a significant adverse impact. The potential impact on the TCSD would be mitigated through the payment of the County Services Impact Mitigation Fee at the time of improvement of each lot. Furthermore, given that the site has been anticipated for development, the proposed project would not require the extension of service to a new area that was not already anticipated for development in the County's General Plan. Therefore, given that the project would be subject to the payment of the County's Service Impact Fee and that the site has been anticipated for development, the proposed project would not require the provision of new or physically altered law enforcement facilities, the construction which could cause significant environmental impacts. Therefore, the proposed project would result in a ***less-than-significant*** impact.

c-e. Future residential development would result in a population of 58 people, which could generate new students in the area. Funding for new school construction is provided through State and local revenue sources. Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) governs the amount of fees that can be levied against new development. Payment of fees authorized by the statute is deemed "full and complete mitigation." Thus, with payment of required school impact fees levied by the Tuolumne County Superintendent of Schools (TCSOS), the project would not result in new significant impacts to schools.

Future residential development within the project site could result in an increase for other public services such as library and County services. However, development would be subject to the provision and payment of the County Services Impact Mitigation Fee. The payment of the applicable fees would ensure that all service-providing functions of County government agencies are adequate.

Based on the above, the proposed project would have a ***less-than-significant*** impact related to the need for new or physically altered schools, parks, or other public facilities, the construction of which could cause significant environmental impacts.

RECREATION:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
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) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental Setting:

Tuolumne County has a variety of recreational opportunities for the public, including Yosemite National Park, Stanislaus National Forest, State parks, and other Federal and State government agencies such as the U.S. Bureau of Reclamation and the Bureau of Land Management. Community based recreation and park districts include the Tuolumne County Recreation Department and the City of Sonora Recreation Department. Tuolumne County operates and maintains approximately 341± acres of parks.

The nearest public recreational facility to the project site includes Mary Laveroni Community Park. The park is approximately 2.3 acres in size and includes a child playground, grass field, picnic areas, and a skate park.

Discussion:

a, b. Mary Laveroni Community Park is located in Groveland, approximately 3.5 miles from the project site. The park is approximately 2.3 acres in size and includes a child playground, grass field, picnic areas, and a skate park. Given the distance between the park and the project site, future project residents would not be likely to increase the use of the park such that substantial physical degradation of the park facilities would occur. Furthermore, Implementation Program 8.D.b. of the Tuolumne County General Plan requires new residential development of five units or more to participate in the provision of recreational facilities for residents.

Section 16.26.120 of the Tuolumne County Ordinance Code states the following:

> The Board of Supervisors will require either the dedication of land or the payment of fees in lieu of such dedication, or a combination of any of the above, for the purpose of providing park and recreational facilities to serve future residents of the subdivision.

Because recreational facilities are not included as part of the proposed project, the project applicant would be required to pay an in-lieu park fee in accordance with Section 16.26.120 of the Tuolumne County Ordinance Code. The in-lieu park fee is due prior to approval of the Final Map. Section 16.26.120(F) of the Ordinance Code states that all park and recreation fees collected shall be placed in a special fund independent of the general fund and expended only for park and recreation acquisition and development. In addition, any fees collected shall be committed within five years after the payment of such fees or the issuance of building permits on one-half the lots created by a subdivision, whichever occurs first.

The in-lieu park fee is based on the following formula:

Number of units X 0.01 X average assessed market price

= 26 units X 0.01 X $7,500 (estimated) = $1,950

Based on the above, with payment of in-lieu park fees prior to the recording of the Final Map, the proposed project would have a ***less-than-significant*** impact on recreation facilities.

TRANSPORTATION:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/:				
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?	☐	☐	☒	☐

Environmental Setting:

Lots 1 through 5 would be accessed via individual driveways on Ferretti Road and Clements Road, while Lots 6 through 13 would be accessed by a new internal roadway and a common driveway. The new access road would connect from the eastern portion of Ferretti Road to Clements Road via the existing road easement in the northwestern corner of the site.

Public transit is provided by Tuolumne County Transit. Services are available in the mornings, afternoons, and evenings and are available five days a week. Tuolumne County also has a “dial-a-ride” program available on demand for the route serving the area. There are no sidewalks or bike lanes in the project vicinity.

Goals, policies, and implementation programs regarding Tuolumne County’s circulation system, including transit, roadway, bicycle, and pedestrian facilities, are contained within the Transportation Element in Chapter 4 of the 2018 General Plan. The Regional Transportation Plan (RTP), adopted by the Tuolumne County Transportation Council (TCTC), acts as the planning document to guide transit investments within Tuolumne County for the next 5 years. In addition, the project has been reviewed for consistency with applicable road standards found in Titles 11 and 15 of the Tuolumne County Ordinance Code and the California Fire Code.

Vehicle Miles Traveled

On August 4, 2020, the Board of Supervisors adopted CEQA thresholds regarding vehicle miles traveled (VMT) as required by Senate Bill (SB) 743. As stated in the legislation, upon adoption of the new guidelines, “automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any.”

The Board of Supervisors adopted screening criteria for projects- if a project meets any of the screening criteria, the project’s impacts on VMT would be less than significant. Included in this screening criteria is residential projects located within a low VMT area defined by Tuolumne County Transportation Council VMT maps.

In addition to analyzing a project’s VMT generation, the County also analyzes projects based on vehicle trips per day or Level of Service, as required in the Tuolumne County General Plan. A site-specific traffic study is required when traffic generation for a project exceeds 500 vehicle trips per day or 50 trips during peak hours as indicated in the *Tuolumne County General Plan and Regional Transportation Plan Evaluation and Analysis*. A Traffic Study was not required for the proposed project as it did not exceed these thresholds.

Discussion:

a. The proposed project would subdivide the 82.2-acre site into 13 residential lots to be developed with up to 13 single-family residences and 13 ADUs. This IS/MND conservatively assumes buildout of the site would include approximately 26 single-family residences. The introduction of 26 residences to the project site would generate traffic on local roadways.

The law has changed with respect to how transportation-related impacts may be addressed under CEQA. Traditionally, lead agencies used level of service (LOS) to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures typically took the form of capacity-increasing improvements, which often had their own environmental impacts (e.g., to biological resources). Depending on circumstances, and an agency's tolerance for congestion (e.g., as reflected in its general plan), LOS D, E, or F often represented significant environmental effects. In 2013, however, the Legislature passed legislation with the intention of ultimately doing away with LOS in most instances as a basis for environmental analysis under CEQA. Enacted as part of Senate Bill 743 (2013), Public Resources Code Section 21099, subdivision (b)(1), directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled (VMT) per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section."

Subdivision (b)(2) of Section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion *shall not be considered a significant impact on the environment* pursuant to [CEQA], except in locations specifically identified in the guidelines, if any." (Italics added.)

Pursuant to Senate Bill 743, the Natural Resources Agency promulgated CEQA Guidelines Section 15064.3 in late 2018. It became effective in early 2019. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."[22]

Please refer to Question 'b' for a discussion of VMT.

Transit, Bicycle, and Pedestrian Facilities

Tuolumne County is served by Tuolumne County Transit, which includes a Monday through Friday fixed route service, dial-a-ride service, and a seasonal SkiBUS service to certain destinations. Tuolumne

22 Subdivision (b)(2) of Section 15064.3 ("transportation projects") provides that "[t]ransportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

County Transit also provides trips to the Yosemite Area Regional Transportation System (YARTS). Given that residents of the project would have access to public transportation and implementation of the proposed project would not conflict with any transit systems, a less-than-significant impact would occur.

Due to the sloping terrain and rural nature of Tuolumne County, bicycle and pedestrian facilities are fairly limited in the area. Sidewalks and bicycle paths exist intermittently along business fronts and more developed areas of the County. Existing bicycle and pedestrian facilities are not located in the project vicinity. As such, the proposed project would not conflict with any bicycle or pedestrian facilities, and a less-than-significant impact would occur.

Additionally, in accordance with Chapter 3.54, development of single-family dwellings would require payment of the applicable Traffic Impact Mitigation Fee. This fee would be reviewed and collected at the time of building permit for each dwelling.

Based on the above, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, bicycle, and pedestrian facilities, and a ***less-than-significant*** impact would occur.

b. Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts, including impacts based on VMT beginning July 1, 2020. Per Section 15064.3, analysis of vehicle miles traveled (VMT) attributable to a project is the most appropriate measure of transportation impacts. A qualitative discussion of impacts based on VMT has been provided below in compliance with the most recent CEQA Guidelines.

Per Section 15064.3(3), a lead agency may also analyze a project's VMT qualitatively based on the availability of transit, proximity to destinations, etc. While changes to driving conditions that increase intersection delay are an important consideration for traffic operations and management, the method of analysis does not fully describe environmental effects associated with fuel consumption, emissions, and public health. Section 15064.3(3) changes the focus of transportation impact analysis in CEQA from measuring impact to drivers to measuring the impact of driving. Future residents of the project site would have access to the Tuolumne County Transit Dial-A-Ride service. The Dial-A-Ride service offers origin to destination service through prior reservation. The Dial-A-Ride service would allow residents to use public transportation and could act to reduce VMT. In addition, the project site is located 3.5 miles from the downtown area of the community of Groveland, which includes commercial development and could offer employment opportunities to residents. Thus, the proximity of the project site to commercial uses and employment opportunities would act to reduce VMT associated with project operations.

Tuolumne County has adopted local thresholds of significance for VMT. For residential projects in this area, the VMT threshold is 32.90 per capita. The County has a VMT screening tool to determine a project's significance that was created by Wood Rogers, Inc, . The project is proposing a subdivision of an 82.2-acre site into 13 lots, ranging in size from 5.0 acres to 10.07 acres. Each lot would allow for development of one residence and, pursuant to Government Code Section 65852.2, an accessory dwelling unit (ADU). There potentially could be 38 single family dwelling residential units on 82.2 acres of land considering that only 19 units would be potential ADU's. The VMT tool was run with this information, and returned a less than significant determination. This project has been determined to not exceed the County of Tuolumne established VMT threshold of 32.90 VMT per capita for residential projects. Based on the above, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and a ***less-than-significant*** impact would occur.

c,d. The proposed project would include construction of a new internal roadway that would be constructed to connect with Tuolumne Road to the Ferretti Road and provide primary access for the project site. Lots 1 through 5 would be accessed by way of Ferretti Road and Clements Road, while Lots 6 through 13 would be accessed by a new internal roadway and a common driveway. All roadway improvements

would be required to comply with applicable county engineering standards for roadway design, thereby ensuring that the improvements do not result in the creation of hazardous design features. Road plans would be reviewed by the Engineering Division of the Department of Public Works and Fire Prevention Division to ensure compliance with applicable code. Based on such, adequate access would be provided to the project site.

Construction traffic associated with the proposed project would include heavy-duty vehicles which would share the area roadways with normal vehicle traffic, as well as transport of construction materials, and daily construction employee trips to and from the site. However, such heavy-duty truck traffic would only occur throughout the duration of construction activities and would cease upon buildout of the proposed subdivision. It should be noted that construction equipment associated with the proposed project would be staged on-site to prevent traffic conflicts on Ferretti Road. Given that increased construction traffic would be temporary in nature, construction traffic on local roadways would not result in significant hazards to the circulation system or restrict emergency vehicle access to the project site.

Based on the above, the proposed project would not substantially increase hazards due to design features or incompatible uses, and emergency access to the site would be adequate. Therefore, the project would result in a ***less-than-significant*** impact.

