Tenaya Cabins Project
Draft Environmental Impact Report

August 2016

PREPARED FOR:
Mariposa County Planning Department
P.O. Box 2039 • 5100 Bullion Street
Mariposa CA • 95338
Notice of Availability of a Draft Environmental Impact Report
and Notice of Draft EIR Public Meeting and Hearing

Date: August 26, 2016

Lead Agency: County of Mariposa Board of Supervisors


Location: Fish Camp, Mariposa County

SCH #: 2015021032

Project Summary: Delaware North (DN), the owner and operator of the Tenaya Lodge, has proposed a two parcel land division (LDA 2014-165), General Plan/Specific Plan zoning amendment (SPZA 2014-163), and conditional use permit (CUP 2014-164) on assessor’s parcel number (APN) 010-350-008. Proposed Parcel 1 is a 24.82 acre parcel; the land use is proposed to be amended from Single Family Residential 1-acre to Resort Commercial for the construction of 54 pre-fabricated cabins and a clubhouse (approximately 2,700 square feet). Proposed Parcel 2 is a 21,782 square foot parcel; the land use is proposed to be amended from Single Family Residential 1-acre to Single Family Residential ½-acre for a future single family residence. The project site is located immediately north of the Tenaya Lodge and is primarily undeveloped forested land that includes a one-acre pond (Rainbow Lake) at the northern end, Big Creek on the eastern side, meadow and wetlands on the southern portion of the site, and State Highway 41 on the western side.

Draft EIR Availability and Comment Period: The County has prepared a Draft Environmental Impact Report (Draft EIR or DEIR) pursuant to the California Environmental Quality Act (CEQA) for the Tenaya Cabins Project. The Draft EIR was filed with the State Clearinghouse and released for public review and comment on August 26, 2016.

The Draft EIR and the Tenaya Cabins application materials are available for public review at the following locations:

Mariposa County Planning
5100 Bullion Street
Mariposa, CA 95338

Mariposa Library
4978 10th Street
Mariposa, CA 95338

Wawona Library
7971 Chilnualna Road
Wawona, CA 95389

Hours:
M-F 8 – 5

Hours:
M 8:30-4, T-F 8:30-6, Sat 8:30-4

Hours:
M-F 1-6, Sat 10-3
A CD of the Draft EIR is available from the Planning Department at no cost. Limited printed hardcopies are also available. Please contact the Planning Department to request either a CD or hardcopy.

Interested individuals, groups, and agencies may provide the County with written comments on the environmental issues related to the EIR. Agencies that will use the EIR when considering permits or other approvals for the proposed project should provide the name of a contact person. Comments provided by email should include “Tenaya Cabins” in the subject line, and the name and physical address of the commenter in the body of the email.

Because of time limits mandated by State law, comments should be provided no later than 5:00 p.m. on October 11, 2016.

Comments will be accepted by US Mail, email or fax. Please send all comments to:

Steve Engfer, Associate Planner
Mariposa County Planning Department
PO Box 2039 Mariposa, CA 95338
Telephone: (209) 966-5151
Fax number (209) 742-5024
Email: sengfer@mariposacounty.org

Public Hearing: The Mariposa County Planning Commission will hold a public hearing to receive comments on the Draft EIR on September 23, 2016 at 9:00 a.m. at the Mariposa County Government Center, Board Chambers located at 5100 Bullion Street, Second Floor, Mariposa, CA 95338.

Public Meeting: The Fish Camp Planning Advisory Council will conduct a public meeting on September 24, 2016 at 9:30 a.m. at the Cottages at Tenaya Lodge, 1110 Highway 41, Fish Camp, CA 93623, in the “Timberloft” meeting room. The Planning Advisory Council will receive comments on the Draft EIR.

These meeting spaces are accessible to persons with disabilities. Individuals needing special assistive devices will be accommodated to the best ability of the County. For more information, please contact Carol Suggs (at the contact information above) at least 48 hours before the meeting.

Project questions should be directed to Steve Engfer, Associate Planner at the above phone number and email address.

PLEASE NOTE: The hearing and meeting identified in this notice are only for review and consideration of the proposed project’s environmental impacts. There will be additional noticed public meetings and hearings in the future to review and consider the merits of the project and final project actions.
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Ascent Environmental

Mariposa County

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<tr>
<td>μin/sec</td>
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<td>AASHTO</td>
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<td>AB</td>
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1 INTRODUCTION

The Tenaya Lodge is an existing mountain resort set in forested lands near the southern gate of Yosemite National Park, adjacent to the Sierra National Forest, in Fish Camp, Mariposa County. The Tenaya Lodge offers guest accommodations within a 249-room destination hotel and 53 rooms in 17 separate cottage buildings. The all-season resort offers onsite amenities and access to a range of recreational activities in the surrounding region.

Delaware North (DN), the owner and operator of the Tenaya Lodge, is proposing to divide an undeveloped 26.89-acre parcel, assessor’s parcel number (APN) 010-350-008, located immediately north of the Tenaya Lodge, into two parcels. The first parcel would be rezoned from Single Family Residential 1-acre to Resort Commercial for the construction of 54 pre-fabricated cabins and an approximately 2,700 square-foot clubhouse. The second parcel would be rezoned from Single Family Residential 1-acre to Single Family Residential ½-acre for a future single family residence. The project site is currently forested and bordered by wetlands, meadow, and the Tenaya Lodge to the south, State Highway (Highway) 41 to the west, a 1-acre pond (Rainbow Lake) to the north, and Big Creek to the east.

1.1 TYPE AND PURPOSE OF THE DRAFT EIR

This environmental impact report (EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulation, Title 14, Chapter 3, Section 1500, et seq.) to evaluate the physical environmental effects of the proposed Tenaya Cabins Project. Mariposa County is the lead agency for consideration of this EIR and proposed project approval. CEQA requires that public agencies consider the potentially significant adverse environmental effects of projects over which they have discretionary approval authority before taking action on those projects (PRC Section 21000 et seq.). CEQA also requires that each public agency avoid or mitigate to less-than-significant levels, wherever feasible, the significant adverse environmental effects of projects it approves or implements. If a project would result in significant and unavoidable environmental impacts (i.e., significant effects that cannot be feasibly mitigated to less-than-significant levels), the project can still be approved, but the lead agency’s decision makers, in this case the Mariposa County Board of Supervisors, must prepare findings and issue a “statement of overriding considerations” explaining in writing the specific economic, social, or other considerations that they believe, based on substantial evidence, make those significant effects acceptable (PRC Section 21002; State CEQA Guidelines Section 15093).

According to the State CEQA Guidelines (Section 15064[f][1]), preparation of an EIR is required whenever a project may result in a significant adverse environmental impact. An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify feasible ways to mitigate or avoid those effects, and describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

1.2 SCOPE OF THE DRAFT EIR AND EFFECTS FOUND NOT TO BE SIGNIFICANT

CEQA requires a lead agency to focus the discussion of environmental effects on those that are considered potentially significant (PRC Section 21100, State CEQA Guidelines Sections 15126.2[a] and 15128). A determination of which impacts would and would not be potentially significant was based on review of the Tenaya Cabins application materials (Appendix A, and on file at the County) and comments received as part of
the public scoping process (Appendix B), as well as additional research and analysis of relevant project data during preparation of this Draft EIR.

### 1.2.1 Effects Found Not to be Significant

As described in Chapter 4, Section 4.2, “Effects Found Not to be Significant,” the Tenaya Cabins Project would not result in significant adverse environmental impacts related to the following resources.

- Agricultural Resources
- Population and Housing
- Schools
- Parks and Recreation

Please see the discussion in Section 4.2 for details regarding why the project would not significantly affect these resources.

### 1.2.2 Scope of the Draft EIR

The County has determined that the Tenaya Cabins Project has the potential to result in significant environmental impacts on the following resources, and they are analyzed in detail in the referenced sections of this Draft EIR:

- Section 4.3 Land Use and Forest Resources
- Section 4.4 Biological Resources
- Section 4.5 Cultural Resources
- Section 4.6 Transportation and Circulation
- Section 4.7 Air Quality
- Section 4.8 Greenhouse Gas Emissions and Climate Change
- Section 4.9 Noise
- Section 4.10 Geology, Soils, and Seismicity
- Section 4.11 Hydrology and Water Quality
- Section 4.12 Utilities and Public Services
- Section 4.13 Hazards and Hazardous Materials
- Section 4.14 Visual Resources

The format and content of this Draft EIR is designed to meet the requirements of CEQA and Mariposa County. This document is organized into chapters as described below.

**Chapter 1, “Introduction,”** establishes the purpose and scope of the Draft EIR; summarizes effects found not to be significant; defines the environmental baseline; provides a summary of environmental and project review requirements; describes the project context and background; summarizes the public review process; and describes the organization of the Draft EIR.

**Chapter 2, “Executive Summary,”** introduces the Tenaya Cabins Project; summarizes the proposed project alternatives; provides a summary of the environmental impacts and mitigation measures; and lists areas of known controversy.

**Chapter 3, “Project Description,”** describes the project location and existing conditions, project objectives, and proposed characteristics of the Tenaya Cabins Project, including an estimated construction schedule. Other potential approvals and required permits are also presented.

**Section 4.1, “Approach to Environmental Analysis,”** describes the approach to the impact analyses in the resource sections.
Section 4.2, “Effects Found Not to be Significant,” discusses those environmental resources to which the Tenaya Cabins Project would result in no impact or a less-than-significant impact (with no required mitigation). Each resource discussion provides substantial evidence for why the construction and operation of the project would not result in adverse effects.

Sections 4.3 through 4.14 address the environmental resource categories listed above. Each section includes the following subsections and evaluates the potential environmental impacts generated by the Tenaya Cabins Project:

- “Regulatory Setting” summarizes the applicable regulatory framework, including the federal, state, and local laws and regulations that may apply to the project;
- “Existing Environmental Setting” describes the existing conditions as they relate to the attributes of the environment that could be affected by the Tenaya Cabins Project;
- “Significance Criteria” lists the relevant federal, state, and local standards (e.g., water quality standards, air quality standards, zoning provisions) and other criteria by which a change in the environment can be assessed;
- “Methods and Assumptions” discloses the resource-specific analysis methods and assumptions; and
- “Impacts and Mitigation Measures” discusses the anticipated changes to existing environmental conditions resulting from construction and operation of the Tenaya Cabins Project. The level of significance is identified for each impact based on a comparison with the significance criteria. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented along with a discussion of the impact’s level of significance after mitigation. Environmental impacts are numbered sequentially within each chapter (e.g., Impact 4.4-1, Impact 4.4-2, etc.). Any required mitigation measures are numbered to correspond to the impact numbering; therefore, the mitigation measure for Impact 4.4-1 would be Mitigation Measure 4.4-1.

Chapter 5, “Cumulative Impacts,” discusses the potential cumulative impacts that would result from implementation of the Tenaya Cabins Project together with other past, present, or probable future projects and the project’s potential to make a cumulatively considerable (significant) contribution to those impacts.

Chapter 6, “Alternatives Analysis,” evaluates alternatives to the Tenaya Cabins Project, including a No Project Alternative as required by CEQA, and identifies the environmentally superior alternative.

Chapter 7, “Other CEQA-Mandated Sections,” evaluates growth-inducing impacts and irreversible and irretrievable commitment of resources, and discloses any significant and unavoidable adverse impacts.

Chapter 8, “Report Preparers,” identifies the lead and responsible agency contacts as well as the preparers of this Draft EIR.

Chapter 9, “References and Persons Consulted,” identifies the organizations and persons consulted during preparation of this Draft EIR and the documents used as sources for the analysis.

1.3 DEFINITION OF BASELINE

CEQA Guidelines Section 15125 states, “An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published, or if no NOP is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall
be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives.” As described below, the County issued an NOP for the proposed project in February 2015. The project was subsequently revised by the applicant and a revised NOP was issued on July 17, 2015. Because the majority of project technical studies were conducted in late 2014 and 2015, and environmental conditions have not substantially changed since then, the baseline conditions for this Draft EIR are generally the conditions as they existed at the time that the February 2015 NOP was published. Environmental conditions at that general point in time are used in this EIR as the point of comparison for determining the significance of the environmental effects. The baseline conditions for each environmental resource topic are described under “Environmental Setting” throughout Sections 4.3 through 4.14.

1.4 SIGNIFICANCE CRITERIA

The State CEQA Guidelines (Section 15382) define a significant effect on the environment as:

...a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Sections 4.3 through 4.14 identify the standards used to determine the level of significance of the environmental impacts for each resource topic, in accordance with the State CEQA Guidelines (Sections 15126, 15126.2, and 15143). The topics upon which these thresholds of significance were developed are based on the environmental checklist in Appendix G of the State CEQA Guidelines; the Mariposa Countywide General Plan; best available data; and regulatory standards of federal, state, and local agencies. The significance of each impact is determined by comparing the effects of the project to the baseline condition and determining whether substantial, adverse physical changes would result. Methods and assumptions used to frame and conduct the impact analyses are described in Sections 4.3 through 4.14 for each resource topic.

1.5 ENVIRONMENTAL REVIEW PROCESS AND PUBLIC INVOLVEMENT

1.5.1 Environmental Review Process

The Tenaya Cabins Project site is within Mariposa County, and the County is the lead agency under CEQA. This EIR has been prepared in accordance with the CEQA Statute (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). This EIR is not, in and of itself, a decision document. Rather, the purpose of this document is to disclose the environmental consequences of implementing the proposed project, and identify alternatives and/or measures to avoid, minimize, or otherwise mitigate significant adverse physical environmental effects.

CEQA requires decision makers to balance the benefits of a project against its unavoidable significant environmental effects in deciding whether to approve the project. Mariposa County will consider the Draft EIR and comments received on the Draft EIR, and will respond to comments on the environmental analysis before making a decision. If significant environmental effects are identified, the lead agency must adopt “Findings” indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those significant effects. If the impacts are identified as significant and unavoidable because there are no feasible mitigation measures or alternatives that render such impacts less than significant, the lead agency may still approve the project if it determines that specific economic, legal, social, technological, or other benefits outweigh the unavoidable adverse environmental effects. On this basis, the lead agency would then be required to prepare a “Statement of Overriding Considerations” for review and approval by the decision
makers that discusses the specific reasons for approving the project, based on information in the EIR and other information in the record.

This disclosure would allow the responsible reviewing officials of Mariposa County to approve the Tenaya Cabins Project following certification of the EIR. The Mariposa County Board of Supervisors is the decision-making body under CEQA. The Board’s decisions will involve:

- Certification of the EIR,
- Land Division (APN 010-350-008 into two parcels),
- Rezone APN 010-350-008 from 1-acre Residential to Resort Commercial or Resort Commercial Planned Unit Development (PUD) (Parcel 1),
- Rezone new parcel from 1-acre Residential to ½-acre Residential (Parcel 2),
- Amend the General Plan and Fish Camp Town Planning Area Specific Plan, and
- Conditional Use Permit.

1.5.2 Public Involvement

An NOP informs the public of the lead agency’s intent to prepare an EIR pursuant to CEQA. As described above, an NOP for an EIR was issued by Mariposa County in February 2015 for the original project proposal, which included the same land division into two parcels and the same type of development as the current proposal, but included 34 cabins rather than 54. The NOP was sent to the California State Clearinghouse, federal, state, and local agencies, and members of the public.

Following the changes to the proposed project, a revised NOP was released on July 17, 2015 notifying the public that Mariposa County would be preparing an EIR for the revised project that now proposes 54 prefabricated cabins and a clubhouse on Parcel 1, and a potential future residence on Parcel 2. A scoping meeting was held to provide agencies and the public with the opportunity to learn more about the Tenaya Cabins Project and to provide input as to the issues that should be addressed in the EIR. An agency and tribal site visit was held at 1:00 p.m. on August 13, 2015 and a public scoping meeting was held at 6:00 p.m. on August 13, 2015. At these meetings, Mariposa County staff made presentations to describe the proposed project and to discuss key environmental issues identified in preliminary analyses, and received input from public agencies and members of the public on the scope of issues that should be addressed in the EIR.

Appendix B of this EIR contains both the first and second NOPs as well as scoping comments received during both of the public scoping periods.

This Draft EIR was released on August 26, 2016 for public review and comment for a 45-day period. The Draft EIR and project application are available for public review online at:

The Draft EIR and Tenaya Cabins application materials are also available for public review at the following locations:

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Interested individuals, groups, and agencies may provide the County with written comments on the environmental issues related to the EIR. Agencies that will use the EIR when considering permits or other approvals for the proposed project should provide the name of a contact person. Comments provided by email should include “Tenaya Cabins” in the subject line, and the name and physical address of the commenter in the body of the email.

Because of time limits mandated by State law, comments should be provided no later than 5:00 p.m. on October 11, 2016. Please send all comments to:

Sarah Williams, Planning Director  
Mariposa County Planning Department  
PO Box 2039 Mariposa, CA 95338  
Telephone: (209) 966-5151  
Email: swilliams@mariposacounty.org

Comments provided in the U.S. mail as well as by email will be accepted. A public hearing will be held during the 45-day review period to receive agency and public comments on the environmental analysis. The hearing will be held on September 23, 2016 at 9:00 a.m. at the Mariposa County Planning Commission meeting, which will be held at the Government Center Board Chambers Mariposa County Government Center on 5100 Bullion Street, Second Floor, Mariposa, CA 95338. In addition, there will be a hearing on September 24, 2016 with the Fish Camp Planning Advisory Council at 9:30 a.m. at the Cottages at Tenaya Lodge, 1110 Highway 41, Fish Camp, CA 93623, in the “Timberloft” meeting room.

The meeting space is accessible to persons with disabilities. Individuals needing special assistive devices will be accommodated to the best ability of the County. For more information, please contact Carol Suggs (at the contact information above) at least 48 hours before the meeting.

All comments received prior and up to the close of the public review period on the Draft EIR will be reviewed and considered, and written responses will be provided to environmental points raised. Following completion of the responses to comments and preparation of the Final EIR, Mariposa County will make the final determination of the project’s effect on the environment, as described above.

1.6 DEFINITION OF TERMS

This Draft EIR uses a variety of terms to describe the level of significance of adverse impacts identified during the course of the environmental analysis. These and other terms are defined below.

- A “less-than-significant impact” is an impact that is adverse but that is not substantial and does not exceed the defined thresholds of significance. Less-than-significant impacts do not require mitigation.

- A “significant impact” is an impact that exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.
A “potentially significant impact” is an impact for which information may not be definitive, but where it is likely or reasonably foreseeable that a significant impact could result. A potentially significant impact is equivalent to a significant impact and requires the identification of feasible mitigation measures or alternatives to eliminate the impact or reduce it to a less-than-significant level.

A “significant and unavoidable impact” is an impact that exceeds the defined thresholds of significance and that cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures.

“No Impact” means no change from existing conditions (no mitigation is required).

“CEQA Lead Agency” or “the County” means Mariposa County.

“Project applicant” means Delaware North (DN).

“Parcel 1” means the approximately 26-acre parcel where the Tenaya Cabins Project is proposed and the parcel that would be rezoned to Resort Commercial.

“Parcel 2” means the new ½-acre parcel that would be rezoned Single Family Residential ½-acre, allowing for a future single-family residence.

“Project site” means the entirety of Parcel 1 and Parcel 2 as well as utility connections.
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EXECUTIVE SUMMARY

SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

2.1 Background and Project Location

The Tenaya Lodge is an existing mountain resort set in forested lands near the southern gate of Yosemite National Park, adjacent to the Sierra National Forest, in Fish Camp, Mariposa County (Exhibit 2-1). The Tenaya Lodge offers guest accommodations within a 249-room destination hotel and 53 rooms in 17 separate cottage buildings. The all-season resort offers onsite amenities and access to a range of recreational activities in the surrounding region.

Delaware North (DN), the owner and operator of the Tenaya Lodge, is proposing to divide assessor’s parcel number (APN) 010-350-008 (Exhibit 2-2), located immediately north of the Tenaya Lodge, into two parcels. The first parcel would be rezoned from Single Family Residential 1-acre to Resort Commercial for the construction of 54 pre-fabricated cabins and a clubhouse (approximately 2,700 square feet [sf]). The second parcel would be rezoned from Single Family Residential 1-acre to Single Family Residential ½-acre for a future single family residence. The project site is primarily undeveloped forested land that includes a one-acre pond (Rainbow Lake) at the northern end, Big Creek on the eastern side, and meadow and wetlands on the southern portion of the site. The total project site acreage assessed in this Draft EIR includes Highway 41 and the utility connections to the Tenaya Lodge, which represents 30.03 acres. Assessor’s parcel number 010-350-008 represents 26.89 acres of this total.

2.1.2 Project Objective

The objectives of the proposed Tenaya Cabins Project are (1) to provide a more rustic lodging option for guests with the conveniences of a resort while allowing them to experience the natural beauty of the Sierra National Forest area in a minimally-developed setting and (2) to subdivide the project site to allow for a potential future residence for the property owner.

2.1.3 Project Characteristics

The Tenaya Cabins Project would include up to 54 pre-fabricated cabins set on concrete pier footings or concrete slab-on-grade foundations. Each cabin would have an area of approximately 675 square feet of room space (plus approximately 75 square feet of deck) and would be served by sanitary sewer, potable water, electricity, telephone, data, and cable television services. The proposed site plan is designed to accommodate the existing topography of the site; minimize the impacts to existing natural features such as rock formations, trees, the Big Creek riparian corridor, Rainbow Lake, and wetlands; and maximize the buffer between the cabins and Highway 41.

The proposed multi-use clubhouse would be located adjacent to Big Creek on the eastern boundary of the site and would include a large outdoor deck, fire pit, barbeque, hot tub and swimming pool. The clubhouse would be used for guest registration, administrative offices, events, laundry facilities, a small grocery, a residential-style kitchen, and recreational activities. The clubhouse would be designed to accommodate seating for 60 people on the deck and provide indoor facilities capable of holding smaller parties. Amplified sound for events at the clubhouse would conclude at 10:00 p.m.; however, events could continue past that time.
Vehicular access to the Tenaya Cabins is proposed from Highway 41 at the same location as an existing dirt-road entrance to the site. The entrance would be configured to meet Caltrans requirements for acceleration and deceleration distances and turning lane requirements. Onsite roads would follow existing dirt roads where possible and would be routed around existing trees, vegetation, and rock formations whenever possible to maximize visual screening. The project roads would be paved with asphalt and designed in compliance with Mariposa County standards for slope, width, turning radius and fire and emergency access.

The proposed site plan provides 1.5 parking stalls for each cabin plus seven additional stalls to account for retail, office and associate parking in accordance with the Fish Camp Town Planning Area Specific Plan, which results in 88 parking stalls. Per the California Accessible Code (2013 California Building Code Chapter 11B), seven cabins would be designed to conform to the requirements of the Americans with Disabilities Act (ADA) Standards for Accessible Design. Therefore, these seven cabins would have an ADA-compliant parking space. There would also be an ADA-compliant parking stall at the clubhouse for registration. Parking would be clustered to maintain visual separation between parked vehicles and the cabins.

Utilities would be installed underground within the limits of the paved access roads where feasible, and would comply with separation standards set by the State of California and the Mariposa County Health Department. Wastewater would be collected with a below-grade piping system and gravity fed to a lift station located near the low point of the property. From the lift station, wastewater would be pumped to the new Tenaya Lodge Wastewater Treatment Plant (WWTP) (operational as of January 2016) located south of the project site on the southwestern side of the Tenaya Lodge property, south of the cottages. In addition, an existing Tenaya Lodge leach field, located between the lodge and the project site, would be expanded to accommodate the project-related increase in tertiary-treated effluent discharge from the WWTP. An additional 637 linear feet of leach lines would be constructed to provide disposal capacity for the proposed Tenaya Cabins at full occupancy.