TRIBAL CULTURAL RESOURCES:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant with Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or pursuant to Section 15064.5?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. 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.	☐	☒	☐	☐

Environmental Setting:

The project site is located within the Groveland USGS Quadrangle, approximately 6 miles east of the townsite of Groveland. The area including the project site was historically occupied by the Central Sierra Miwok. An influx of miners came to the area starting in 1849. The townsite of Groveland was first established in 1848. Cattle ranching then became the town's economic foundation. Construction of the Hetch Hetchy dam began in 1915 and ended by 1925, with Groveland being the headquarters for the construction project. The project site was historically used for farming and ranching.

A cultural study was prepared by Peak and Associates, Inc. in July 2020. The study includes a pedestrian survey of the 82.2-acre site, search of previous literature and studies, and correspondence with Tribes. The pedestrian survey of the site was conducted on June 20 and 21, 2020. Previous studies and surveys have been conducted on the site.

Regulatory Setting:

State and Federal legislation requires the protection of historical and cultural resources. In 1971, the President's Executive Order No. 11593 required that all Federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places.

In 1980, the Governor's Executive Order No. B-64-80 required that State agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places."

Regulatory Setting:

CEQA requires lead agencies to consider whether projects will affect tribal cultural resources. PRC 21074 states the following:

a) "Tribal cultural resources" are either of the following:
   1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

A) Included or determined to be eligible for inclusion in the CRHR.
B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resources Code (PRC) regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts to "tribal cultural resources" separately from archaeological resources (PRC §21074; 21083.09). The Bill defines "tribal cultural resources" in a new section of the PRC §21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC §21080.3.1, 21080.3.2, 21082.3).

To date, two tribal entities have contacted the Tuolumne County Community Development Department to request formal consultation under the AB 52 process. The Chicken Ranch Rancheria of Me-Wuk Indians and Tuolumne Band of Me-Wuk Indians have requested formal consultation under the AB 52 process for projects subject to CEQA. AB 52 consultation letters were sent to the Tuolumne Band of Me-Wuk and Chicken Ranch Rancheria Tribes on July 19, 2022. Neither tribe provided comments nor requested consultation.

Since the project initially included an application for a General Plan Amendment, consultation letters were sent in accordance with SB 18. The Native American Heritage Commission provided a list of two Tribes to include for consultation; the Tuolumne Band of Me-Wuk and Chicken Ranch Rancheria Tribes. The SB 18 consultation letters were mailed on August 26, 2020 to both Tribes. No response or request for consultation was received.

The August 2020 response from the NAHC indicated that the Sacred Lands File check conducted through the Native American Heritage Commission was positive. The NAHC recommended contacting the Tribes for any additional information. This outreach was completed in 2020 and no responses were received.

Discussion:

a., b. As noted in Section V, Cultural Resources, of this IS/MND, the Cultural Resources Assessment prepared for the proposed project include records search of the CHRIS by the Central California Information Center (CCIC). According to the Cultural Resources Report, the project site does not include any significant tribal cultural resources. While the site contains a documented surface finding (P-55-4195) consisting of small chert, jasper, and obsidian flakes, the Cultural Resources Assessment that P-55-4195 is not eligible for listing in the NRHP or the CRHR.

In compliance with AB 52 (Public Resources Code Section 21080.3.1) and Senate Bill 18 (SB 18), Tuolumne County distributed project notification letters to the Chicken Ranch Rancheria of Me-Wuk Indians. The AB 52 letters were distributed on August 14, 2020 and the SB 18 letters were distributed on August 26, 2020. Requests for consultation have not been received to date.

Based on the results of the site survey performed by Peak & Associates, Inc., the project site does not contain known tribal cultural resources. Nevertheless, the possibility exists that construction of the proposed project could result in a substantial adverse change in the significance of a tribal cultural resource if previously unknown resources are uncovered during grading or other ground-disturbing activities. Thus, a ***potentially significant*** impact to tribal cultural resources could occur. Implementation of the mitigation measures below from the "Cultural Resources" section of this report would result in a ***less-than-significant*** impact.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

XVII-1 Implement Mitigation Measures V-2 and V-3 from the Cultural Resources Section.

UTILITIES AND SERVICE SYSTEMS:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Would the Proposed Project/Action:				
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 statues and regulations related to solid waste?	☐	☐	☒	☐

Environmental Setting:

Water would be provided via on-site private wells and sewer services would be provided via a private on-site sewage disposal system. Based on the General Plan and Zoning designations, connection to public water and public sewer would not be required for the current project. Wells and septic systems are permitted by the Environmental Health Division, and must be constructed and maintained in accordance with Title 13 of the TCOC. Individual wells and septic systems are not required to be permitted through the State.

Pacific Gas and Electric (PG&E) provides electric service to the project site. There is no natural gas consumption in Tuolumne County. There are existing telecommunications facilities that serve the area. Potential wireless internet providers include Xfinity, AT&T, Conifer Communications, Hughes Net and Cal.net. Cellular providers include Verizon and AT&T.

Cal Sierra Disposal Inc, which is owned by Waste Management, is responsible for garbage and recycling collection in the Sonora area and would provide weekly trash service to the site. Chapter 8.05 of the Tuolumne County Ordinance Code contains the County's regulations for refuse, rubbish, and recycling handling and storage. All of the solid waste generated within the County is processed at one of the transfer stations where solid waste is sorted to remove recyclables and hazardous materials from the waste stream. Residual waste is transported to the Highway 59 Landfill located in Merced. The maximum capacity of the Highway 59 Landfill is 30,012,352 cubic yards.

Cal Sierra Disposal operates a buy-back center at 14959 Camage Avenue, in East Sonora. Untreated wood and yard waste are presently accepted by Cal Sierra Disposal at its Earth Resources Facility located at 14909 Camage Avenue. Such material is accepted for a fee and is ground up or chipped and sold as compost or any other uses deemed appropriate for such material.

Discussion:

a,c. Electricity and telecommunications would be provided by way of new connections to existing infrastructure in the immediate project area. Wastewater from residential development within the project site would be managed by individual septic systems; thus, sewer service would not be required. Brief discussions of the water, wastewater, stormwater drainage, electrical, and telecommunications facilities

that would serve the proposed project are included below. Tuolumne County does not have natural gas consumption.

Stormwater

As discussed in Section X, Hydrology and Water Quality, of this IS/MND, future on-site residential development which could increase the amount of impervious surfaces within the project site. As noted in Section X, Hydrology and Water Quality, of this IS/MND, future residential development within the site would be required to submit a drainage study to the Engineering Division of the Department of Public Works for review and approval. The drainage study would be required to meet the County's Phase II MS4 Permit standards and ensure that the rate or amount of runoff leaving the site does not increase. Given that future residential development within the project site would be required to comply with relevant County and State regulations, the proposed project would result in a less-than-significant impact related to storm water drainage.

Wastewater

The project would be served via private septic systems. Pursuant to the purpose of the RE-5 zoning contained in Section 17.28.010 of the TCOC, Chapter 3 "Utilities" of the General Plan, and Chapter 13.08 of the TCOC, the project site is not required to connect to public sewer. Therefore, sewer infrastructure would not need to be expanded to serve the site.

Tuolumne County Ordinance Code Chapter 13.04 requires the applicant, prior to approval of the Final Map prove that safe, long-term sewage treatment and disposal for a single-family dwelling is possible, using a standard or special-design septic tank and leach field system. The Tuolumne County Environmental Health Division would be required to review and approve the septic report and percolation test results provided from the applicant identifying that safe, long-term sewage treatment and disposal for single-family residential is possible for the lots within the project site. Site and soil information is required for each individual parcel and would be required prior to the approval of the Final Map. Future construction and maintenance of the septic systems are required to comply with Chapters 13.04 and 13.08 of the TCOC, and applicable State Codes. Compliance with Chapter 13.04 and 13.08 of the Tuolumne County Ordinance Code and applicable State Codes would result in a less-than-significant impact to wastewater systems.

Other Utilities

Electrical and natural gas utilities would be provided by PG&E by way of connections to existing infrastructure located within the immediate project vicinity. Telecommunications utilities would be provided by way of connections to existing infrastructure located within the immediate project vicinity. The proposed project would not require major upgrades to, or extension of, existing infrastructure. Thus, impacts to electricity and telecommunications infrastructure would be less than significant.

Conclusion

Based on the above, the proposed project would result in a ***less-than-significant*** impact related to the relocation or construction of new or expanded wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications infrastructure, the construction or relocation of which could cause significant environmental effects.

b. The project would be served via private, on-site wells for water. As discussed in the "Hydrology and Water Quality" Section above, under items b and e, the hydrological report showed that even utilizing the lowest precipitation amounts, there would be sufficient groundwater recharge to provide water for the residential uses. The full hydrological report and supplemental documentation has been provided as

appendix B of this report. There, there would be a ***less-than-significant*** impact***.***

d,e. Solid waste in Tuolumne County is collected by three solid waste providers: Cal Sierra Disposal; Burns Refuse Service; and Moore Bros. Scavenger Co. Solid waste is disposed of at the Highway 59 Landfill in Merced, California. The Highway 59 Landfill has a maximum permitted throughput of 1,500 tons per day and receives approximately 677.6 tons per day, six days per week.[23] The Merced County Regional Waste Management Authority estimates that the Highway 59 landfill will have remaining capacity until at least 2080. Therefore, the buildout of the proposed project would not 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 and would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, a ***less-than-significant*** impact related to solid waste would occur as a result of the proposed project.

23 Tuolumne County. *Tuolumne County General Plan Update Draft EIR* [pg. 4.16-18]. December 2015.

WILDFIRE:

Issues and Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Proposed Project:				
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 uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
a) 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?	☐	☐	☒	☐

Environmental Setting:

In 2018, a Multi-Jurisdictional Hazard Mitigation Plan (Plan) for Tuolumne County was prepared to provide mitigation solutions to minimize each jurisdiction's vulnerability to the identified hazards and ultimately reduce both human and financial losses subsequent to a disaster. The Plan includes existing information on typical hazards, such as earthquakes, flooding, and fire, and provides risk assessments of each hazard and the potential for occurrence within the County. Specific wildland fire objectives provided in the Plan include vegetation management, code enforcement, GIS mapping, and compliance with the planning process.

Mitigation actions provided in the Plan range from improving water supply systems and conveyance systems for potential fire needs, initiating fuel thinning and chipping projects in high-priority areas, to updating existing and preparing new fire protection and evacuation plans. The Plan states that Tuolumne County Fire Protection District/CAL FIRE along with seven fire districts and one city fire department provide life and property emergency response. In addition to services traditionally provided by most fire protection agencies nationwide, these agencies work cooperatively with the U.S. Forest Service and the National Park Service in providing wildfire response in Tuolumne County. Although there are existing plans, programs, ordinances, and regulations in place within the County, wildland fire risks and the potential for future fire hazards occurring within the County is considered high (Tuolumne County 2018).

Tuolumne County does not have a static emergency plan or evacuation plan due to the dynamic nature of emergencies. In the event of an emergency, the Tuolumne County Sheriff Office is the responsible entity for declaring and directing evacuations in the case of emergencies. The Sherriff's Department will inform members of the public via the Emergency Notification System, local media, and door-to-door when feasible.

The project site is located within a State Responsibility Area (SRA) and is rated as a very high fire hazard severity zone. This rating is based on factors of slope, vegetation, and annual summer weather patterns. These zones, referred to as Fire Hazard Severity Zones (FHSZ), provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. The zones also relate to the requirements for building codes designed to reduce the ignition potential to buildings in the wildland-urban interface zone.

Discussion:

a-d. The Tuolumne County Fire Department provides fire protection services to the County through a cooperative fire protection agreement with CAL FIRE. CAL FIRE in a separate cooperative fire protection

agreement with the Groveland CSD, and in conjunction with the Tuolumne County Fire Department, provides services for nearly fifteen square miles and approximately 6,500 residents in southern Tuolumne County. According to the CAL FIRE Fire and Resource Assessment Program, the project site is located within a Very High Fire Hazard Severity Zone in a State Responsibility Area.[24]

The Tuolumne County Fire Prevention Division has provided several recommendations and conditions to reduce the risk of fire at the project site, including the preparation of a fuel modification program and compliance with driveway construction standards, standards for residential gates, and residential identification standards found in Titles 11, 12, 15 and 16 of the Ordinance Code, which includes standards set by the California Building Code, and the California Fire Code.

The following conditions would be required and reviewed by the Fire Prevention Division prior to approval of the Final Map:

> The project site is located in an area that is rated as a very high fire hazard by the California Department of Forestry and Fire Protection (Cal Fire). The fire hazard shall be reduced through a fuel modification program approved by Tuolumne County Planning and Fire Prevention. The fuel modification program shall provide for the reduction of flammable vegetation by the thinning of brush, small trees and the removal of piles of dead brush from the project site. The fuel modification plan shall be completed prior to the approval of the final map. (TCOC Section 15.20.060 & 16.08.030)
>
> The following statement shall be recorded on the final map: "Modification to Defensible Space Building Setbacks may be made prior to securing a Building Permit subject to approval of Tuolumne County Fire Prevention." (TCOC Section 15.20.060)
>
> Defensible Space Building Setbacks of 30 feet shall be provided from all property boundaries. All existing parcel boundaries, proposed parcel boundaries and building setbacks shall be recorded and shown on the final map in order to ensure minimum defensible space around future structures on the proposed parcels. (TCOC Section 15.20.060)
>
> All proposed access to the project shall be constructed to meet current road requirements. Fire apparatus access roads shall be provided, constructed and maintained as follows: The roads shall be constructed to have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 15 feet. The roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities. All cul-de-sac roads shall terminate in a 40' radius turn bulb. (CFC Sections 503 TCOC Title 11)
>
> Where parcels are zoned five (5) acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals. (TCOC Title 11, PRC 4290)
>
> All streets shall be signed and identified at intersections to allow for speedy response of emergency equipment. All cul-de-sac roads shall be posted "Not a Through Road". (TCOC Sections 11.12.040 and 11.12.050)
>
> A letter shall be submitted by a licensed surveyor or registered civil engineer to the Engineering Development Division containing demonstrated proof that all driveways proposed to serve the project can be constructed from the access road to each building site or parcel to the standards specified in Title 11 of the Tuolumne County Ordinance Code. (TCOC Section 16.24.150(E))

24 California Department of Forestry and Fire Protection. *California Fire Hazard Severity Zone Viewer*. Available at: https://egis.fire.ca.gov/FHSZ/. Accessed August 2020.

The following conditions would be required and reviewed by the Fire Prevention Division for future development of single family dwellings on each parcel:

> All roads accessing the project site shall be cleared of flammable vegetation over 18 inches in height to a distance of 25 feet from the centerline of the road. (TCOC Section 15.20 and CFC Section 503)
>
> Driveways to the proposed home sites shall be at least 12 feet in width, with a minimum surface of 4 inches of compacted Class II aggregate. Maximum gradient shall be 16%. (TCOC Section 11.12.060.)
>
> Where residential dwellings are less than 150 feet from the roadway, the driveway grade may exceed 16% to a maximum 22%, but the driveway shall be paved with asphalt concrete or concrete. In addition, a parking bay at least 10 feet wide and 40 feet long and surfaced in the same manner as the adjacent road shall be provided at road grade. (TCOC Section 11.12.060(B))
>
> Six parcels may share a common driveway provided that the common portion of the driveway shall be a minimum of 18 feet in width and does not provide access to more than six (6) dwelling units and any number of accessory buildings, and for which easements have been established for use of the driveway by all parcels. (TCOC Sections 11.02.120, 11.12.060, 15.20.005 (D) and 15.20.050)
>
> For any driveway that exceeds 300 feet in length, a turning bulb or a circular driveway with a minimum outside radius of 40 feet shall be provided within 50 feet of all building sites. (TCOC Section 11.12.060 (C))
>
> For any driveway that exceeds 150 feet, turnouts shall be provided at the midpoint for driveways between 150 feet and 800 feet in length, or at 400-foot intervals for driveways over 800 feet in length. Turnouts shall be a minimum of 10 feet in width and 30 feet in length with 25-foot tapers at each end. (TCOC Section 11.12.060)
>
> Residential gates providing access from a road to a driveway shall be located at least 30 feet from the roadway edge, the gate entrance shall be two feet wider than the width of the traveled way, and the gate shall open away from the roadway (TCOC Section 11.12.062)
>
> Address numbers shall be displayed on a building or land in such a manner as to be visible from the street or road on which the building or land fronts. Where the building is located more than 50 feet from the main roadway, the number shall be displayed at the entrance of the driveway and be readable from both directions. The size of letters, numbers, or symbols for addresses shall be a minimum four-inch letter height but shall not exceed twelve inches in height, one-half inch stroke, reflectorized, and contrasting with the background color of the sign or structure on which it is displayed. All numbers or signs shall be maintained in a neat and orderly manner so as to remain readable. (TCOC Sections 12.12.080(A)(1) and 12.12.080(A)(4), CFC 901.4.4)

As noted in Section IX, Hazards and Hazardous Materials, of this IS/MND, The County adopted the *Emergency Operations Plan for Tuolumne County* in June 2012.[25] As noted therein, the project would not include land uses or operations that could impair implementation of the plan. Tuolumne County does not have a static emergency plan or evacuation plan due to the dynamic nature of emergencies. In the event of an emergency, the Tuolumne County Sheriff Office is the responsible entity for declaring and directing evacuations in the case of emergencies. The Sherriff's Department will inform members of the public via the Everbridge Emergency Notification System, local media, and door-to-door when feasible.

25 Tuolumne County. *Emergency Operations Plan for Tuolumne County*. June 2012.

In the event of an emergency, individuals would travel east of west on Ferretti Road towards State Route 120. Implementation of the proposed project would involve the construction of a new roadway that would provide internal access by way of Ferretti Road and Clements Road. Construction of the road would not result in any substantial modifications to the existing roadway system and, thus, would not physically interfere with the Emergency Plan. Furthermore, the proposed project would not include land uses or operations that could impair implementation of the plan

Furthermore, as noted in Section VII, Geology and Soils, of this IS/MND, the County has very “Low” to “Moderate” risk for landslides. As such, the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan or 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.

In addition, to decrease the wildland fire hazard risk in the County, the Strategic Fire Plan for the Tuolumne/Calaveras Unit provides guidance to reduce structural ignitability. Furthermore, although the project site is comprised of sloping hills, adherence to the California Building Code Chapter 7A, Fire Hazard Severity Zones and Building Standards and Materials, and Public Resource Code 4291, requiring property owners to maintain clearance of flammable vegetation of 100 feet from structures would also reduce the risk of fire. Furthermore, implementation of the proposed project would include site clearing activities, which would remove much of the on-site vegetation within the area. Development of the site for residential uses would help to reduce the risk of wildland fire in the area due to site improvements, such as roadways, driveways, and irrigated landscaping, which would reduce readily combustible vegetation. Therefore, the proposed project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire or require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

Based on the above, the proposed project would not be subject to excess risks related to wildfires, and a ***less-than-significant*** impact would occur.

MANDATORY FINDINGS OF SIGNIFICANCE:

Supporting Information Sources	*Potentially Significant Impact*	*Less-than-Significant With Mitigation Incorporation*	*Less-than-Significant Impact*	*No Impact*
Proposed Project/Action:				
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?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Analysis:

a. As discussed in Section IV, Biological Resources, of this Initial Study, while the potential exists for bats as well as nesting raptors and migratory birds protected by the MBTA to occur on-site, Mitigation Measures IV-1 through IV-4 would ensure that impacts to special-status species would be less-than-significant. As discussed in Section IV, Cultural Resources, of this IS/MND, an existing ditch on the site could be considered a historical resource (P-55-0059). However, consistent with the recommendations of the Cultural Resources Assessment, the project would establish a "no-construction zone" around the existing ditch. Given that construction activities would not disturb the existing ditch, the proposed project would not result in any impacts to P-55-0059. Mitigation Measures V-1 and V-2 would ensure that, in the event that unknown historic or prehistoric resources are discovered within the project site, such resources are protected in compliance with the requirements of CEQA.

Considering the above, the proposed project would not degrade the quality of the environment, substantially reduce or impact the habitat or fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, a ***less-than-significant impact with mitigation*** would occur.

b. The proposed project in conjunction with other development within Tuolumne County could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level through compliance with the mitigation measures included in this IS/MND, as well as applicable General Plan policies, Ordinance Code standards, and other applicable local and State regulations. As demonstrated throughout this IS/MND, the proposed project would not result in any significant environmental impacts peculiar to the project, and, thus, the proposed project would not contribute any new or additional impacts not previously analyzed in the General Plan EIR. Therefore, when viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts in Tuolumne County and the project's incremental contribution to cumulative impacts would be ***less than significant***.

c. As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Ordinance Code standards, other applicable local and State regulations, and mitigation measures included herein. In addition, as discussed in Section VIII, Greenhouse Gas Emissions, Section IX, Hazards and Hazardous Materials, Section XIII, Noise, and Section XVII, Transportation, of this IS/MND, the proposed project would not cause substantial effects to human beings, including effects related to exposure to air pollutants, hazardous materials, noise or vehicle traffic. Therefore, the project would not result environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly, and a ***less than significant impact with mitigation*** would occur.

Mitigation Measures: See the Mitigation Monitoring and Reporting Program Table Below.

Mitigation Monitoring: See the Mitigation Monitoring and Reporting Program Table Below.

Table 12: Mitigation Monitoring and Reporting Program

Mitigation Measure	When Implemented	Monitored by	Verified by
I-1:Prior to issuance of a building permit or addition of exterior lighting to the site, and subject to the review and approval of the Land Use and Natural Resources Division (LUNR) of the Tuolumne County Community Development Department (CDD), construction plans shall show that all lighting of roads, driveways, and the exterior of structures shall be designed to provide adequate illumination without a glaring effect (aimed down and towards the site). Exterior lighting shall have the International Dark Sky fixture seal of approval. Fixtures shall have bulbs that are fully recessed and shielded and shall not emit light above the horizontal plane of the shielding.	Mitigation Measure I-1 shall be required prior to the issuance of a building permit by the Building and Safety Division or addition of exterior lighting. The plan will be reviewed and verified by the LUNR Division of CDD. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	Tuolumne County Community Development Department (CDD)	Land Use and Natural Resources (LUNR) Division of CDD
IV-1: In order to avoid impacts to maternity roosting bats, tree and snag trimming or removal on-site shall be avoided during the maternity roosting season (April 15 – August 31). If tree and snag removal or trimming must occur during the maternity roosting season (April 15 – August 31) within the site, a qualified biologist shall conduct a pre-construction survey for maternity roosting bats within 14 days of the onset of these activities. Maternity roosting bat surveys shall include all trees and snags proposed to be impacted. Survey results shall be submitted to the Tuolumne County Community Development Department. If active maternity bat roosts are not found within the survey area, further mitigation is not required. Should any active maternity bat roosts be discovered during the pre-construction survey in trees or snags proposed to be impacted, the biologist shall identify a suitable construction-free buffer around the maternity roost. An example of a suitable construction free buffer is 50 feet; however, each buffer distance should be determined on a case-by-case basis by the qualified biologist. The buffer shall be identified on the ground with flagging or fencing, and shall be maintained until a qualified biologist has determined that the tree and snag impacts would not adversely affect bat survival or survival of their young.	Mitigation Measure IV-1 shall be required prior to tree and snag removal or trimming between April 15 and August 31. This would be verified prior to the issuance of a grading permit by the Tuolumne County Department of Public Works (DPW) or a building permit by the Building and Safety Division of CDD. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	CDD and DPW	LUNR Division
IV-2:For construction activities expected to occur during the nesting season of raptors (February 1 to August 31) and migratory birds, a pre-construction survey by a qualified biologist shall be conducted	Mitigation Measure IV-2 shall be required prior to construction on site between February 1 and August 31	CDD and DPW	LUNR Division