Water for domestic and firefighting purposes would be provided by the existing Tenaya Lodge water system. Fire hydrants would be located adjacent to the paved access road per the requirements of Mariposa County Fire Department. Fire water storage is estimated to be between 120,000 and 150,000 gallons, per Mariposa County requirements.

Electricity would be extended from existing PG&E facilities. Telephone, data and cable television service would be extended from Tenaya Lodge, so the services are integrated with the main lodge.

The proposed project includes a land division to create a ½-acre parcel for residential use. This parcel would require an amendment from Single Family Residential 1-acre residential to Single Family Residential ½-acre land use classification per Fish Camp Town Planning Area Specific Plan and Mariposa County requirements. Although no development is currently proposed for this parcel, it is assumed that a residence would be built on the site in the future. Therefore, the Tenaya Cabins Project would provide vehicular access and utilities (water, wastewater, electricity) to the residential parcel. Per County requirements, all main access road grading and improvements would occur within a 40 to 60-foot easement.

### 2.2 ENVIRONMENTAL IMPACTS AND PROPOSED AND RECOMMENDED MITIGATION

This Environmental Impact Report (EIR) has been prepared pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000, et seq.) to evaluate the physical environmental effects of the proposed Tenaya Cabins Project. Mariposa County is the lead agency for consideration of this EIR and proposed project approval. The County will use this document to make decisions based on its planning policies and statutory requirements. After receiving comments from the public and reviewing agencies on this Draft EIR, a Final EIR will be prepared that will include responses to comments received on
the Draft EIR. If the decision is made to approve the project, a Notice of Determination will be published for compliance with CEQA.

Chapter 4 of this Draft EIR describes the potential environmental impacts of the project and recommends various mitigation measures to reduce impacts. Impacts are determined to be: 1) no impact; 2) less than significant (adverse or potentially adverse effects that are not substantial); 3) significant or potentially significant (substantial or potentially substantial adverse changes in the environment, for which mitigation measures are required); or 4) significant and unavoidable (substantial or potentially substantial adverse changes in the environment that cannot be feasibly reduced to a less-than-significant levels with mitigation measures).

Chapter 5 presents the cumulative impact discussions to determine whether the incremental effects of the Tenaya Cabins Project are significant when viewed in combination with the effects of past projects, other current projects, and probable future projects.

As disclosed in Section 4.2 of this Draft EIR, for the following environmental issue areas, all project and cumulative effects were found to either result in no impact or less-than-significant impacts (no mitigation required) and were therefore not evaluated further in the EIR:

- Agricultural Resources
- Population and Housing
- Schools
- Parks and Recreation

As discussed throughout the following resource sections in Chapter 4 of this Draft EIR, these environmental impacts were found to be less than significant, and no mitigation would be required:

- Section 4.3, Land Use and Forest Resources
- Section 4.6, Transportation and Circulation
- Section 4.7, Air Quality
- Section 4.12, Utilities and Public Services
- Section 4.14 Visual Resources

As discussed throughout the following resource sections in Chapter 4 of this Draft EIR, one or more environmental impacts were found to be potentially significant or significant for these resources. However, these impacts would be reduced to less-than-significant levels with implementation of mitigation. No significant and unavoidable impacts were identified.

- Section 4.4, Biological Resources
- Section 4.5, Cultural Resources
- Section 4.8, Greenhouse Gas Emissions and Climate Change
- Section 4.9, Noise
- Section 4.10, Geology, Soils, and Seismicity
- Section 4.11, Hydrology and Water Quality
- Section 4.12, Utilities and Public Services
- Section 4.13, Hazards and Hazardous Materials

### 2.3 ALTERNATIVES TO THE PROPOSED PROJECT

The following summary provides brief descriptions of the alternatives evaluated in this Draft EIR. Table 2-2 presents a comparison between the alternatives and the proposed project. For a more thorough discussion of project alternatives, see Chapter 5, “Alternatives.”
Executive Summary

Alternative 1: No Project – No Development Alternative, which assumes no new development occurs on the project site.

Alternative 2: No Project – Fish Camp Town Planning Area Specific Plan Alternative, 1-acre Parcels, which assumes development in accordance with existing land use designations and zoning under the Fish Camp Specific Plan (single family residential with one acre lots). With consideration of environmental site constraints, this would include up to 20 single-family residential lots with up to 20 secondary units, and associated infrastructure.

Alternative 3: No Project – Fish Camp Town Planning Area Specific Plan Alternative, 1/2-acre Parcels, which assumes an amendment to the Fish Camp TPA Specific Plan to change the land use designation for the project site from single-family residential with one acre lots to single-family residential with half acre lots. This alternative then assumes development of residential on the half-acre lots in accordance with the Fish Camp TPA Specific Plan. With consideration of environmental site constraints, this would include up to 37 single-family residential lots with up to 37 secondary units and associated infrastructure.

Alternative 4: Reduced Density Alternative (34 Units), which assumes the same project as proposed, with resort commercial on Parcel 1 and a ½-acre residential parcel; however, this alternative would have a reduced number of cabins.

The No Project – No Development Alternative, is the environmentally superior alternative, as all of the significant impacts of the project would be avoided. CCR Section 15126.6 suggests that “If the environmentally superior alternative is the ‘no project,’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

Of the development alternatives, Alternative 4, would be the environmentally superior alternative. This alternative would meet the basic project objectives and although this alternative would result in similar less-than-significant or mitigable environmental impacts, it would reduce the severity of impacts to biological resources, cultural resources, transportation, air quality, greenhouse gas emissions, hydrology and water quality, utilities, public services, and hazards.

2.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

The following areas of potential controversy were raised in scoping comments in response to the NOPs on the Tenaya Cabins Project:

- the effects of the proposed use of groundwater on existing water supplies in the community of Fish Camp, and adequacy of the proposed groundwater water supply to serve the project;
- the effects on cultural resources and the need for consultation with Native American Tribes;
- traffic associated with the proposed project, line of sight and safety on Highway 41, and cumulative traffic congestion conditions;
- the effects on biological resources, including special status species and the potential for noxious weeds;
- the potential for exposure to wildfire hazards, high fire hazard zone;
- the adequacy of utilities and public services to serve the proposed project; and
- the effects on air quality, noise, stormwater runoff, and visual resources.
### Table 2-1 Summary of Impacts and Mitigation Measures

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<td><strong>4.3 Land Use and Forest Resources</strong></td>
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<td><strong>Impact 4.3-1: Land use compatibility and potential to divide an established community.</strong> The Tenaya Cabins project site is located in the Town of Fish Camp, which contains single- and duplex residences, the Tenaya Lodge, White Chief Mountain Lodge, Jack L. Boyd Outdoor School and Camp Green Meadows Fish Camp, and designated general forest areas. Project implementation would be consistent with the Fish Camp TPA Specific Plan and compatible surrounding land uses and would not result in the division of an established community. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<td><strong>Impact 4.3-2: Conflict with relevant plans, policies, and zoning adopted for the purpose of avoiding or mitigating an environmental effect.</strong> Implementation of the project would be consistent with the goals and policies established by the Mariposa County General Plan and the Fish Camp TPA Specific Plan such that rural quality and natural resources would be conserved during and after project implementation. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<td><strong>Impact 4.3-3: Result in the loss of forest land or the conversion of forest land to non-forest use.</strong> The project site is currently zoned 1-acre Single Family Residential under the Fish Camp TPA Specific Plan. Although the site is not zoned forest land, it is undeveloped and forested, supporting 10 percent native tree cover and meeting the “forest land” definition (Public Resources Code Section 12220(g)). Project implementation would result in the removal of some trees, which may be harvested for sale. Therefore, the applicant would secure a Timberland Conversion Permit and receive approval of a Timber Harvest Plan prior to any tree removal. Further, the project site would continue to support at least 10 percent native tree cover after project construction. Therefore, the project would result in a less-than-significant conversion of forest land to non-forest use.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<td><strong>4.4 Biological Resources</strong></td>
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<td><strong>Impact 4.4-1: Loss of forest habitat and movement corridors.</strong> The Tenaya Cabins Project would convert an estimated 25.39 acres of the 30.03 acre project site, from natural habitat to development. The majority of this development would be within montane coniferous forest, which is a habitat type common in the region. The location of the site and proximity to existing development limits its suitability as a wildlife corridor. The development of the project site would not result in a substantial loss of habitat for any species or substantial interference with wildlife movement. Therefore,</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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### Executive Summary

The impact of the project on natural habitat types and movement corridors would be less than significant.

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<td><strong>Impact 4.4-2: Impacts to special-status plant species.</strong> No special-status plant species are known to occur on the site; however, two watch list (CRPR 4) plant species are documented on the project site—Coleman’s rein orchid and oak-leaved nemophila. The mapped population of oak-leaved nemophila would be avoided by project activities. One of two mapped populations of Colman’s rein orchid would likely be damaged or destroyed during project construction; however this would not be a substantial adverse effect on this species as a whole. Project impacts to special-status plant species would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
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<td><strong>Impact 4.4-3: Impacts to special-status bird species.</strong> There are five special-status bird species that have a moderate or higher potential to forage within the project site. Of these, only olive-sided flycatcher and Vaux’s swift are likely to nest on the project site. Implementation of the Tenaya Cabins Project would not substantively reduce habitat in the region for these species. However, the project could result in loss of special-status species bird nests during project construction. Should loss of nests occur, it would be a significant impact.</td>
<td>S</td>
<td>Mitigation Measure 4.4-3: Avoid and minimize impacts to special-status bird species. To minimize potential disturbance to nesting birds, vegetation removal, grading and other ground disturbing activities associated with construction of the project shall occur during the non-breeding season (September 1-February 28), unless it is not feasible to do so, in which case the following measures shall also be applied. If construction activity is scheduled to occur during the nesting season (February 28 to September 1), a qualified biologist shall conduct preconstruction surveys to identify active special-status bird nests within the project site that could be affected by project construction. Surveys shall be performed before activities occur (e.g., grading, tree removal, trenching, construction) and no less than 14 days and no more than 30 days before the beginning of activity. If no nests are found, no further mitigation is required. If active nests are found, impacts on special-status bird species shall be avoided by establishment of appropriate buffers around the nests, as determined by a qualified biologist in consultation with CDFW. No project activity shall commence within the buffer area until a qualified biologist confirms that any young have fledged or the nest is no longer active. A 50-foot buffer around olive-sided flycatcher and Vaux’s swift nests are generally adequate to protect them from disturbance, but the size of the buffer may be adjusted by a qualified biologist in consultation with CDFW depending on site specific conditions and species sensitivity to disturbance. Monitoring of the nest by a qualified biologist during construction activities may be required to determine if activity has potential to adversely affect the nest, and to allow for increased buffer size or other measures to avoid impacts to the nest.</td>
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### Table 2-1 Summary of Impacts and Mitigation Measures