to determine if active nests are present on or within 0.5 mile of the project site where feasible. Areas that are inaccessible due to private property restrictions shall be surveyed using binoculars from the nearest vantage point. The survey shall be conducted by a qualified biologist no more than seven days prior to the onset of construction. If no active nests are identified during the pre-construction survey, no further mitigation is necessary. If construction activities begin prior to February 1, it is assumed that no birds will nest in the project site during active construction activities and no pre-construction surveys are required. If at any time during the nesting season construction stops for a period of two weeks or longer, pre-construction surveys shall be conducted prior to construction resuming. If active nests are found on or within 0.5 mile of the project site, the applicant shall notify CDFW and explain any additional measures that a qualified biologist plans to implement to prevent or minimize disturbance to the nest while it is still active. Depending on the conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the 500-foot buffer without impacting the breeding effort. Appropriate measures may include restricting construction activities within 500 feet of active raptor nests and having a qualified biologist with stop work authority monitor the nest for evidence that the behavior of the parents have changed during construction. Nests that are inaccessible due to private property restrictions shall be monitored using binoculars from the nearest vantage point. Appropriate measures would be implemented until the young have fledged or until a qualified biologist determines that the nest is no longer active. Construction activities may be halted at any time if, in the professional opinion of the biologist, construction activities are affecting the breeding effort.	and will be verified prior to the issuance of a grading permit by the DPW by the LUNR Division. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.		
IV-3:Prior to issuance of grading permit, a wetland delineation shall be prepared in accordance with the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region (Arid West Region Supplement). The wetland delineation shall be submitted to the USACE for review. If the existing drainages	Mitigation Measure IV-3 shall be required prior to the issuance of a grading permit by the DPW and will be verified by the LUNR Division. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to	CDD and DPW	LUNR Division

within the site are found to be jurisdictional under the USACE, RWQCB, or CDFW, then Mitigation Measure IV-4 shall be implemented. If the existing drainage features are not jurisdictional, then additional mitigation is not required.	comply with said measures.		
IV-4 : To the extent feasible, the future residential development shall be designed to avoid and minimize adverse effects to the existing drainage features within the project site. If impacts to the existing drainage features would occur as a result of implementation of the future residential development, then prior to issuance of any grading permits for lots on which construction could affect the seasonal drainages, the project applicant shall acquire a Section 404 permit for fill of jurisdictional wetlands, and mitigation for impacts to jurisdictional waters that cannot be avoided shall be provided in conformance with the USACE "no-net-loss" policy. If a Section 404 permit is required, the applicant must also obtain a water quality certification from the Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act (CWA) prior to issuance of any grading permits for lots on which construction could impact the seasonal drainages. In addition, prior to issuance of any grading permits for lots on which construction would affect the existing drainage features, the applicant shall enter into a 1602 Streambed Alteration Agreement with CDFW. To avoid or minimize adverse impacts to downstream fish and wildlife resources, the applicant shall implement avoidance and minimization measures, which may include but not necessarily be limited to: • Prior to construction, the authorized construction limits shall be marked in coordination with a qualified biologist. Vegetation shall not be removed outside of this marked area and construction debris, equipment, or soils shall not be placed outside of the marked area. • Throughout construction, all equipment storage, equipment maintenance, lighting, and staging, shall occur outside of CDFW jurisdictional habitat except for any work authorized through a 1602 Agreement. • Debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof,	Mitigation Measure IV-4 shall be required prior to the issuance of a grading permit by the DPW and will be verified by the LUNR Division. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	CDD and DPW	LUNR Division

asphalt, paint, oil or other petroleum products or any other substances which could be hazardous to aquatic life, or other organic or earthen material from any logging, construction, or other associated project-related activity shall not be allowed to contaminate the soil and/or enter into or placed where it may be washed by rainfall or runoff into, waters of the State.			
IV-5 All oak trees subject to Implementation Program 16.B.j.1 located within the proposed lots shall be retained appropriately except when removal of said oaks is necessary pursuant to the requirements under California Public Resources Code Section 4291, Chapter 8.14.040(D) of the Hazardous Vegetation Management Ordinance and when needed for additional fuel reduction purposes on a case-by-case basis authorized by the Community Development Department Director.	Mitigation Measure IV-5 will be an on-going condition of approval. A Notice of Action will be recorded to advise future owners of the required mitigation measure and the responsibility to comply with said measure.	CDD	LUNR Division
V-1: The Kanaka ditch and a 10-foot buffer around the ditch shall be rezoned to OpenSpace zoning. The Zone Change shall be approved by the Tuolumne County Board of Supervisors in conjunction with Zone Change RZ20-001. The Open Space zoning shall be shown on the Final Map.	Mitigation Measure V-1 shall be required prior to the approval of the Final Map and will be verified by the LUNR Division. Open Space zoning shall be approved by the Tuolumne County Board of Supervisors in conjunction with Zone Change RZ20-001	CDD and DPW	LUNR Division
V-2: If any prehistoric artifacts or other indications of archaeological resources are found during grading and construction activities, all work within 100 feet of the find shall cease and the applicant shall retain a qualified archaeologist to evaluate the find(s). If the resource is determined to be eligible for inclusion in the California Register of Historical Resources and project impacts cannot be avoided, data recovery shall be undertaken. Pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during	Mitigation Measure V-2 will be required during grading and construction activities on site. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	CDD and DPW	LUNR Division

project excavation or testing, curation may be an appropriate mitigation. The language of this mitigation measure shall be included on any future grading plans and/or utility plans approved by the County for future development on the project site.			
V-3 If human remains are discovered during grading and construction activities occurring on the project site, further disturbance shall not occur within 100 feet of the vicinity of the find(s) until the Tuolumne County Coroner has made the necessary findings as to origin. (California Health and Safety Code Section 7050.5) Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Tuolumne County Coroner determines the remains to be Native American, the NAHC must be contacted within 24 hours. The NAHC must then identify the "most likely descendant(s)" (MLD). The landowner shall engage in consultations with the MLD. The MLD shall make recommendations concerning the treatment of the remains within 48 hours, as provided in Public Resources Code 5097.98. This language of this mitigation measure shall be included on any future grading plans approved by the County for future development on the project site.	Mitigation Measure V-3 will be required during grading and construction activities on site. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	CDD and DPW	LUNR Division
VIII-1 Prior to issuance of a grading permit, the project applicant shall show on the grading plans via notation that the contractor will comply with the following requirements, to the maximum extent feasible determined by the County: • To the maximum extent feasible, off-road heavy-duty diesel-powered equipment (e.g., rubber-tired dozers, excavators, graders, scrapers, pavers, paving equipment, and cranes) to be used for each phase of construction of the project (i.e., owned, leased, and subcontractor vehicles) shall meet CARB Tier 3 emissions standards or cleaner; • To the maximum extent feasible, temporary power necessary for construction activities shall be supplied by the existing power grid, as opposed to portable generators; and • Alternatively-fueled construction equipment and renewable diesel shall be used for on-site construction, if such equipment is commercially available.	Mitigation Measure VIII-1 will be required prior to the issuance of a grading permit by the DPW and will be verified by the LUNR Division. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	CDD and DPW	LUNR Division
XIII-1: Prior to approval of a grading permit, and subject to the	Mitigation Measure XIII-1 will be	CDD and	LUNR

review and approval of the Engineering Division of the Department of Public Works and Land Use and Natural Resources Division of the Community Development Department, construction plans shall require a notation limiting construction activities to the following: • Construction activities shall be restricted to the hours between 7:00 AM and 7:00 PM Monday through Saturday. • Construction activities shall be prohibited on Sundays and County holidays. • All noise-producing project equipment and vehicles using internal combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition. • All mobile or fixed noise-producing equipment used in the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity and must be located as far as is feasible from sensitive receptors. • Sound attenuation devices shall be required on construction vehicles and equipment.	required prior to the issuance of a grading permit by the DPW and will be verified by the LUNR Division. The information will be required to be shown on the grading plans. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	DPW	Division
XVII-1 Implement Mitigation Measures V-2 and V-3 from the Cultural Resources Section.	Implement Mitigation Measures V-2 and V-3 from the Cultural Resources Section will be required during grading and construction activities on site. A Notice of Action will be recorded to advise future owners of the required mitigation measures and the responsibility to comply with said measures.	CDD	LUNR Division

AGENCIES CONTACTED:

Tuolumne County:
Community Development Department, Building and Safety Division
Community Development Department, Environmental Health Division
Department of Public Works, County Surveyor
Department of Public Works, Engineering Division
Department of Public Works, Solid Waste Division
Department of Public Works, Roads
Fire Department, Fire Prevention Division
Sheriff's Department
Tuolumne County Transportation Council

State of California:
Department of Fish and Wildlife
Department of Forestry and Fire Protection
Department of Highway Patrol
Department of Transportation, Caltrans District 10
Regional Water Quality Control Board

Other:
AT&T
Audubon Society
Central Sierra Environmental Resource Center
Chicken Ranch Rancheria of Me-Wuk Tribal Council
Citizens for Responsible Growth
Comcast Cable Communications
Pacific Gas & Electric Company
Sierra Club, Tuolumne Group
Jamestown School District
Sonora Union High School District
Tuolumne County Association of Realtors
Tuolumne County Farm Bureau
Tuolumne Heritage Committee
Tuolumne Me-Wuk Tribal Council
Tuolumne Utilities District
United States Fish and Wildlife Service
U.S. Army Corp of Engineers

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The following documents are referenced information sources used for the purposes of this Initial Study:

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APPENDIX B
HYDROLOGICAL REPORT AND SUPPORTING DOCUMENTATION

HYDROGEOLOGIC REPORT
on

Proposed Long Gulch Development
Section 13, T.1S., R.16E., M.D.M.
Tuolumne County, California

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February 23, 2021

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1.0 INTRODUCTION AND SCOPE OF WORK

The proposed Long Gulch development is a large lot subdivision with 19 domestic lots ranging from 3.00 to 12.52 acres on a site that totals 82.2 acres (Figures 1-4 & 6).

GeoResource Management was contracted by Brian Fitzgerald, Managing Partner Long Gulch Ranch LP ("Client"), to carry out a hydrogeological survey requested by the Tuolumne County Community Development Department. This study was mandated to determine if adequate water could be developed by individual wells to serve the nineteen parcels in the proposed Long Gulch subdivision. The proposed Long Gulch development is also referred to in this document as the "site" or "subject area".

In order to accomplish the above mandated tasks, GeoResource Management obtained and examined Google Earth photographs and public domain geologic maps as well as proprietary data to determine the geologic framework of the area. Geologic and hydrologic data for several existing wells surrounding the property were also researched. In addition, the physical and geological conditions of the site were examined in the field.

This report describes the results of the investigation of the geologic and hydrogeologic setting of the Long Gulch site and discusses the potential availability of ground water for domestic use by owners of the parcels.

2.0 LOCATION AND PHYSICAL SETTING

The site is located in the eastern foothills of the Sierra Nevada mountain range of California, approximately 125 miles due east of San Francisco and three miles northeast of Groveland in Tuolumne County, California, in Section 13, T1S, R16E, MDB&M. The site consists of a total of 82.2 acres.

The area is characterized by a north-south grassland meadow gently sloping down to a tributary of Indian Creek. The meadow is flanked by forested uplands with slopes of less than 10%. Elevation of the site ranges from 2900 to 2990 feet above mean sea level (Figures 3 & 4). Annual precipitation for the period 1980 to 2010 averaged 38.02 inches (www.usa.com).

Conifers, such as ponderosa pine, sugar pine, Douglas fir, white fir, and incense cedar with various shrubs in the understory are the dominant natural plants in the areas flanking the grassland meadow. However, black oak and canyon live oak are also present on the site.

3.0 GEOLOGY

3.1 Geologic Setting

The Long Gulch area is located on the western flank of the Sierra Nevada geographic province of California. The Sierra Nevada extends for approximately 400 miles in a north-south direction. The core of the mountain range is composed of a complex series of igneous and metamorphic rocks. The most prominent of these is a large complex of Mesozoic plutonic rocks known as the Sierra Nevada batholith. On the western flank of the range, accreted volcanic and sedimentary rocks are in contact with the older subjacent series of metasediments. These younger rocks generally dip steeply to the west.

The sequence of older formations were mantled by Tertiary sedimentary rocks that were deposited from streams flowing to the west from volcanic centers along the eastern flank of the Sierra.

Faulting along the eastern flank of the Sierra has uplifted the eastern margin of the range and tilted it to the west. This has allowed Recent westward-flowing rivers to cut deep, rugged canyons into the neighboring landscape.

3.2 Area Geology and Hydrogeology

3.2.1 Calaveras Complex formation

The Calaveras Complex dominates the bedrock formations in the subject area (Figures 5 & 6). The Calaveras Complex formation consists of a 230 mile long by 22 mile wide belt of metasedimentary and metavolcanic rocks of, bounded on the west by the Melones fault and on the east by granitic rocks of the Sierra Nevada batholith. Calaveras forms a continuous northwest-trending belt from the Placerville area in the north to the Merced River in the south. The formation is thousands of feet thick and lithologies included in the formation are diverse. The lowest portion of the formation is composed of volcanics, believed to have been derived from oceanic crust. Above this unit is a sequence of fine-grained marine sediments containing minor chert and siltstone. Limestone is an important constituent of this unit, particularly in the vicinity of Sonora. The uppermost section grades into rocks predominated by quartzite and argillite.

Although fossils are rare, currently, the Calaveras Complex is believed to have been deposited between the Permo-Carboniferous and lower Triassic time (300 to 250 million years ago).

Because of its great age the Calaveras has been subjected to a long history of thermal and tectonic events. At a result it is metamorphosed so that the fine-grained rocks are now compact slates and chert has become almost indistinguishable from quartzite. In addition, tectonic stresses have resulted in a complex network of fractures and faults.

The ground water in the Calaveras Complex formation is controlled by and stored in the fractures and faults referred to above. The writer prepared a schematic diagram (Figure 7) in order to present an explanation of the hydrogeology in this fracture-controlled ground water regime (Figure 7). On the Long Gulch property, where the water resource is fracture-controlled, three possible ground water cases are possible.

In Figure 7 Well #1 intersects a perched water source in the soil profile which rests on and is confined by unfractured bedrock. This case would be possible in the area where deep soils are present in the central meadow of the property. However, although initial yields in this type of aquifer may be substantial, because of the limited water storage in the perched aquifer, the long term yield would most likely fail to produce adequate water. Consequently, wells should be extended down into bedrock to tap a more sustainable water supply.

Both Wells #2 & #3 are completed below the water table that exists in the bedrock and is carried in bedrock fractures. When water flow is intersected in either of these wells, the water rises to stand at the level of the intersected fracture. The water level in either of these two wells may be the same. However, Well #3 would have a greater yield since it is completed in a major fracture that is highly permeable. On the other hand, Well #2 receives its water from small fractures that, even though they may be connected to the main fracture, yield lower volumes because of the limited permeability of these structures.

A spring issues from the Calaveras Complex in the Pine Mountain Lake subdivision at an elevation of 2750 feet about one mile west of the site (Figure 2). A second spring location is situated on Indian Creek about one mile northwest of the site. The spring at this location is also at an elevation of 2750 feet. It is significant to note that Indian Creek, one quarter mile to the east of the site, is a perennial flowing stream. This indicates that the stream is fed by base flow of ground water into Indian Creek.

The elevation of these springs probably represents the minimum ground water table elevation in the fractured aquifer of the Calaveras Complex since the water table most likely slopes from the Long Gulch site toward the locations of these springs.

3.2.2 Mehrten formation

The upper portions of ridges in the area are capped by rocks of the Mehrten formation (Figures 5 & 6). The Mehrten represents a major period of Neogene (23 to 2.6 million years ago) nonmarine sedimentation in east-central California. The Mehrten Formation was originally defined as andesite-rich clastic sediments deposited in the Mokelumne River drainage basin of the Sierra Nevada foothills. However, the unit has since been extended to include volcanogenic sandstones, mudflows, and lava flows occurring throughout the foothills and in the Sierra Nevada itself.

The precise depositional history is exceedingly complex and sequence of events that formed the Mehrten have never been systematically studied. The Mehrten was related to andesitic volcanism which was active along the eastern margin of the Sierra. The main volcanic pulse was preceded by rhyolitic flows of the Valley Springs formation that are dated at from 20 to 30 million years bp. The Mehrten was formed as tuffs, mudflows and fluvial sediments were transported westward from the volcanic centers. This episode of volcanism ended with the extrusion of a thick sequence of latite flows about 9 million years ago.

The Mehrten was deposited upon a topography of substantial relief which was developed on Mesozoic granites, diorites, and older metasedimentary rocks. The quantity of volcaniclastic sediments poured out from the centers to the east was generally sufficient to bury the preexisting topography and the Mehrten formation reached a thickness in some places of 3,000 feet.

The Mehrten series of sedimentary rocks typically slope to the west due to a combination of the gradient on which the formation was originally deposited and additional tilting due to Sierra uplift. The coarse sediments contained within the Mehrten provide excellent aquifers because they can have high porosity and permeability. A series of springs flow from near the western contact of Mehrten with the Calaveras Complex (Figures 2 & 6) and also from the Mehrten in the southeast corner of Section 18 (Figure 2).

3.3 Geology of the Long Gulch Site

3.3.1 Soils

Gowans and Hinkley, 1964, classified the soils in the area as belonging to the Josephine series. These soils consist of a reddish brown loam about 20 inches deep with a subsoil of reddish brown clay loam. Soil depth to the hard, but partly weathered bedrock, is generally more than five feet thick. It is believed that the soil depth in the site meadow is considerably greater because the gentle slope would have accumulated sediments transported from the surrounding hills

3.3.2 Bedrock Formations

The proposed Long Gulch development area is underlain entirely by rocks of the Calaveras Complex formation but is situated in a gap between Mehrten outliers that cap ridges to the southeast and an occurrence of Mehrten that underlies the Pine Mountain airport to the northwest (Figure 6).

A visit to the site was made on January 31, 2021. During the visit the property was traversed on foot and examined in an attempt to ascertain the bedrock composition. However, soil mantle obscured the bedrock from view except for two boulders of

quartzite. These boulders had a sugary texture and were less than a foot in thickness and had parallel sides that were interpreted as lithologic contacts. It is not known if the boulders were in place or if they had been transported. These rocks are believed to be formed as a result of recrystallizing of chert beds. However, it is believed that the lithology of the bedrock on the site is dominated by metamorphosed argillite and siliceous argillite that are the dominant rock types in this portion of the Calaveras Complex (Scheichert, et. al., 1977).

3.3.3 Faulting and Fracturing

Topographic maps of the site were examined to locate the surface expression of bedrock lineaments. According to Scheichert, et.al, 1977, the original bedding of the Calaveras Complex formation has been tectonically destroyed and very little remains of original structure. Consequently, it is believed that topographic lineaments represent bedrock fractures imparted to the bedrock by tectonic stresses and not by lithologic layering. As will be discussed in the subsequent section, since ground water beneath this site is carried in bedrock fractures, interpretation of these structures is critical to determine if a fractured bedrock aquifer exists beneath the property.

Because the fractures and faults with the steepest dip have the most obvious topographic expression there are undoubtedly many more fracture systems with flat or shallow dips that are not apparent on aerial photos. These fractures will also control ground water flow.

The fractures plotted on Figure 6 probably consist of disrupted zones that are significant ruptures since they are responsible for the obvious topographic expression. Consequently, these fractures may be several feet wide. These features also typically have minor parallel structures as well as conjugate fractures that extend out into the adjacent rock.

Two lineament trends are obvious. The first set, trending N 35ºW is most dominant since it forms the straight course of the valley of Indian Creek in the eastern portion of Section 13 and Western portion of Section 18. The second obvious fracture trend bears N80ºE and offsets the first course of Indian Creek for a distance of 1800 feet (Figure 6). Major fractures such as these are mirrored by a series of parallel structures that have no or very little topographic expression.

A third major inferred fault structure trends N25ºE at the east end of the Pine Mountain Lake airport. This fault appears to have the western dropped down at least 200 feet since it forms the boundary between the Mehrten formation on the west and the Calaveras Complex on the east. This offset was confirmed by water well drill logs in the area.

4.0 AREA DOMESTIC WELLS

Well completion records (driller's logs) for water wells in the area were retrieved and examined for significant data such as total depth of well, depth of first water, rock type encountered, and final yield. Also, the California Water Resources Board files were accessed to obtain additional data. Final depth to water after development and water table elevation was not recorded on some of the logs or on the CWRB database. Also, the rock type encountered in the drilling was not recorded in some of the well records retrieved from the California State records.

Data from ten wells within a mile northwest of the site in the vicinity of the Pine Mountain Lake airport (Figure 6) were compiled and tabulated in Table 1. Logs from seven wells within a mile to the southeast of the site (Figure 6) were also examined and the data summarized in Table 2.

The data wells northwest of the project area show that the total depth of wells ranged from 140 to 1000 feet. The static water level varied from 60 to 110 feet below ground surface. The initial yield estimated by the drillers ranged from 5 to 100 gallons per minute, averaging 40 gallons per minute.

However, close examination of the logs revealed that the deeper wells, ranging from 620 to 1000 feet in depth were completed in the Calaveras Complex rocks, while those receiving water from the Mehrten aquifer ranged in depth from 140 to a maximum of 300 feet. The contrast between the two aquifers was also apparent in the yield from the two formations. The Calaveras Complex fractured rock aquifer yielded an average of 12 gallons per minute, while the Mehrten aquifer averaged 52 gallons per minute.