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<td><strong>Impact 4.4-4: Impacts to fisher.</strong> Fisher is known to occur in the vicinity of the project site, and may occur within the project site although resting and denning sites are limited and human disturbance of the surrounding area is high. Implementation of the Tenaya Cabins Project would remove and likely reduce suitability of fisher habitat within the project site. Project construction could also result in disturbance of occupied den sites potentially causing mortality, and ongoing pest control could result in the poisoning of individual fishers. Mortality of fisher adults or kits would be a significant impact.</td>
<td>S</td>
<td><strong>Mitigation Measure 4.4-4: Avoid and minimize impacts to fisher.</strong> Although the USFWS has determined that the West Coast DPS of fisher does not require the protection of the ESA, the USFWS has recommended that a conference assessment be prepared and a conference report or conference opinion be obtained from the USFWS (Nagano, pers. comm., 2016). Because of this recommendation, reference to the USFWS is included in the following mitigation. The five trees previously identified as containing cavities that are potentially suitable for fisher den sites, and all trees along the utility corridor that contain suitable cavities that were not previously surveyed for potential den sites, shall be surveyed (using trail cameras) no more than 7 days before the initiation of construction activities within 0.25 miles of potentially suitable den sites to determine whether there are occupied dens. The protocol for pre-construction surveys of potential den sites shall be developed in coordination with CDFW and USFWS. If no occupied dens are detected then no further mitigation is required. If any occupied dens are detected, CDFW and USFWS shall be immediately notified and a disturbance-free buffer of 0.25 mile shall be flagged around the den at ground level. Monitoring of the den site, and any adjustment or removal of buffers shall occur in consultation with CDFW and USFWS. If buffer areas cannot be avoided during construction activities, the following construction schedule shall be implemented. If construction activities must be conducted within the established buffer areas from occupied fisher dens, work in these areas must take place between July 1 and March 1, which is outside of the kit-rearing season. During this period and prior to work occurring within the established buffer, as indicated above the monitoring of the den and the removal of the buffer shall be conducted in coordination with. Once it has been determined that there would be no potential for mortality as a result of den disturbance, the tree may be removed or work conducted within the buffer area with oversight by the qualified biologist.</td>
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<td><strong>Impact 4.4-5: Impacts to special-status bats.</strong> There are two species of special-status bats that are known to forage on the project site: pallid bat and California mastiff bat. Of these two, pallid bats may also roost on the project site as there is suitable roosting habitat present. The Tenaya Cabins Project has a potential to remove pallid bat roosts, and should these roosts be occupied, mortality of pallid bats could occur. This impact would be significant.</td>
<td>S</td>
<td><strong>Mitigation Measure 4.4-5: Avoid and minimize impacts to special-status bats.</strong> To determine if special-status bats may be affected by construction, preconstruction acoustic surveys shall be conducted during an appropriate seasonal period to detect bats, which at this elevation would be mid-April to mid-October. If no special-status bat species are detected, no further mitigation is required. If special-status bat species are detected, surveys to determine the presence of any roosting bats in tree cavities, under bark, or in foliage shall be conducted by a qualified biologist.</td>
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### Table 2-1 Summary of Impacts and Mitigation Measures

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<td>biologist. All trees in the project footprint plus a 300-foot buffer (on the subject property) shall be surveyed. To avoid impacts to roosting bats, if any roost sites are detected, a disturbance-free buffer of 300 foot shall be flagged, and shall not be removed until a qualified biologist has determined that the roost site is no longer in use. If buffer areas cannot be avoided, removal of trees with active roots must occur after August 31 and before October 15 to avoid impacts to roosting bats. Construction activities during that time would not have adverse impacts on maternity roosts because young bats would be independent from their mothers and flying. In addition, day roosts could be identified because bats would still be emerging nightly to forage. A passive eviction plan shall be developed in consultation with CDFW. The eviction plan may include opening the roosting cavity to allow air flow, placing a one-way door on the entrance(s) to the roost, or disturbing the roost using a high-frequency broadcasting device. The roost shall be monitored with acoustic surveys to ensure that no bats are in the roosts before the trees are removed.</td>
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### Impact 4.4-6: Impacts to Yosemite toad.
The construction of the Tenaya Cabins Project would result in an estimated 0.01 acres of permanent effects wet meadow habitat, as well as an estimated 0.02 acres of temporary effects that are likely to occur during construction of the clubhouse facilities and the boardwalk between the project and the Tenaya Lodge. This habitat is suitable for Yosemite toad. These permanent and temporary direct effects on habitat would not be substantive due to the relatively small area affected. However, indirect effects on habitat due to reduced water quality that result from construction and project operations, as well as construction activities that could result in mortality of individual Yosemite toad would be significant. These effects would constitute a significant impact.

**Mitigation Measure 4.4-6: Avoid and mitigate for impacts to Yosemite toad.**

Construction limits in suitable habitat for Yosemite toad (e.g., wet meadow) shall be clearly demarcated with high visibility construction fencing to minimize the disturbance area. No construction activities, including staging or stockpiling materials, shall occur outside of the construction limits. Before any construction activities begin, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training session shall include a description of Yosemite toad and its habitat, natural history, legal status, general measures that are being implemented to conserve Yosemite toad as they relate to the project, and the boundaries within which the project may be accomplished. Instructions on actions to take if a toad is encountered on the project site shall be provided, including name and phone number of biological monitor and USFWS contact information. A qualified biologist shall survey the work site two weeks before the onset of activities in areas of suitable habitat for Yosemite toad (e.g., wet meadow). The pre-construction surveys shall focus on areas that toads may occupy, such as mammal burrows and cover areas under rocks, and shall identify eggs, tadpoles, juvenile, and adult lifestages. If a Yosemite toad is found on the project site, all construction activities in areas of potential habitat shall halt and USFWS shall be contacted. The project shall comply

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<th>NI = No Impact</th>
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Ascent Environmental

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<td>Impact 4.4-7: Impacts to sensitive habitats, wetlands, and waters.</td>
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<td>In addition to the implementation of Mitigation Measures 4.11-1, 4.11-2, and 4.11-3 identified in Section 4.11, “Hydrology and Water Quality,” which address drainage and water quality during construction and project operations, the following mitigation measures shall be implemented. Mitigation Measure 4.4-7: Avoid and mitigate for impacts to sensitive habitats, wetlands, and waters. As a first priority, the project applicant shall seek to avoid impacts to sensitive habitats through project design, setbacks, and other avoidance measures. To avoid temporary impacts to the water quality of wet meadow in the vicinity of the clubhouse and boardwalk, no vehicles or equipment shall be refueled within 100 feet of jurisdictional areas unless a bermed and lined refueling area is constructed. Spill kits shall be maintained on the site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks. No vehicles or construction equipment shall be stored overnight within 100 feet of jurisdictional areas unless drip pans or ground covers are used. In addition, a minimum 25-foot construction setback shall be observed, where feasible, from the outer edge of all wet meadow and forested/shrub wetland/riparian communities, as shown in Exhibit 4.4-1. Setbacks shall be fenced or flagged before construction occurs in adjacent areas. In areas where a setback is not feasible, such as for the construction of the boardwalk and clubhouse, encroachment of the work area into wet meadow habitats will be kept to a minimum and similarly flagged or fenced. If a 25 foot buffer is not feasible a reduced setback may be utilized in other areas of the project site if approved by a qualified biologist.</td>
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NI = No Impact

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

Mariposa County

Tenaya Cabins Project Draft EIR

2-11
### Table 2-1 Summary of Impacts and Mitigation Measures

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<td>To facilitate site management and ensure avoidance of sensitive habitats, all wetlands, riparian areas and streams and their setback areas shall be clearly delineated on plan sets. No construction- or operation-related vehicular access shall occur through wetlands, riparian areas, or streams. A biological monitor shall be present during construction to ensure the setback areas are avoided. If impacts to jurisdictional wetlands or other waters of the United States is not possible, the project applicant shall implement the following measures to compensate for the loss of wetlands and other waters of the United States. The preliminary wetland delineation shall submitted to and verified by USACE. If, based on the verified delineation, it is determined that fill of waters of the United States would result from project implementation, authorization for such fill shall be secured from USACE. Based on the 0.01 permanent impact identified, the project may qualify for use of a Nationwide Permit if required criteria are met. For those wetlands that cannot be avoided, the project applicant shall replace all wetland habitat at acreage and location agreeable to USACE and the RWQCB and as determined during the Section 401 and Section 404 permitting processes, and shall implement all permit conditions.</td>
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<td>▲ Mitigation Measure 4.5-1a: Conduct archaeological monitoring outside of P 22 594/CA-MRP-280/H. Archaeological monitoring will be conducted in areas outside of site P-22-594/CA-MRP-280/H where there is likelihood that archaeological remains may be discovered but where those remains are not visible on the surface (per the confidential Cultural Resources Assessment on file at the county). Where necessary, the project proponent will seek Native American input and consultation. Mitigation Measure 4.5-1b: Stop work in the event of an archaeological discovery outside of P 22 594/CA-MRP-280/H. If potentially significant cultural resources are discovered outside of site P-22-594/CA-MRP-280/H during ground-disturbing activities associated with individual project preparation, construction, or completion, the project proponent will require the construction contractor to stop work in that area until a qualified archaeologist can access the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with appropriate agencies and interested parties. A qualified archaeologist will follow accepted professional standards in recording any find including submittal of the standard California Cultural Resources Assessment.</td>
<td></td>
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</tr>
</tbody>
</table>

**4.5 Cultural Resources**

**Impact 4.5-1: Disturb unique archaeological resources.** Based on the results of the archaeological records search and historic land evaluations conducted for the proposed project, there is one known archaeological site. The site has been evaluated and determined to not to meet the criteria for the NRHP or the CRHR and is not considered significant for the purposes of CEQA. However, ground-disturbing activities could result in discovery or damage of as yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. This is considered a potentially significant impact.

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### Table 2-1  Summary of Impacts and Mitigation Measures

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<thead>
<tr>
<th>Impact</th>
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<tbody>
<tr>
<td>Impact 4.5-2: Accidental discovery of human remains. Although unlikely, construction and excavation activities associated with project development could unearth previously undiscovered or unrecorded human remains, if they are present. This impact would be potentially significant.</td>
<td>PS</td>
<td><strong>Mitigation Measure 4.5-2: Stop work if human remains are discovered.</strong> California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097. If human remains are discovered during any demolition/construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the project applicant shall notify the Mariposa County coroner and the NAHC immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project applicant shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD), if any, identified by the NAHC. Following the coroner’s findings, the archaeologist, and the NAHC-designated MLD shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.94.</td>
<td>LTS</td>
</tr>
<tr>
<td>Impact 4.5-3: Disturb a unique paleontological resource. The project site is underlain with Mesozoic granite, which has a low paleontological potential. No paleontological resources are known to occur within the project site or a one-mile radius of the site. Therefore, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
</tbody>
</table>

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</thead>
<tbody>
<tr>
<td>Impact 4.5-4: Change in the significance of a tribal cultural resource.</td>
<td>LTS</td>
<td>Mitigation Measure 4.5-4: Memorialize the cultural values of the project site through public education. Delaware North, the project applicant, shall further consult with the Picayune Rancheria of the Chukchansi Indians to plan, design, agree on the content, and implement the following: a. Cultural Resource Interpretative Program (Program) for the Tenaya Cabins Project site, which shall include i. cultural resource interpretive display(s) inside the clubhouse, ii. cultural resource seminar(s) or workshop(s) for interested groups, and/or iii. cultural resource brochures and/or handouts for the patrons and public. The primary goal of the Program shall be to educate the public on the cultural history of the Fish Camp area, particularly the Chukchansi Indians and their history in the region, as well as the significance of environmental resources to their culture. The agreement for the Tenaya Cabins Cultural Resource Interpretive Program between the Tribe and Delaware North shall be submitted to, and approved by the County Planning Director prior to the issuance of a grading or building permit for the project. The Program shall define the location, material type(s), and dimensions of any/all displays proposed. The Program shall establish the themes, text, and images for all displays and brochures. The agreement shall define the financial obligation of Delaware North related to the display(s) and brochures/handouts and their maintenance. Delaware North shall make space available for cultural resource seminars/workshops, but shall not be financially responsible for their implementation. The Cultural Resource Interpretive Program agreement shall be submitted to, and approved by, the Planning Director. The County shall be responsible for verification of installation of interpretive display(s) and brochure(s) prior to the certificate of occupancy of project clubhouse or cabins.</td>
<td>LTS</td>
</tr>
</tbody>
</table>

4.6 Transportation and Circulation

Impact 4.6-1: Construction-related traffic impacts. Project construction would generate temporary employee and truck trips, which would use Highway 41 and could result in increased congestion. However, the project would include a traffic control plan that would be implemented during construction operations. Additionally, the traffic generated during project construction is anticipated to be less than the traffic generated by project day-to-day operations which was determined to be a less-than-significant impact. Thus, the construction-related traffic impacts would be a less-than-significant impact.