Table 1. Water Well Data from Area Northwest of Site

Address	Total Depth (feet)	Well Yield (gallons/min)	Static Level (feet)	Section (T1S. R16E)
13349 Clements Rd	300	2.5	--	12
21131 Hemlock St	620	15	--	12
13334 Clements Rd	180	55	--	12
13340 Clifton Way	200	80	60	12
13388 Clements Rd	200	100	60	12
13420 Clements Rd	290	100	75	12
13309 Clifton Way	200	5	100	12
13309 Clifton Way	140	25	60	12
13040 Clements Rd	850	14	--	13
21330 Beaver Ct	1000	7	110	13
Average	398	40	77	
Range	140-1000	5-100	60-110	

Table 2. Water Well Data from Area Southeast of Site

Address	Total Depth (feet)	Well Yield (gallons/min)	Static Level (feet)	Section (T1S. R17E)
22177 Ferretti Rd	500	18	--	18
22025 Ferretti Rd	150	5	15	18
21891 Ferretti Rd	850	3	20	18
22050 Ferretti Rd	820	15	--	18
22025 Ferretti Rd	150	7	18	18
21880 Ferretti Rd	900	1	13	18
21880 Ferretti Rd	360	12	30	18
Average	533	9	19	
Range	150-850	1-18	13-30	

5.0 LONG GULCH SITE HYDROGEOLOGY

5.1 Ground Water Sustainability

When the rate of rainfall exceeds the rate of infiltration of water into the ground and evapotranspiration, excess water (runoff) is available to supply surface waters.

Calculation of rainfall infiltration can be a complex exercise. However, factors affecting how much water is available for recharging ground water beneath a site are known. They are typically soil characteristics, topographic slopes, type and character of vegetative cover, and intensity of rainfall event. This calculation is beyond the scope of this study. However, because of the vegetative cover on the subject site and gentle slopes, it is believed that a significant percentage of precipitation received on the site will infiltrate to recharge ground water. Moreover, inspection of the small channel in the center of the site revealed that its bottom was vegetated and that there was no evidence of scouring or erosion. This would indicate that any down cutting due to water flow would occur intermittently only during high rainfall events and that a large percentage of the precipitation either is lost by evapotranspiration or infiltrates to ground water.

5.2 Estimated Infiltration and Usage Volume

Tuolumne Utilities District (October 27, 2006) estimates that the average water usage per household in Tuolumne County is 377 gallons per day and 60% of this volume (226 gallons) is consumed (not discharged to the sewage treatment plant). Some of this consumption is likely due to transmission losses, so it is not unreasonable to assume that the actual domestic consumption is probably less than that calculated.

Since, septic systems are proposed for each of the parcels in the proposed Long Gulch subdivision, a portion of the volume of water used is returned to the ground water system through the septic system drain field percolation. Using the consumption reported by TUD, it is estimated that the daily volume discharged to each septic drain field would be 151 gallons per day. A significant portion of this drain field discharge infiltrates into the soil and ultimately to ground water.

If one assumes a 38 inch rainfall average and only 20% of this total infiltrates to ground water, the total recharge for the smallest three acre parcel would be 0.63 acre feet per acre for a total of 1.9 acre feet (619,117 gallons) for the lot. Or, an average of 1,696 gallons per day, exceeding the rate of net consumption by 4.5 times. This does not consider any recharge due to treated septic infiltration or recharge originating off site and migrating onto the development.

6.0 WATER RIGHTS

The rights to the ground water underlying the site are governed by the principle of overlying water rights. Thus, the owner of the parcel has the rights to the ground water beneath his property under the following conditions:

1. Water must be used on lands overlying the aquifer from which the water is pumped

2. No water-right permit is required—the right arises directly from ownership of land

3. Overlying rights all have the same priority and must share shortages on a correlative basis

Thus, the owner of each parcel in the proposed subdivision, should be allowed and have the right to develop and use the water resources beneath their property for domestic use.

7.0 FINDINGS

At the Proposed Long Gulch site, ground water is present in an unconfined state and carried in fractured bedrock of diorite or gabbro composition.

An evaluation of the geology, wells on adjacent parcels, and calculations of likely recharge of the aquifer due to rainfall infiltration demonstrates that an adequate domestic water source can be developed for each of the parcels that are proposed to be three acres or greater in size.

Water rights for the development and use of the ground water beneath the site are firmly established by the principle of overlying rights, subject to the restrictions inherent in this right.

A comparison of water use and infiltration rate for the parcels established that infiltration of rainfall would exceed the projected water domestic use for each of the nineteen parcels by a large margin. However, if usage is contemplated beyond normal domestic purpose, such as for irrigation of large plots, additional hydrogeological characterization of the parcel should be required. These tests would include well pumping tests, specific measurement of infiltration rates on the parcel, and water balance calculation to determine consumptive use. This will ensure that there is adequate water source replenishment and that such usage will not adversely affect neighboring parcels.

As a result of this study, it is believed that there would be either no or no significant impacts as a result of the proposed project. The project would not discharge any constituents into any of the streams or watercourse in the area. There would be very limited soil disturbance as a result of access road building, site preparation and dwelling construction and there would be no alteration of drainage patterns or courses.

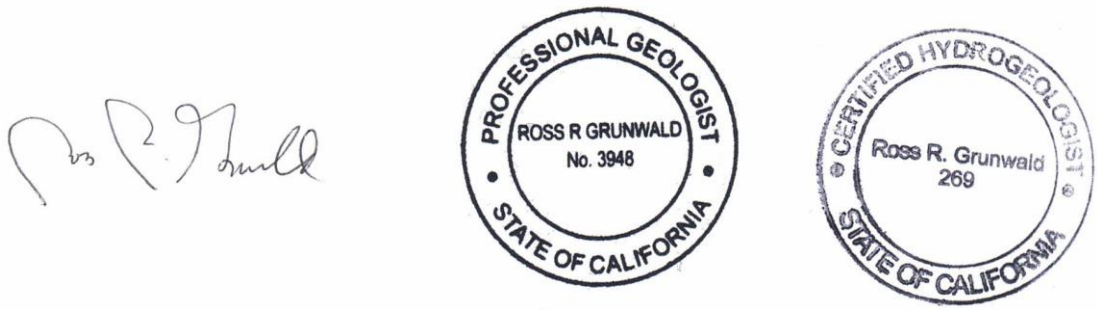
Furthermore, there would be no withdrawal of ground water other than that required for normal domestic usage. There would be adequate recharge of ground water by infiltration so that there would be no adverse effect on ground water supplies on the proposed Long Gulch development or adjacent parcels.

8.0 SIGNATURE AND CERTIFICATION

This report has been prepared by GeoResource Management. for Brian Fitzgerald, Managing Partner, Long Gulch Ranch LP. The data and information used in the preparation of this report was believed to be complete and accurate at the time of writing, however, GeoResource Management makes no warranty as to the completeness or accuracy of the data obtained from outside sources. As such, any recommendations or conclusions based upon such data are subject to revision as deemed necessary.

All aspects of this investigation were performed by GeoResource Management in accordance with applicable laws, regulations, geologic and hydrologic standards in effect at the time of this writing. At no time is any warranty, either express or implied, made with respect to the geologic or hydrologic conditions beneath the Long Gulch site.

This report was prepared by:



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California Registered Geologist # 3948
California Certified Hydrogeologist #269