LTS | No mitigation is required. | LTS |

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### Summary of Impacts and Mitigation Measures

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</thead>
<tbody>
<tr>
<td>Impact 4.6-2: Operational impacts to intersections.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td>The proposed project would result in operations of LOS C or better at</td>
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<tr>
<td>the Highway 41 / Summit Camp Road and Highway 41 / project entry</td>
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<tr>
<td>intersections. Therefore, LOS at these intersections would not</td>
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<tr>
<td>exceed the significance criteria of LOS D. In addition, no queuing</td>
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<tr>
<td>would occur under existing plus project conditions. Thus, this is a</td>
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<tr>
<td>less-than-significant impact.</td>
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<tr>
<td>Impact 4.6-3: Operational impacts to roadway segments.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td>The proposed project would result in operations remaining at LOS C</td>
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<tr>
<td>along Highway 41 between Jackson Road and the project entry, and from</td>
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<tr>
<td>the project entry to Fish Camp Lane. Therefore, LOS along these</td>
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<tr>
<td>roadway segments would not exceed the significance criteria of LOS D.</td>
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<tr>
<td>Thus, would result in a less-than-significant impact.</td>
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<tr>
<td>Impact 4.6-4: Safety-related impacts.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td>The Highway 41 and project entry intersection is located in a section</td>
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<td>of the highway with S-curves and limited site distance, and locating</td>
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<tr>
<td>the project entrance off of Highway 41 could result in a hazard due to</td>
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<tr>
<td>a design feature. However, in consultation with Caltrans, the</td>
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<tr>
<td>proposed intersection design would conform to Caltrans’ Highway Design</td>
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<tr>
<td>Manual and the American Association of State Highway and Transportation</td>
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<tr>
<td>Officials’ (AASHTO) A Policy on Geometric Design of Highways and</td>
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<td>Streets (2001) standards. Construction of the project entry driveway</td>
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<td>in accordance with applicable design standards for adequate lines of</td>
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<td>sight would ensure the entrance to the project would not substantially</td>
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<tr>
<td>increase hazards due to a design feature. Thus, this impact would be</td>
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<tr>
<td>less than significant.</td>
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<tr>
<td>Impact 4.6-5: Emergency access.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td>Year-round emergency access would be provided through two onsite</td>
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<tr>
<td>access points to the project site, which have been designed in</td>
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<td>compliance with emergency access requirements and in coordination</td>
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<td>with the County and Fire Protection District. Thus, this impact would</td>
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<tr>
<td>be less than significant.</td>
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<tr>
<td><strong>4.7 Air Quality</strong></td>
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<tr>
<td>Impact 4.7-1: Violate any air quality standard or contribute</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
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<tr>
<td>substantially to an existing or projected air quality violation.</td>
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<tr>
<td>Construction- and operational-related activities associated with the</td>
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<td>project would not result in mass emissions of CAPs or precursors in</td>
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<td>the MCAB. Levels of emissions would be not be substantial such that</td>
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<td>the applicable SJVAPCD and MCAPCD thresholds of significance would be</td>
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<td>exceeded. This impact would be less than significant.</td>
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<tr>
<td><strong>Impact 4.7-2: Expose sensitive receptors to substantial pollutant concentrations.</strong></td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td>Construction activities would produce temporary, short-term emissions of diesel PM. Because of the relatively low mass of diesel PM, the short duration in which construction would occur, and the proximity of sensitive receptors to the project site, TACs emitted during construction would expose sensitive receptors to an incremental increase in cancer risk that does not exceed the SJVAPCD thresholds of 20 in one million or a hazard index greater than 1.0. Operational activities could include emissions of TACs from infrequent applications of architectural coatings for maintenance purposes. This would happen on an as-needed basis and would be expected to occur over short periods. ROG, NOx, and CO would be emitted from motor vehicles accessing and operating near the project site. These emissions would disperse regionally and would not be a substantial localized source such that sensitive receptors would experience health effects according to ARB recommendations. Diesel PM could be emitted from the use of the diesel-powered back-up generator; however, as use of this generator would only occur in the case of emergency loss of electricity, emissions would not be anticipated to occur over extended periods of time. This impact would be less than significant.</td>
<td><strong>Impact 4.7-3: Exposure of sensitive receptors to emissions of odors.</strong> Construction and operation of the proposed project would not result in the frequent exposure of receptors to substantial objectionable odor emissions. As a result, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
</tr>
<tr>
<td><strong>4.8 Greenhouse Gas Emissions and Climate Change</strong></td>
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<tr>
<td><strong>Impact 4.8-1: Generation of direct and indirect emissions of GHGs that would result in a significant impact on the environment.</strong> The project would generate emissions of GHGs during construction and operation; however, emissions would not exceed the 1,100 MT CO₂e per year threshold applied to the project. The amount of GHG emissions would not result in a substantial contribution of GHGs such that a cumulatively considerable effect would occur. Therefore, this impact is less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.8-2: Conflict with applicable plan, policy, or regulation of an agency adopted to reduce the emissions of greenhouse gases.</strong> Because Mariposa County does not have an adopted GHG reduction plan or a CAP, and has not conducted a GHG inventory, the GHG reduction targets identified in the Scoping Plan are applied to the project. Through a qualitative comparison of the project to measures within the</td>
<td>PS</td>
<td>Mitigation Measure 4.8-1: Incorporate design features into project to be consistent with the Scoping Plan. To achieve consistency with the California Light-Duty Vehicle Greenhouse Gas Standards, the applicant shall: Install, at a minimum, two onsite electric charging stations for use by guests and employees to encourage use of plug-in electric and hybrid vehicles.</td>
<td>LTS</td>
</tr>
</tbody>
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<tr>
<td>Scoping Plan, the project is consistent with or not applicable to most of the measures; however, the project does not support certain policies that are applicable to projects of this type, particularly related to low emission vehicles and the use of solar technology. Therefore, the project would not be fully consistent with the policies of the Scoping Plan and this is considered a potentially significant impact.</td>
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<tr>
<td><strong>Impact 4.8-3: Impacts of climate change on the project.</strong> Climate change is expected to result in a variety of effects that would influence conditions on the project site. These effects include increased temperatures, increased wildfire risk and sea level rise; and changes to timing and intensity of precipitation, resulting in increased stormwater runoff and flood risk. However, numerous State and County programs and policies are in place to protect the project against and respond to wildland fire, sea level rise, and flooding. Therefore, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>4.9 Noise</strong></td>
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<tr>
<td><strong>Impact 4.9-1: Project traffic noise impacts on existing noise-sensitive land uses outside project site.</strong> Implementation of the project would result in a maximum traffic noise increase of 0.3 dB on Highway 41 through Fish Camp. Noise increases of less than 1 dB would not be perceptible. No sensitive receptors would be exposed to substantial increases in traffic noise. Further, the topography of the project site provides natural shielding from traffic-related noise from Highway 41. This impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.9-2: Noise impacts from onsite noise sources.</strong> The Tenaya Cabins Project would include operation of new stationary sources: a speaker system and diesel powered generator, both associated with the clubhouse. Noise generated from newly introduced stationary sources would produce noise levels that would exceed the applicable County noise standards of 50 dB $L_{eq}$ for daytime hours and 40 dB $L_{eq}$ for nighttime hours. This would be a significant impact.</td>
<td>S</td>
<td>Mitigation Measure 4.9-2: Reduce noise exposure to sensitive receptors from new stationary noise sources. The project applicant shall implement the following measures to reduce the effect of noise levels generated by onsite stationary noise sources. ▲ The applicant shall assess the level of noise generated by the clubhouse speaker system depending on what model of speaker is chosen to determine the locations and settings for the speakers so that they operate at noise levels that do not exceed County standards (i.e., 50 dB $L_{eq}$ during daytime hours and 40 dB $L_{eq}$ during nighttime hours) at any existing or planned sensitive receptor. The speaker locations and settings shall be reviewed and approved by the County. The clubhouse speaker system shall be recalibrated once a year to ensure that it continues to operate in compliance with the County noise standards. The results of the calibration, including monitored noise levels, shall be provided to the County. If an exceedance of County standards occurs, the speaker system shall be recalibrated, volumes shall be lowered if necessary,</td>
<td>LTS</td>
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2-17
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<tr>
<th>Impact 4.9-3: Transportation noise impacts to onsite proposed noise-sensitive uses.</th>
<th>LTS</th>
<th>No mitigation is required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact 4.9-4: Short-term construction-related noise.</td>
<td>PS</td>
<td>Mitigation Measure 4.9-4: Restrict construction hours and apply noise-reducing mufflers to construction equipment. The County shall require the applicant to implement the following noise reduction measures during construction activities:</td>
</tr>
<tr>
<td>- All construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. for Monday through Friday and 9:00 a.m. to 8:00 p.m. on weekends and legal holidays.</td>
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<tr>
<td>- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.</td>
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</tr>
<tr>
<td>Impact 4.9-5: Vibration-related impacts. Project implementation would require the use of construction equipment that may generate limited vibration; however, construction activities are not anticipated to result in substantial vibration such that nearby sensitive receptors would be affected. This would be a less-than-significant impact.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
</tr>
<tr>
<td>Geology, Soils, and Seismicity</td>
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</tr>
<tr>
<td>Impact 4.10-1: Exposure of people or structures to risk of loss, injury, or death resulting from seismically-related ground shaking or seismically-induced hazards. The project area is located in Seismic Hazard Zone III, which corresponds to an area that may experience damage due to earthquakes having moderate intensities (maximum</td>
<td>LTS</td>
<td>No mitigation is required.</td>
</tr>
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momentum magnitudes of 4.9 or greater). However, seismically active fault zones have been identified in the region. In the event of a very rare, strong earthquake, project components could be subjected to ground shaking. Proposed project structures would be designed and constructed in accordance with the current seismic safety and structural design requirements set forth in the California Building Code. Therefore, there would be no substantial risk of loss, injury, death, or property damage from strong seismic shaking. Furthermore, due to the moderate seismicity of the area, as well as the character of native slope gradients, soils, and rock conditions of the project site, the potential for future instability of the native terrain is considered low. For these reasons, the project would have a less-than-significant impact related to exposure of people or structures to seismic hazards.

Impact 4.10-2: Potential for substantial soil erosion or loss of topsoil. Project implementation would require clearing, trenching, and grading associated with the construction of cabins, roadways, utility lines, a clubhouse, and a single family home. Soils may be exposed to increased erosion during construction activities. Sediments carried in runoff from disturbed areas could enter nearby surface waters (Big Creek). Therefore, the project’s potential for soil erosion or loss of topsoil would be potentially significant.

**Impact 4.11-1: Violate any water quality standard or water discharge requirement, or otherwise substantially degrade water quality: construction impacts.** Implementation of the Tenaya Cabins Project would require grading, earth moving, excavation, underground infrastructure installation, and building construction. Sediments carried in runoff from disturbed areas could enter nearby surface waters (Big Creek). Additionally, construction-related pollutants could come into contact with stormwater and affect surface or groundwater quality. Therefore, construction activities would have a potentially significant impact on water quality.