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FIGURES

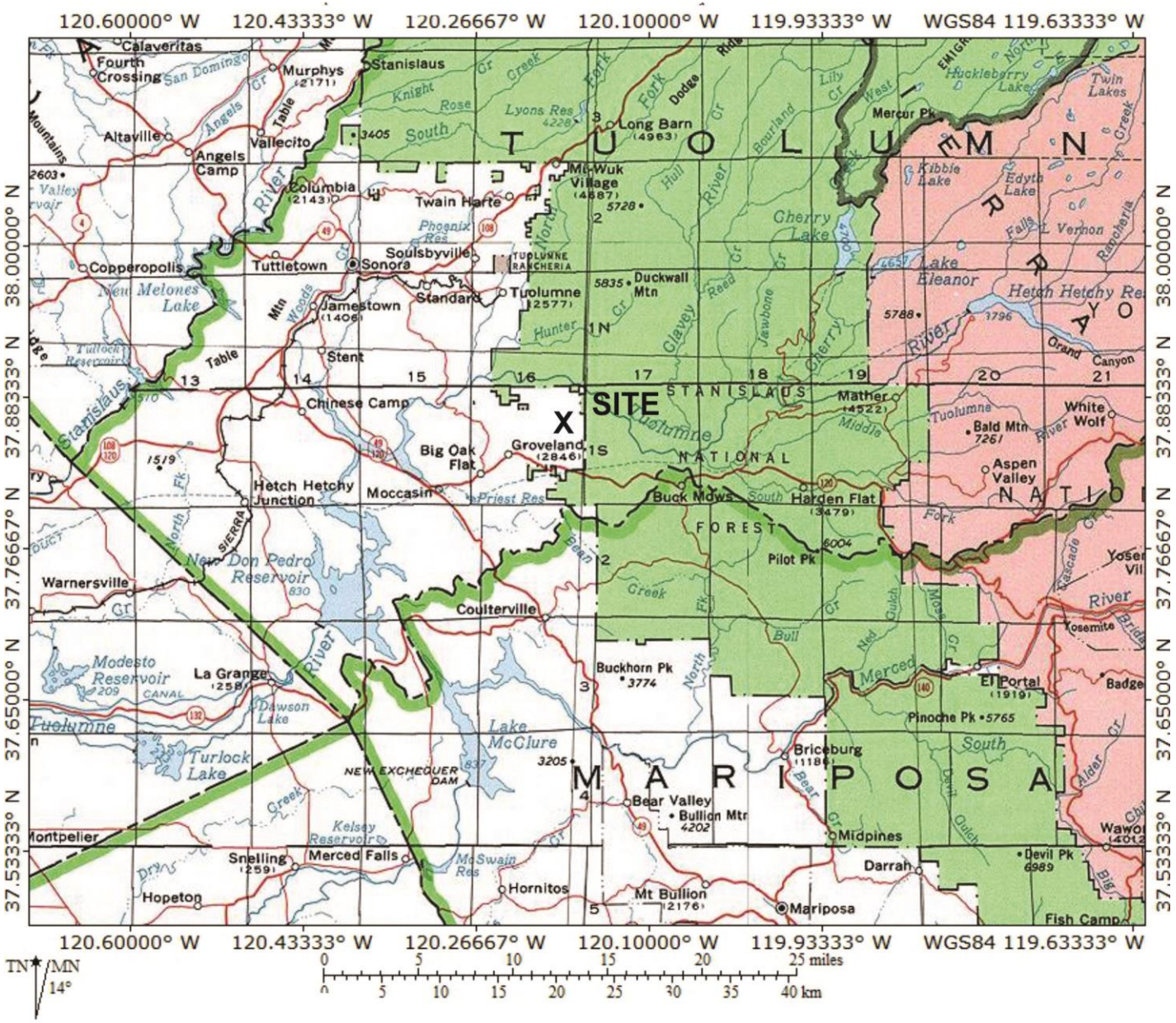

Figure 1. Map Showing Location of Proposed Long Gulch Subdivision

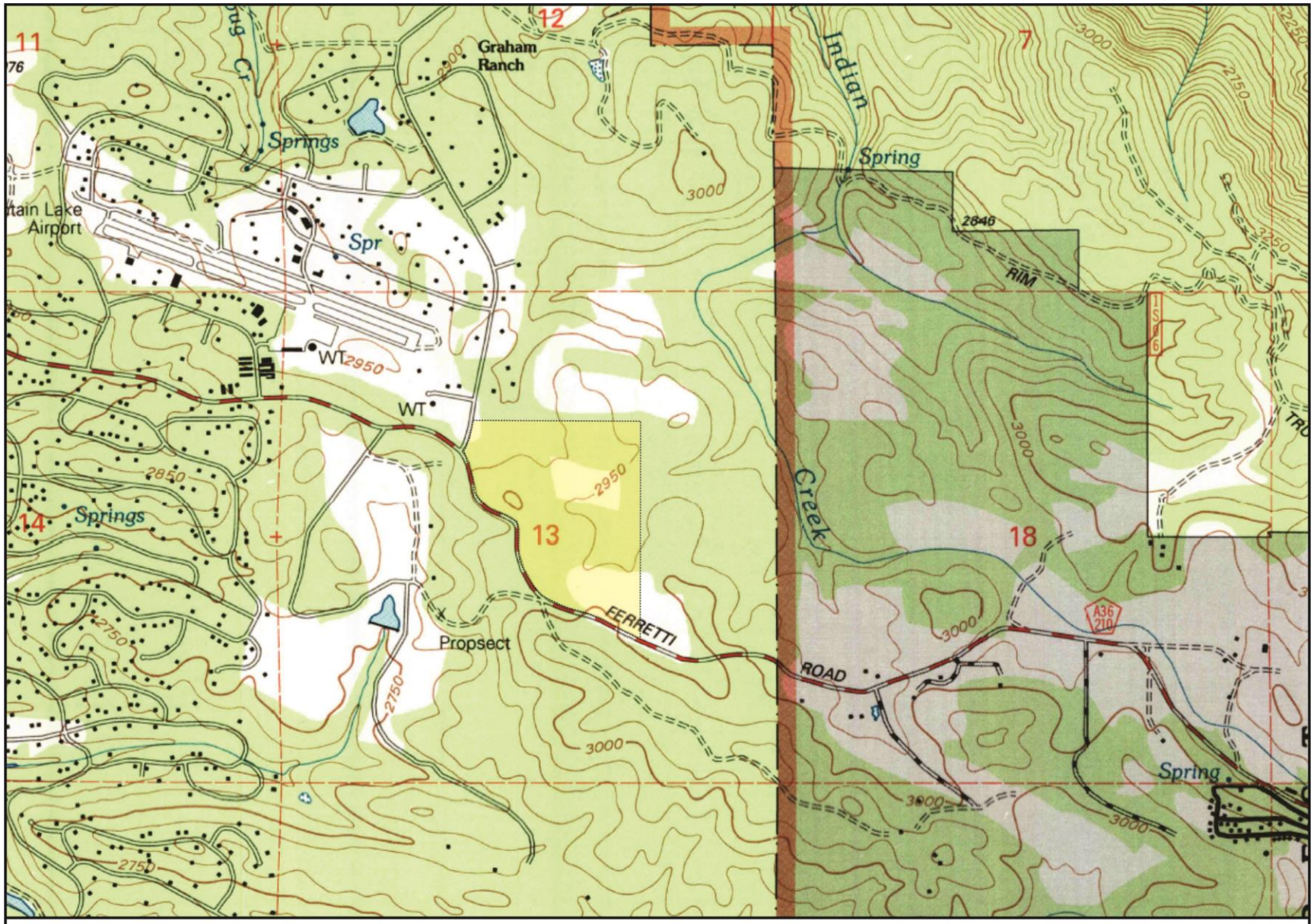

Figure 2. Topographic Map of Area showing Proposed Long Gulch Subdivision and Neighboring Properties and Features

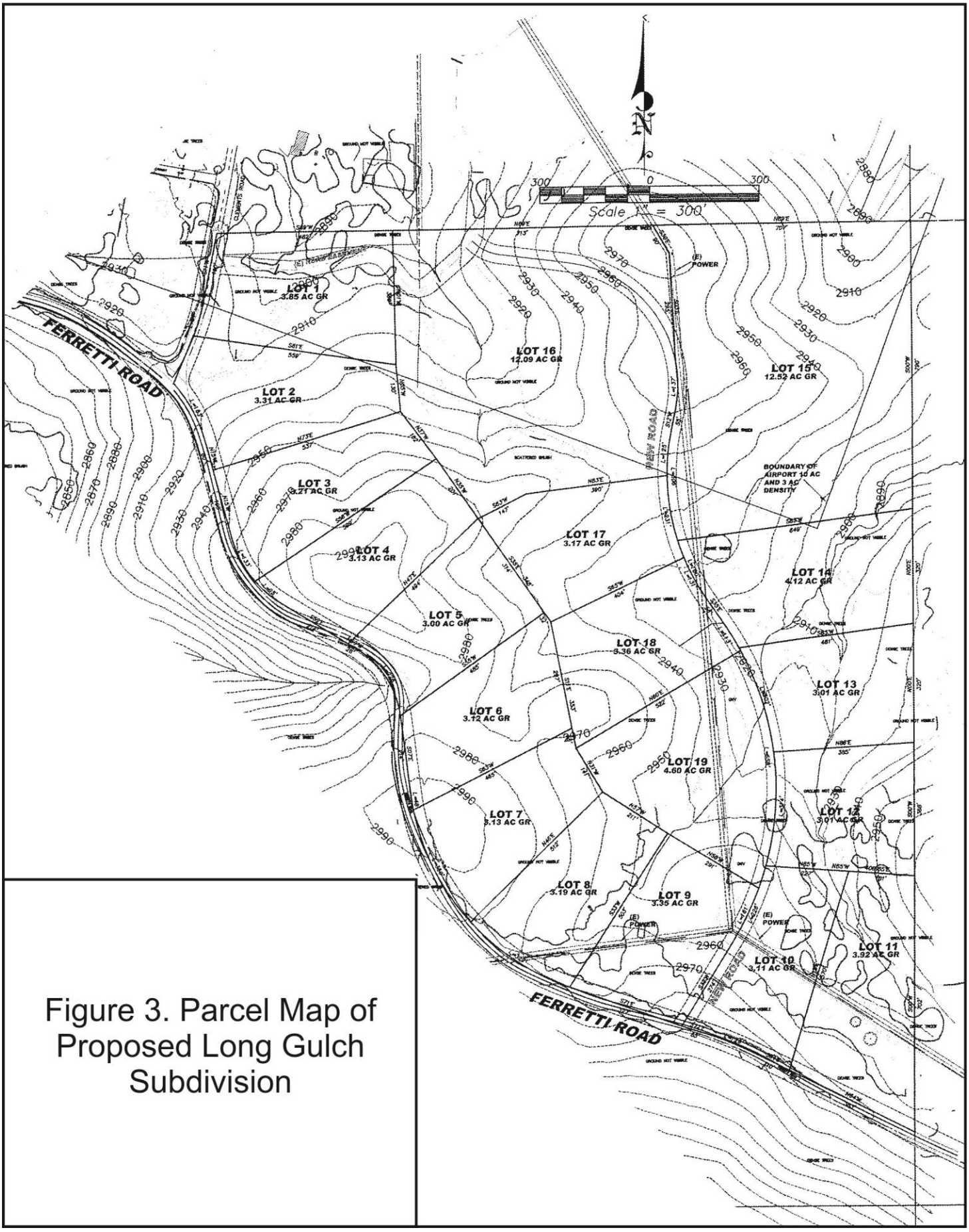

Figure 3. Parcel Map of Proposed Long Gulch Subdivision

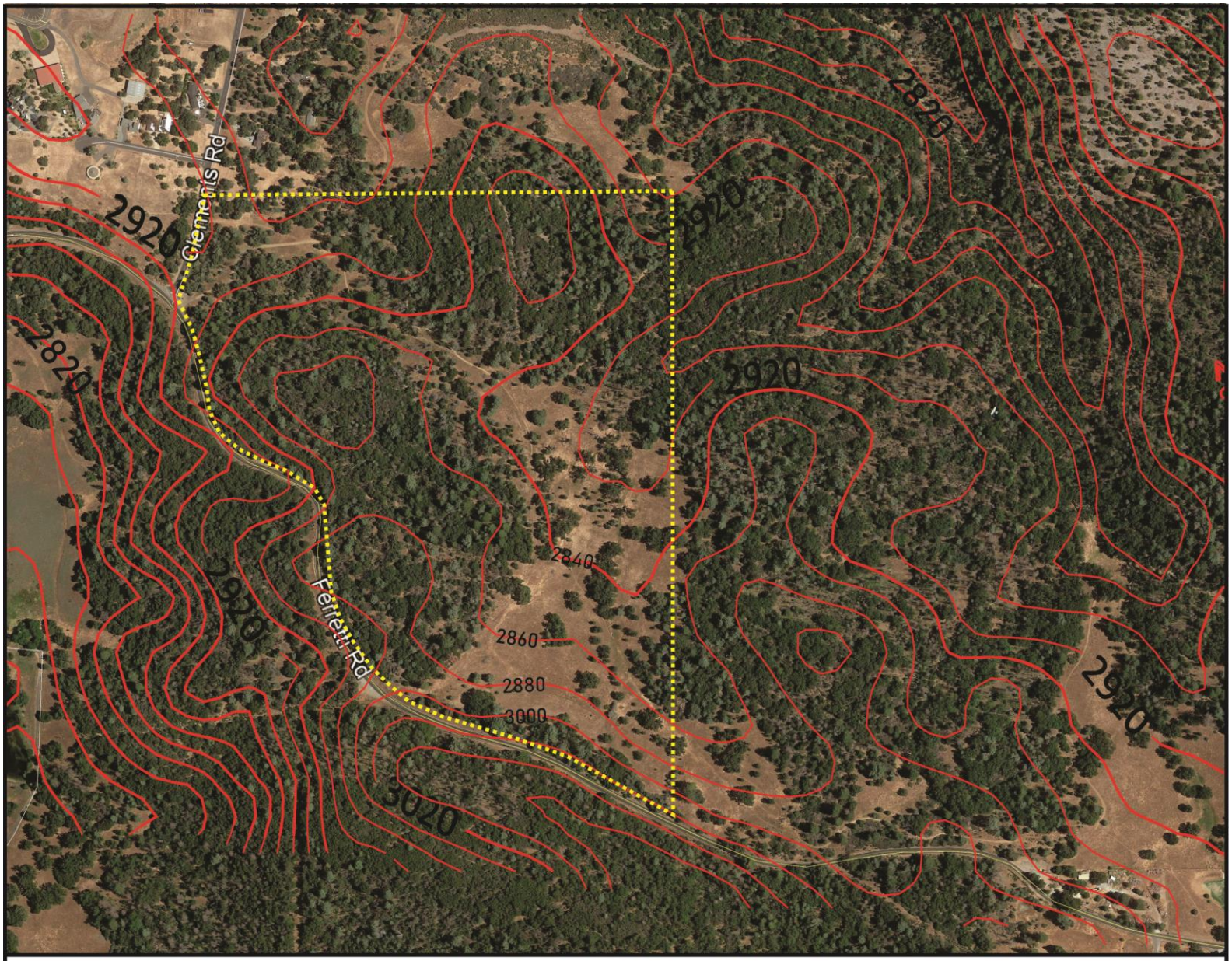

Figure 4. Google Earth Photograph of Proposed Long Gulch Subdivision Showing Topographic Contours

Image Date: 6/25/2018

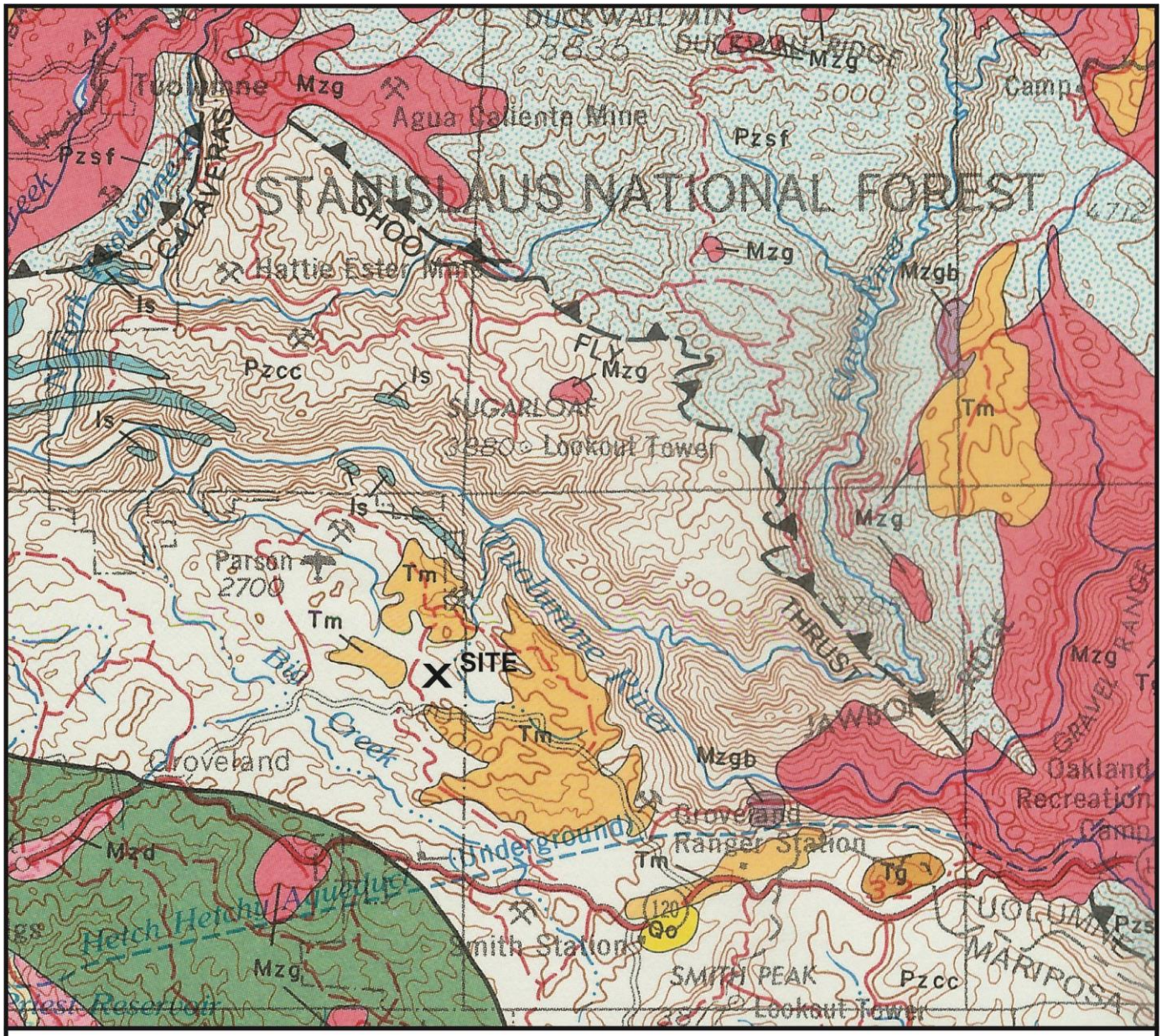

Figure 5. Regional Geologic Map

0 5 10

SCALE (miles)

LEGEND

CENOZOIC

- Pzsf — Older Alluvium
- Tm — Mehrten Formation

MESOZOIC

- Mzg — Granitic Rocks
- Mzd — Dioritic Rocks
- Mzgb — Gabbroic Rocks

PALEOZOIC

- Is — Crystalline Limestone and Dolomite
- Pzcc — Calaveras Complex
- Pzsf — Shoo Fly Complex
- Jms — Jurassic(?) Metasedimentary rocks

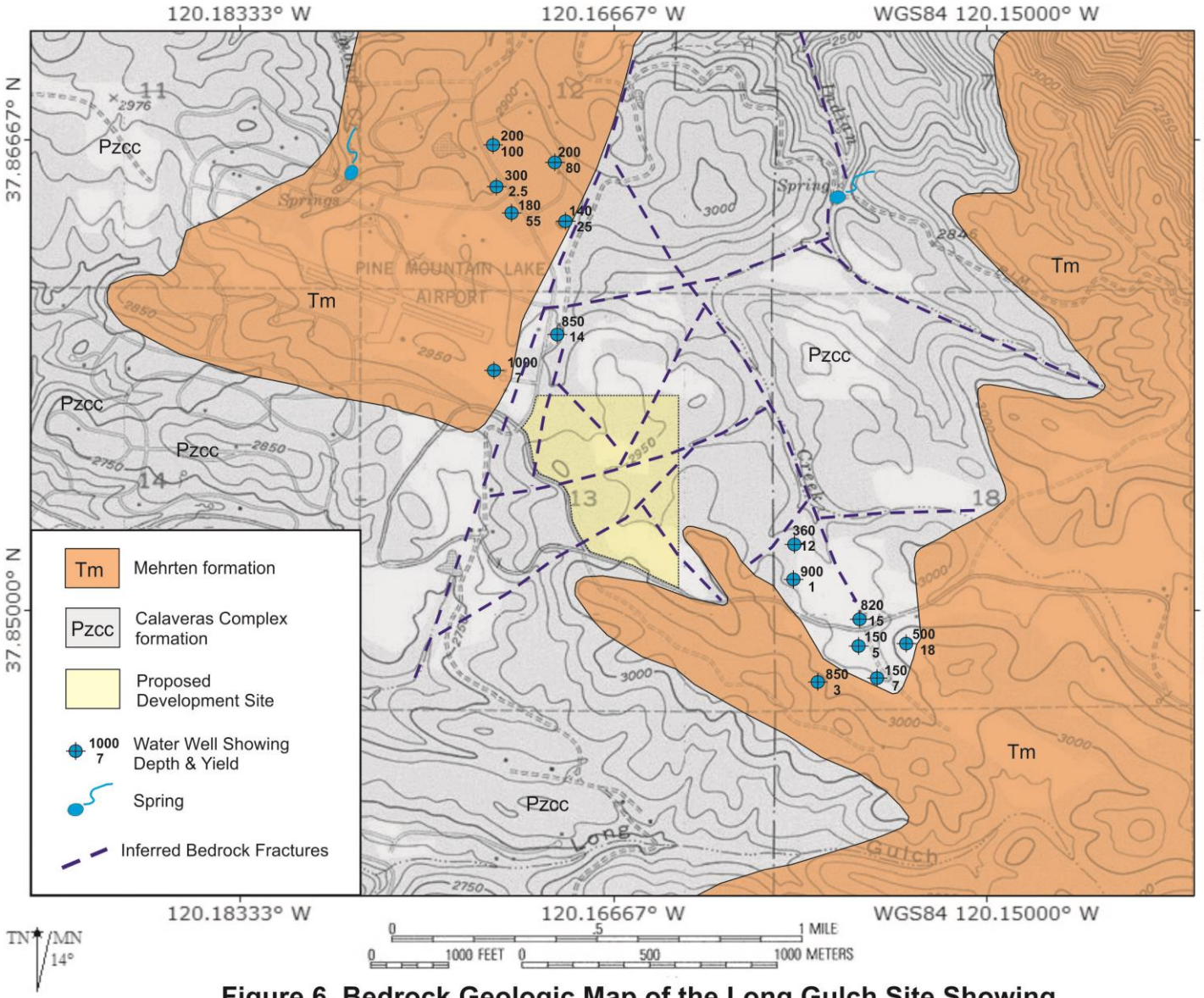

Figure 6. Bedrock Geologic Map of the Long Gulch Site Showing Proposed Development Area, Existing Wells And Inferred Bedrock Fractures

Geology Adapted from Schweickert, R.A., 1977, et. al.

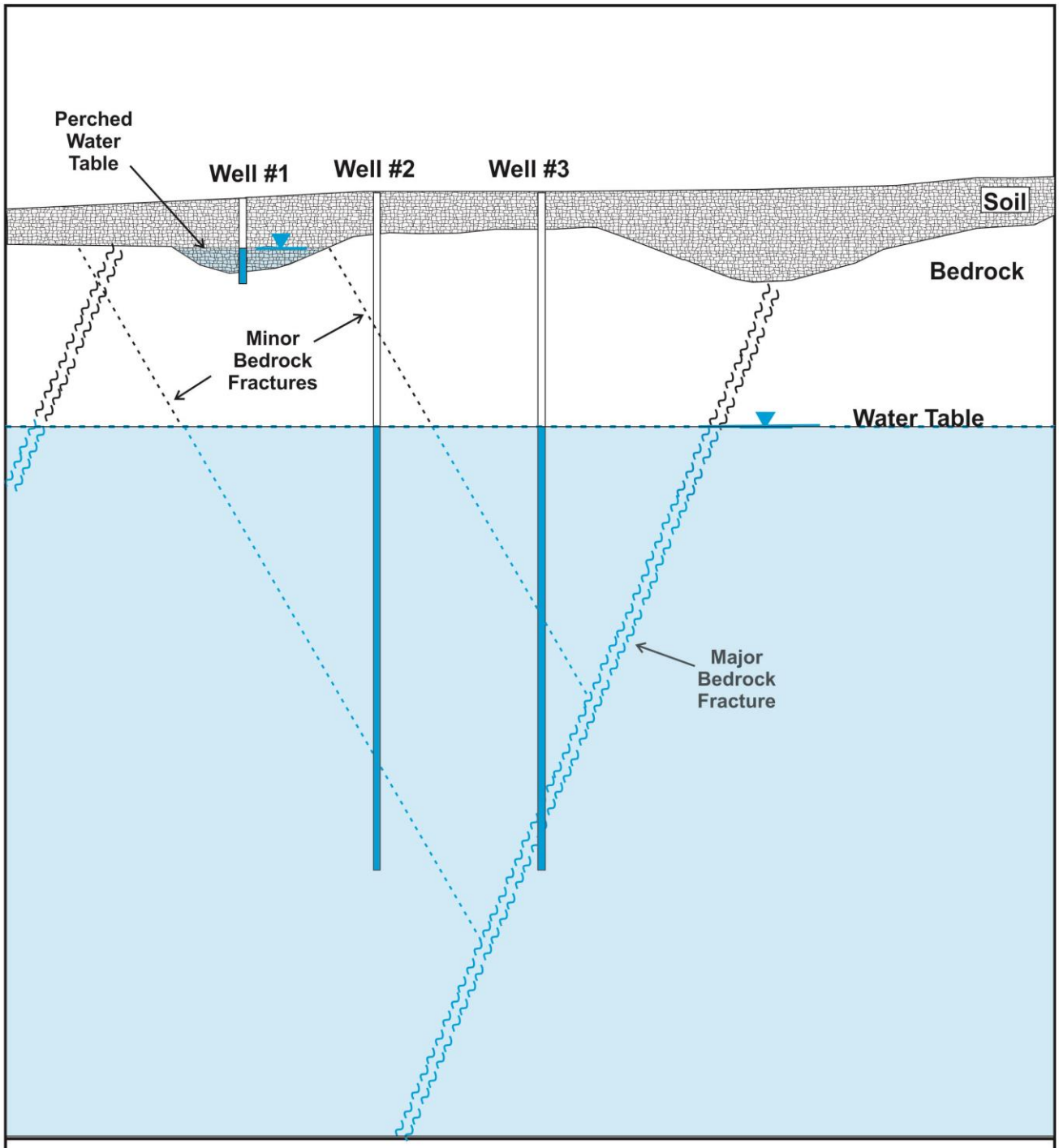

Figure 7. Schematic Cross Section Diagram
Explaining Fracture-Controlled Bedrock Aquifer Characteristics

Well #1 Intersects Ground Water in Perched Water Table--Limited Yield and Storage
Well #2 Intersects Ground Water in Minor Bedrock Fracture=Limited Yield but Likely Large Storage
Well #3 Intersects Ground Water in Major Bedrock Fracture--High Yield and Likely Large Storage