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<tr>
<td>Potential for soil erosion or loss of topsoil.</td>
<td>PS</td>
<td>Mitigation Measure 4.10-2: Prepare and implement a stormwater pollution prevention plan.</td>
<td>LTS</td>
</tr>
<tr>
<td>Violate any water quality standard or water discharge requirement, or otherwise substantially degrade water quality: construction impacts.</td>
<td>PS</td>
<td>Mitigation Measure 4.11-1: Prepare and implement a stormwater pollution prevention plan.</td>
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<tr>
<td>project completion, all areas used for staging would be stabilized or revegetated.</td>
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<tr>
<td>- Temporary BMPs to prevent the tracking of earthen materials and other waste materials from the project site to offsite locations, including stabilized points of entry/exit for construction vehicles/equipment and designated vehicle/equipment rinse stations, and sweeping.</td>
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<tr>
<td>- Temporary BMPs to prevent wind erosion of earthen materials and other waste materials from the project site, including routine application of water to disturbed land areas and covering of stockpiles with plastic or fabric sheeting.</td>
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<tr>
<td>- To avoid temporary impacts to the water quality of wet meadow in the vicinity of the clubhouse and boardwalk, no vehicles or equipment shall be refueled within 100 feet of jurisdictional areas unless a berm and lined refueling area is constructed. Spill kits shall be maintained on the site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks. No vehicles or construction equipment shall be stored overnight within 100 feet of jurisdictional areas unless drip pans or ground covers are used. In addition, a minimum 25-foot setback shall be observed from the outer edge of all wet meadow and forested/shrub wetland/riparian communities (see Exhibit 4.4-1). Setbacks shall be fenced or flagged before construction occurs in adjacent areas. If a 25 foot buffer is not feasible a reduced setback may be utilized if approved by a qualified biologist.</td>
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<tr>
<td>- Temporary BMPs to capture and contain pollutants generated by concrete construction including lined containment for rinsate to collect runoff from washing concrete delivery trucks and equipment.</td>
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<tr>
<td>- Protective fencing to prevent damage to trees and other vegetation to remain after construction, including tree protection fencing and individual tree protection such as protective casings of wood slats around the bases of trees.</td>
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<tr>
<td>- Temporary BMPs for the containment or removal of drilling spoils generated from construction of bridge foundations and abutments.</td>
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<tr>
<td>- Daily inspection and maintenance of temporary BMPs to ensure proper function. The prime contractor would be required to maintain a daily log of Temporary Construction BMP inspections and keep the log onsite during project construction, available for review by the Central Valley RWQCB and Mariposa County.</td>
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</table>
### Table 2-1 Summary of Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measure</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Tree removal activities, including the dropping of trees, would be confined to the construction limit boundaries. ▶ Construction boundary fencing to limit disturbance and prevent access to areas not under active construction.</td>
<td>PS</td>
<td>Mitigation Measure 4.11-2: Install permanent stormwater controls and water quality BMPs. The project applicant shall implement the following stormwater controls and water quality BMPs: ▶ Best management practices for the containment and isolation of products, and use of non-toxic products whenever possible would reduce the quantity of contaminants exposed to stormwater. ▶ Recognizing that in some instances it is impossible to isolate all contaminants from stormwater discharges, stormwater controls shall be implemented to reduce the amount of runoff that discharges directly to surface water. Water quality treatment facilities/best management practices (BMPs)/low impact development (LID) measures shall be designed according to the guidance of the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and for Industrial and Commercial as well as the Mariposa County Erosion and Sedimentation Policies for Construction Activities and the Specific Plan Topography and Soil Erosion requirements. Final site plans shall illustrate stormwater controls and water quality BMPs as a condition of project approval. ▶ Storm drainage from on- and offsite impervious surfaces (including roads) shall be collected and routed through specially designed vegetated swales, infiltration trenches, water quality inlets, detention basins, filters, etc. for entrapment of sediment, debris and oils/greases or other identified pollutants. BMPs shall be designed at a minimum in accordance with the Mariposa County Erosion and Sedimentation Policies for Construction Activities and the Specific Plan Topography and Soil Erosion requirements. ▶ No stormwater controls or BMPs shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals. ▶ All BMPs shall be maintained as required to insure effectiveness. The applicant shall provide for the establishment of vegetation, where specified, by means of proper irrigation. Proof of ongoing maintenance, such as contractual evidence, shall be provided to Mariposa County upon request. Maintenance of these facilities shall be provided by the project owner/permittee. Contractual</td>
<td>LTS</td>
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</tbody>
</table>

NI = No Impact, LTS = Less than Significant, PS = Potentially Significant, S = Significant, SU = Significant and Unavoidable.
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</table>
| Impact 4.11-3: Substantially alter drainage patterns or increase surface runoff in a manner that would exceed the capacity of existing or planned stormwater drainage systems or result in onsite or offsite flooding. | PS                             | Mitigation Measure 4.11-3: Prepare and implement a final drainage report that reduces runoff to pre-project conditions. As part of the project approval process, the applicant shall submit a Drainage Report prepared by a Registered Civil Engineer that addresses at minimum:  
- written text addressing existing conditions,  
- the effects of the proposed improvements,  
- all appropriate calculations,  
- watershed maps,  
- changes in flows and patterns, and  
- proposed on- and off-site improvements to accommodate flows from the project. The final Drainage Report shall provide details showing that stormwater runoff shall be reduced to pre-project conditions (no net increase in runoff) through the installation of retention/detention facilities. Retention/detention facilities shall be designed to the satisfaction of the Mariposa County Public Works Department. The County may, after review of the project final drainage report, delete this requirement if it is determined that drainage conditions do not warrant installation of this type of facility. Maintenance of detention facilities by the property owner, or entity responsible for project maintenance shall be required. No retention/detention facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals. | LTS |
| Impact 4.11-4: Substantially deplete groundwater supplies.            | PS                             | Mitigation Measure 4.11-4: Prepare and implement well monitoring program. DN shall establish a monitoring program for FCMWC Well 1 and shall, at a minimum, include short duration pumping tests to assess production capacity and pumping water levels. These tests shall be completed on a monthly basis during the months of August, September, and October and shall include the following:  
- Delaware North shall coordinate with FCMWC to test FCMWC Well 1 once a month during the months of August, September, and October. A qualified well driller, hydrologist or hydrogeologist, approved by the County, shall conduct the testing and provide monitoring reports.  
- Each test shall be proceeded by a minimum of eight (8) hours of non-operation in FCMWC Well 1. | LTS |

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<tbody>
<tr>
<td>Localized drawdown on an existing well is considered a potentially significant impact to groundwater supply.</td>
<td>A static depth to water measurement shall be collected and recorded following the period of non-operation and preceding the start of the test.</td>
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<td></td>
<td>Following the period of non-operation and collection of the static depth to water measurement, FCMWC Well 1 shall be pumped at the full capacity of the existing pumping equipment for a period of at least four (4) hours.</td>
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<td></td>
<td>Depth to water measurements shall be collected in FCMWC Well 1 throughout the four (4) hour test. Depth to water measurements shall be collected at least every ten (10) minutes throughout the test.</td>
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<tr>
<td></td>
<td>Production volume and rate measurements shall be collected from the discharge of FCMWC Well 1 at least every ten (10) minutes throughout the test.</td>
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<td></td>
<td>The three Tenaya Lodge wells shall be maintained non-operational for a period of at least four (4) hours prior to the start of the test and shall remain non-operational for the first two (2) hours of the test.</td>
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<td>After the first two (2) hours of the test have elapsed, the Tenaya Lodge wells shall be turned on and allowed to operate at full capacity.</td>
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<td>The production rate and pumping depth to water measurements from FCMWC Well 1 shall be compared to previous test results.</td>
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<td>This evaluation will compare each test to previous tests, and also compare the first two (2) hours of each test (when the Tenaya Lodge wells are not operating) to the first two (2) hours of previous tests, and the second two (2) hours of each test (when the Tenaya Lodge wells are pumping) to the second two (2) hours of previous tests.</td>
<td></td>
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<td></td>
<td>The comparisons shall consider specific capacity information for incremental time steps during the test (e.g., every hour) and compare these data to those from the same time step in previous tests.</td>
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<td></td>
<td>The results of each test shall be compared to the previous tests from that year and to the tests from the same month in previous years.</td>
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<td></td>
<td>A sustained reduction of over ten (10) percent of the capacity of FCMWC Well 1, measured either by a reduction in pumping rate or a reduction in specific capacity, shall trigger the need for implementation of water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages. A sustained ten (10) percent reduction shall apply only to decreases in the capacity of the well when compared to prior years. Small seasonal changes in well production capacity are to be expected, and these shall not trigger implementation of water demand management measures.</td>
<td></td>
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</tbody>
</table>
### Table 2-1 Summary of Impacts and Mitigation Measures

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<thead>
<tr>
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<th>Significance after Mitigation</th>
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<tbody>
<tr>
<td>Any reduction of over twenty (20) percent of the capacity of FCMWC Well 1, either compared to previous months or the previous year, shall trigger implementation of water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages.</td>
<td>▶ Adjust operation of the three existing wells in the Tenaya Lodge water system; alternate well pumping so that the Tenaya wells do not pump at the same time.</td>
<td>LTS</td>
<td>LTS</td>
</tr>
<tr>
<td>This monitoring program shall be initiated as far as possible in advance of completion of project construction. Collection of baseline pumping rate and water level data from FCMWC Well 1 before the project becomes operational will improve the usefulness and reliability of the monitoring data.</td>
<td>▶ Reduce the rates of pumping in three existing wells in the Tenaya Lodge water system.</td>
<td></td>
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<tr>
<td>The FCMWC Well 1 monitoring program shall be implemented for five (5) years. If there is no defined drought during that five (5) year period, then Delaware North, FCMWC, and Mariposa County may extend the monitoring for a second five (5) year period, not to exceed a total of ten (10) years.</td>
<td>▶ Reduce occupancy at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to reduce the total demand for water.</td>
<td></td>
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</tr>
<tr>
<td>If triggered as a result of the FCMWC Well 1 monitoring program described above, DN shall implement one or more of the following water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to incrementally reduce groundwater pumping until supplemental monitoring of FCMWC Well 1 shows no residual reduction in the production capacity.</td>
<td>▶ Install additional water conservation devices throughout the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to reduce the total demand for water.</td>
<td></td>
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</tr>
</tbody>
</table>

**Impact 4.11.5: Interfere with groundwater recharge.** Implementation of the Tenaya Cabins Project would result in the development of new impervious surfaces such as structures and roadways, which could impede groundwater recharge. However, the water budget indicates that there is adequate recharge to the groundwater system to meet the existing plus project demands for the Fish Camp area. Average annual recharge is conservatively estimated to be approximately 190 afy, and existing plus project pumping is estimated to be 103.4 afy; net demand (accounting for return flows) is a fraction of this amount. This is a less-than-significant impact.

**LTS** No mitigation is required.
## Summary of Impacts and Mitigation Measures

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<tbody>
<tr>
<td>4.12</td>
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<tr>
<td><strong>Impact 4.12-1: Increase demand for water supply.</strong> Project water demands for all components of the Tenaya Cabins Project except landscape irrigation are estimated to be 9.6 afy, with average daily demands of 8,595 gallons and a peak day demand of 17,190 gallons. The existing Tenaya Lodge water system is proposed to be used to meet the project’s demand. When the proposed-project water demand is added to the demands of the existing Tenaya Lodge, the total demand on the Tenaya Lodge water supply system would be 61.4 afy. The combined Lodge-plus-project average demand is estimated to be 54,783 gallons per day, with a combined peak day demand of 109,566 gallons per day. Based on a three day continuous well pumping test, the project-plus-existing-Lodge demand can be met by pumping 7.6 hours per day and the combined peak day demand would require pumping just over 15 hours per day. The existing Tenaya Lodge water supply is sufficient to serve the proposed project. The proposed project’s water demand would not require new water supply or entitlements. Therefore, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td><strong>Impact 4.12-2: Require or result in the construction of new or expanded wastewater treatment facilities or result in the exceedance of wastewater discharge requirements of the applicable regional water quality control board.</strong> The project would install sewer lines to convey project-generated wastewater to the Tenaya Lodge wastewater treatment plant, which has a capacity to treat up to 125,000 gallons per day (gpd) of wastewater. This capacity is sufficient to serve maximum demands from the Tenaya Lodge and Cottages (average daily flow of 80,000 gpd, and peak daily flow of 100,000 gpd) in addition to the maximum demands from the proposed Tenaya Cabins and future single family residence average (average daily flow of 8,595 gpd and peak daily flow of 12,893 gpd). The treatment plant complies with the wastewater discharge requirements (WDRs) of the Central Valley Regional Water Quality Control Board and the project would include the expansion of the central leach field at the Tenaya Lodge to accommodate the project-related effluent increase and allow for proper disposal of treated effluent from the WWTP. Therefore, this impact would be less than significant.</td>
<td>LTS</td>
<td>No mitigation is required.</td>
<td>LTS</td>
</tr>
<tr>
<td>Impact</td>
<td>Significance before Mitigation</td>
<td>Mitigation Measure</td>
<td>Significance after Mitigation</td>
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<tr>
<td>Impact 4.12-3: <strong>Exceed landfill capacity</strong>, Project implementation would entail the production of solid wastes typical of a resort commercial development, such as food refuse, packaging, and disposable materials. Waste generated from the project would not exceed the capacity of the Mariposa County Sanitary Landfill such that additional landfill facilities would be required. This would be a less-than-significant impact.</td>
<td>LTS No mitigation is required.</td>
<td>LTS</td>
<td></td>
</tr>
<tr>
<td>Impact 4.12-4: <strong>Increased demand for law enforcement services</strong>, The Tenaya Cabins Project would add visitors to the Fish Camp area, which would create a limited additional demand for law enforcement services. The Tenaya Lodge security personnel provide security, complaint resolution and interaction with law enforcement or emergency response personnel in case of an incident. The Tenaya security personnel would expand their rounds to include the Tenaya Cabins site. Therefore, the project would not result in the need for additional or expanded law enforcement service facilities and would not result in decreased law enforcement service levels. This would be a less-than-significant impact.</td>
<td>LTS No mitigation is required.</td>
<td>LTS</td>
<td></td>
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<tr>
<td>Impact 4.12-5: <strong>Result in inefficient and wasteful consumption of energy</strong>, Implementation of the project would result in increased demand for electricity and propane. However, the proposed project would be designed to incorporate Title 24 energy efficiency requirements and would not result in the wasteful consumption of energy. The impact would be less than significant.</td>
<td>LTS No mitigation is required.</td>
<td>LTS</td>
<td></td>
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</tbody>
</table>

### 4.13 Hazards and Hazardous Materials

| Impact 4.13-1: **Expose people or the environment, including schools within 0.25 mile of the project site, to hazards because of the routine use, storage, or transport of hazardous materials or from accidental release or upset**, Construction and operation of the Tenaya Cabins Project would involve the use, storage, and transport of typical hazardous materials (oil, cleaning products, etc.). All such hazardous materials and activities would be typical for construction and for resort commercial and residential uses, and would occur in compliance with local, state, and federal regulations, which would minimize the potential for upset or accident conditions. Therefore, impacts related to exposure of the public or environment, including schools within 0.25 mile of the project site, to hazardous materials through routine use, storage, or transport or from accidental release or upset would be less than significant. | LTS No mitigation is required. | LTS |
| Impact 4.13-2: **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan**, Construction of the proposed project would result in additional vehicles, trucks, and equipment on

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<tbody>
<tr>
<td>Highway 41; however, it would be temporary and not extensive enough at any one time to result in the obstruction of an evacuation route or impair implementation of an emergency response or evacuation plan. As part of project operation, adequate emergency access to and from the project site would be established in coordination with Caltrans, the Mariposa County Fire Department, and CAL FIRE, and the project-related increase in traffic volume on Highway 41 would not interfere with emergency response or evacuation. This impact would be less than significant.</td>
<td>PS</td>
<td>Mitigation Measure 4.13-3: Provide supplementary fire protection staff and equipment. Prior to operation of the Tenaya Cabins Project, DN shall provide a minimum of two trained and certified emergency staff on premises or in the Fish Camp community and available to respond to emergencies at all times. The supplementary staff would be trained to meet Mariposa County Fire Department Volunteer Fire Service standards. Staffing may be provided by Tenaya Lodge employees who have completed the required training. DN shall provide personal protection equipment (PPE) and positive communication equipment for all firefighting and emergency service personnel provided by DN. PPE and communication equipment shall be stored in a central, secure location. Communication systems shall permit uninterrupted contact between all firefighters at all times and at all locations on or within the property. In addition, there shall be positive communication at all times between a fire officer and recognized Emergency Command Center (ECC). All equipment required shall be approved by and become property of Mariposa County and maintained per manufacturer and National Fire Protection Association (NFPA) standards by DN. DN and Mariposa County shall negotiate a mutually-agreeable project contribution to support the Mariposa County Fire Department apparatus inventory. This shall be included as a condition of permitting for the project. The above requirements, or equivalent as approved by the Mariposa County Fire Department, shall be included in a fully executed agreement between the Fire Department and DN prior to the issuance of grading or building permit for the project.</td>
<td>LTS</td>
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</table>

**Impact 4.13-3: Expose people or structures to wildland fire hazards or increase demand for fire protection and emergency medical services.** Implementation of the project would expose people and structures to an area with a very high risk of wildfire and would increase demand for fire protection and emergency services. Adherence to the California Building Code standards for fire prevention during construction, compliance with regulations for fire protection and emergency access would reduce the wildland fire threat to workers and residents of Fish Camp. Nonetheless, introduction of people and structures to an area with a very high risk of wildfire inherently increases human exposure to wildfire as well as demand for fire protection and emergency services. This impact would be potentially significant.

| Impact 4.14-1: Degrade the existing visual character or quality of the site and its surroundings, including scenic resources within a state scenic highway. Project implementation would result in the introduction of human-made structures to a currently undeveloped forested site. The new structures could be visible through | LTS | No mitigation is required. | LTS |

**4.14 Visual Resources**

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<tbody>
<tr>
<td>Filtered views (through trees) from Highway 41 and adjacent resort</td>
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<td>LTS</td>
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<tr>
<td>residential properties. However, the proposed site plan minimizes</td>
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<td>No mitigation is required.</td>
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<tr>
<td>grading; minimizes removal of trees, vegetation, and rock formations;</td>
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<td>and avoids any construction within the Big Creek flood zone or riparian</td>
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<td>corridor to maintain the natural features of the site and provide a</td>
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<td>visual buffer between the cabins and clubhouse, Highway 41, and</td>
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<td>surrounding properties. In addition, the project would comply with</td>
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<td>Fish Camp TPA Specific Plan development standards and the architectural</td>
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<td>design and materials of the buildings would blend with the natural</td>
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<td>environment. The resulting visual character of the developed project</td>
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<td>site would be consistent with other development in the Fish Camp TPA.</td>
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<td>Therefore, the project's impact on the existing visual character and</td>
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<td>quality of the site and its surroundings would be less than</td>
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<td>significant.</td>
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<td>Impact 4.14:2: Create new sources of light and glare. The Tenaya</td>
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<td>Cabins Project would result in new sources of light, including</td>
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<td>interior and exterior residential lighting, street lighting, clubhouse</td>
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<td>lighting, and lighting from vehicle traffic. The project would</td>
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<td>implement measures to limit the intensity and visibility of outdoor</td>
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<td>lighting, and the cabins and clubhouse would be screened from</td>
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<td>Highway 41 and surrounding properties by existing vegetation and</td>
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<td>topography. Therefore, the project's lighting would be less</td>
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<td>prominent than existing light sources in Fish Camp, would not create</td>
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<tr>
<td>a new source of substantial light that would adversely affect views</td>
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<td>in the area, and would not contribute substantially to skyglow. This</td>
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<tr>
<td>impact would be less than significant.</td>
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<tr>
<td>Environmental Topic</td>
<td>Proposed Tenaya Cabins Project</td>
<td>Alternative 1: No Project – No Development Alternative</td>
<td>Alternative 2: No Project - Fish Camp TPA Alternative, 1-acre Lots</td>
</tr>
<tr>
<td>------------------------------------------------</td>
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<tr>
<td>Land Use and Forest Resources</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Less</td>
<td>Less – Land Use Greater - Forestry</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
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<tr>
<td>Cultural Resources</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
</tr>
<tr>
<td>Transportation and Circulation</td>
<td>Less than significant (Project and Cumulative)</td>
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<td>Air Quality</td>
<td>Less than significant (Project and Cumulative)</td>
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<tr>
<td>Greenhouse Gas Emissions and Climate Change</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Less</td>
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<tr>
<td>Noise</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
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<tr>
<td>Geology and Soils</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
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<tr>
<td>Hydrology and Water Quality</td>
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<td>Less</td>
<td>Greater</td>
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<td>Utilities and Public Services</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
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<td>Greater</td>
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<tr>
<td>Hazards and Hazardous Materials</td>
<td>Less than significant with mitigation (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
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<tr>
<td>Visual Resources</td>
<td>Less than significant (Project and Cumulative)</td>
<td>Less</td>
<td>Similar</td>
</tr>
</tbody>
</table>

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Mariposa County
Tenaya Cabins Project Draft EIR

2-29
Executive Summary

Ascent Environmental

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Mariposa County

Tenaya Cabins Project Draft EIR

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3 PROJECT DESCRIPTION

3.1 PROJECT BACKGROUND

The Tenaya Lodge is an existing mountain resort set in forested lands near the southern gate of Yosemite National Park, adjacent to the Sierra National Forest, in Fish Camp, Mariposa County (Exhibit 3-1). The Tenaya Lodge, owned by Delaware North (DN), offers guest accommodations and conference facilities within a 249-room destination hotel and 53 rooms in 17 separate cottage buildings (the cottages were entitled separately and then purchased by DN). The all-season resort offers onsite amenities and access to a range of recreational activities in the surrounding region. DN is proposing to place up to 54 pre-manufactured cabins and a clubhouse on a site adjacent to and immediately to the north of the Tenaya Lodge to cater to visitors who want a more rustic experience than the existing Tenaya accommodations. The site would also accommodate a private residence, on a separate parcel.

3.2 PROJECT OBJECTIVES

The objectives of the proposed Tenaya Cabins Project are (1) to provide a more rustic lodging option for guests with the conveniences of a resort while allowing them to experience the natural beauty of the Sierra National Forest area in a minimally-developed setting and (2) to subdivide the project site to allow for a potential future residence for the property owner.

3.3 PROJECT LOCATION

The Tenaya Cabins Project site is located at 1152 State Highway (Highway) 41 in the unincorporated community of Fish Camp, Mariposa County, on private property located immediately north of the Tenaya Lodge, between Highway 41 and Big Creek (Exhibit 3-2). The existing Fish Camp community is a small (2010 U.S. Census population of less than 100) (U.S. Census Bureau 2010) residential development of private homes, vacation homes, vacation rentals and resort commercial uses. Fish Camp is primarily developed along Highway 41 and is situated approximately one mile from the south entrance to Yosemite National Park. The nearest community is Oakhurst, approximately 14 miles to the south, at the juncture of Highway 41 and Highway 49, a rural highway that connects many Gold Rush era communities of the Sierra foothills (Exhibit 3-1).

The Tenaya Cabins Project site (assessor’s parcel number [APN] 010-350-008) is located within the Fish Camp Specific Plan (a “town plan” in Volume II of the Mariposa County General Plan) and is currently zoned for single-family residential uses on one-acre minimum lots (SFR-1 Acre). The project site is primarily undeveloped forested land that includes a one-acre pond (Rainbow Lake) at the northern end, Big Creek on the eastern side, and meadow and wetlands on the southern portion of the site. The total project site acreage assessed in this Draft EIR includes Highway 41 and the utility connections to the Tenaya Lodge, which represents 30.03 acres. Assessor’s parcel number 010-350-008 represents 26.89 acres of this total.

The project site is within the Big Creek watershed. Big Creek traverses the western slopes of the Sierra Nevada from an elevation of 8,200 feet east of Fish Camp to its confluence with the South Fork of the Merced River in Yosemite National Park, near Wawona, at an elevation of 3,960 feet. The reach of Big Creek at the boundary of the Tenaya Cabins Project site has an elevation of 4,990 feet at the upstream end and an elevation of 4,985 feet at the downstream end.
Exhibit 3-1

Regional Location

Legend

- Project Location

Source: Adapted by Ascent Environmental in 2015
Exhibit 3-2

Tenaya Cabins Project Site Location

APN 010-350-0080
+/- 26.89 acres

Legend

Project Location

0 250 500 Feet

Source: Adapted by Ascent Environmental in 2016
3.4 DESCRIPTION OF THE PROPOSED PROJECT

3.4.1 Project Characteristics

PROPOSED LAND USE DESIGNATION AND ZONING

The proposed project includes a land division of APN 010-350-008 into “Parcel 1” for the proposed cabins and clubhouse, and “Parcel 2” for a future single-family residence. The two parcels are shown on the site plan (Exhibits 3-3 and 3-4). Parcel 1 would be rezoned from Single Family Residential 1-acre to Resort Commercial. Parcel 2 would be rezoned from Single Family Residential 1-acre to Single Family Residential ½-acre per Fish Camp Town Planning Area (TPA) Specific Plan and Mariposa County requirements. The Fish Camp TPA Specific Plan would be amended to reflect the changed land use classifications. The Mariposa County land use entitlement application numbers for the Conditional Use Permit, Minor Land Division, and General Plan/Specific Plan/Zoning Amendment are: 2014-163, 2014-164, and 2014-165, respectively.

No development is currently proposed for Parcel 2, the ½-acre residential parcel. However, it is assumed that a single residence would be built on the site in the future. Mariposa County requires ‘ready to build’ lots for new subdivisions, therefore, for purposes of this EIR, roadway access and provision of all necessary utilities to Parcel 2 are considered in the environmental impact analyses.

CABINS AND CLUBHOUSE

The Tenaya Cabins Project would involve the construction and operation of up to 54 pre-fabricated cabins (on Parcel 1) set on concrete pier footings or concrete slab-on-grade foundations. Each cabin would have an area of approximately 675 square feet of room space (plus approximately 75 square feet of deck), would be approximately 14 to 18 feet tall, and would be served by sanitary sewer, potable water, electricity, propane, telephone, data, and cable television services. The cabins would have interior electric or propane fireplaces in each unit. The proposed lay-out of the 54 cabins as well as a lot for a potential future single-family residence is shown on Exhibits 3-3 and 3-4, the diagrammatic site plan and detailed site plan.

The proposed multi-use clubhouse would be approximately 2,700 square feet (sf) and a maximum of 35-feet tall located adjacent to Big Creek on the eastern boundary of the site and would include a large outdoor deck, barbeque, hot tub, swimming pool, and maintenance shed (Exhibits 3-3 and 3-4). The clubhouse would be used for guest registration, administrative offices, events, laundry facilities, a small grocery, a residential-style kitchen, and recreational activities. The clubhouse would be designed to accommodate seating for 60 people on the deck and provide indoor facilities capable of holding smaller parties. Amplified sound for events at the clubhouse would conclude at 10:00 p.m.; however, events could continue past that time.

It is estimated that the Tenaya Cabins Project would require 18 new employees. Currently, the majority of Tenaya Lodge’s employees commute the approximately 14-mile distance from Oakhurst. It is assumed that the future employees for the project would have a similar commute, as no onsite employee housing would be constructed as part of the project. However, for the past two years, DN has offered seasonal internship housing to 15 employees who are employed at the Tenaya Lodge or Cottages during the peak season, which is approximately mid-May to mid-October. DN currently employs a total of 427 staff during the summer season. Therefore, during peak season, DN offers employee housing in Fish Camp for 3.5 percent of the employees. Based on this same percentage, DN would offer summer housing in Fish Camp to one (1) of the 18 employees at Tenaya Cabins.
DESIGN CONSIDERATIONS AND LIGHTING

As stated above, the Tenaya Cabins Project is intended to provide guests with a minimally-developed setting. Therefore, the proposed site plan (Exhibits 3-3 and 3-4) was designed to minimize site disturbance and preserve the existing natural features of the site, including rock formations, trees, the Big Creek riparian corridor, Rainbow Lake, and wetlands. Furthermore, layout of the cabins is intended to maximize the buffer between the cabins and Highway 41. In addition, as shown on Exhibit 3-4, a total of five propane fire pits would be placed throughout the project site.

An entry sign would be constructed adjacent to the project entry road intersection with Highway 41 in compliance with the Fish Camp TPA Specific Plan sign standards. The sign would be compatible with the mountain resort atmosphere of Fish Camp; it would not be constructed of plastic, would be less than 32 square feet, not greater than 27 feet above ground level, and would have no flashing/moving lights, letters or characters.

The Tenaya Cabins Project would comply with the Fish Camp TPA Specific Plan development standards relating to building setbacks, density, height restrictions, signage, and lighting for resort commercial development. The building form, mass, materials, colors, landscaping, and outdoor features of the clubhouse and cabins are designed to blend with the existing natural setting and to be appropriate within the context of the Sierra Mountain environment. The cabins would be approximately 16 feet tall and the clubhouse would not exceed the 35-foot height standard for the Resort Commercial zone per the Fish Camp TPA Specific Plan. Conceptual designs of the cabins are shown in Exhibits 3-5 and 3-6 and conceptual designs of the clubhouse are shown in Exhibits 3-7 and 3-8.

The County may utilize a scenic highway overlay (per Section 17.65.010). The scenic highway overlay zone (SHO) is an overlay district intended to be combined with any other district to protect the scenic qualities of public highways or roadways designated a scenic highway by the State of California and/or the Board of Supervisors. The purpose of this district is to maintain the recreational, social and economic values of the county by protecting and enhancing the designated highway, for the benefit of residents and visitors. This zone will function to promote the overall economic vitality of a district, enhance tourism, and stabilize and increase property values. (Ord. 801 Sec.I, 1991). If the County utilizes a SHO, the applicant would be required to submit an application for scenic highway review to be approved by the Planning Director. In reviewing an application for scenic highway review, the Planning Director must find that the development is harmonious with the scenic quality of the designated highway, complies with all applicable standards (per 17.65.010), and is consistent with the goals, policies, and standards of the General Plan.

Lighting would be used for safety throughout the Tenaya Cabins Project site and for the residence on Parcel 2. Outdoor lighting fixtures would be provided for parking areas, pedestrian walkways, roadways, and the clubhouse, illuminating only the areas needed for safety and security. To minimize the intensity and visibility of lighting and be compatible with the rural character of the Fish Camp TPA, the project would implement the following measures:

- Consistent with General Plan Policy 11-1d, lighting shall meet the standards established by the International Dark Sky Association and building materials shall have a low reflective index.
- Exterior lighting shall use the lowest possible wattage and energy-efficient luminaire for each application.
- Exterior lighting shall only illuminate the area needed for safety and shall be minimized during non-active hours (11 p.m. – dawn).
- Outdoor light fixtures for the parking areas, roads, cabins, clubhouse, and pedestrian areas shall be shielded and directed down to preserve the night sky, as well as directed away from the cabins or adjacent residential parcels to minimize light and glare effects.
Conceptual Cabin Design

Source: darden architects 2016

Exhibit 3-5
Exhibit 3-6

Typical Cabin Interior
Exterior lighting fixtures shall be installed and shielded in such a manner that no light rays are emitted from the fixture at angles above the horizontal plane.

Timers shall be installed on exterior lighting fixtures near buildings, where applicable, to avoid continual lighting of surfaces.

**LANDSCAPING**

The conceptual site plan (Exhibits 3-3 and 3-4) was designed to limit disturbance and removal of trees, vegetation, and rock formations. Therefore, there would be limited need for landscaping. Any new landscaping would utilize vegetation native to the region, so as to blend with the existing onsite vegetation. Vegetation would be drought-tolerant (per state water efficient landscape standards [effective December 2016 CDCR Chapters 490-459]), and if any irrigation would be needed, it would be supplied by tertiary-treated effluent (recycled water) from the new Tenaya Lodge wastewater treatment plant.

**VEHICULAR ACCESS**

Vehicular access to the Tenaya Cabins Project site is proposed from Highway 41, north of the Tenaya Lodge entrance and Summit Road and south of Fish Camp Lane, at the location of an existing dirt-road entrance to the site as shown on the circulation plan in Exhibit 3-9. In coordination with the California Department of Transportation (Caltrans), the site entry has been configured to meet Caltrans requirements for acceleration and deceleration distances, sight distance, and turning lane requirements, as follows (Exhibit 3-10):

- Highway 41 12-foot travel lane north;
- Highway 41 8-foot shoulder along the north-bound lane from the project entrance to the north end of the project site near the emergency access road entrance;
- Highway 41 12-foot travel lane with 4-foot shoulder south;
- Highway 41 12-foot left turn lane (south), with 275-foot deceleration lane (including the bay taper length);
- Highway 41 Caltrans Easement of 100-feet, including the 80-foot right-of-way and 10-feet on either side;
- Signage to meet Caltrans requirements (onsite stop sign);
- Highway 41 sight distance from north approximately 300 feet; and
- Highway 41 sight distance from south approximately 360 feet.

The onsite roads shown on Exhibit 3-9 follow existing dirt roads where possible and are routed around existing trees, vegetation, and rock formations whenever possible to maximize visual screening. The project roads would be paved with asphalt and designed in compliance with Mariposa County standards for slope, width, turning radius and fire and emergency access. All onsite roads would be maintained by DN, including drainage and erosion control, snow removal, and upkeep of the road surface.

The main onsite access road would connect Highway 41 and Parcel 2, the ½-acre single-family parcel. Per County requirements, all main access road grading and improvements would occur within a 40 to 60-foot easement (applicant has proposed a 40 foot easement, which is allowed by the County’s Road Improvement and Circulation Policy as long as all required road improvements can fit within the easement) with a cul-de-sac at the terminus of the easement at Parcel 2. This main access road and secondary access roads would be improved to a minimum of “Town Class V and/or Town Class III,” in accordance with the Road Improvement and Circulation Policy and the County Improvement Standards. Improvement plans would be
Exhibit 3-10
Tenaya Cabins Site Entry and Highway 41 Improvements
approved by the County engineer prior to commencement of construction work on the onsite roads. The onsite roads would be designed as shown on Exhibit 3-9 and as follows:

- main access road would have two 12-foot wide travel lanes, for a total width of 24-feet;
- secondary access roads would be 20-feet wide; and
- emergency access road would be 20-feet wide and gated.

**EMERGENCY ACCESS**

Year-round emergency access would be provided to both Parcel 1 and Parcel 2 through the construction of the onsite access roads (Exhibits 3-9 and 3-10), which have been designed in compliance with emergency access requirements and Mariposa County’s Road Policies, in coordination with Mariposa County Fire and CAL FIRE. The circulation plan includes two points of access to the project site: one from the project entry and a second emergency access at northern end of the site near Rainbow Lake. The emergency access road would be paved with asphalt, 20-feet wide, gated, and maintained year-round. The turning radius of the onsite roads is shown on Exhibit 3-9.

**SNOW STORAGE**

The Fish Camp area experiences relatively heavy snowfall during most winter seasons. Therefore, snow removal is necessary to ensure that roads, pedestrian pathways, parking, and related areas are clear to provide pedestrian and vehicular access throughout the Tenaya Cabins site and to Parcel 2. The site plans (Exhibit 3-4) identify snow storage areas, which would be onsite within the privately-owned property. Snow removal would be the responsibility of DN. Best management practices (BMPs) would be installed at snow storage areas, and all snowmelt would be diverted to the onsite drainage system. It is not anticipated that any off-haul of snow would be needed, as there is ample onsite undeveloped land for snow storage.

**PARKING**

The proposed site plan provides 1.5 parking stalls for each cabin plus seven additional parking stalls to account for retail, office and associate parking in accordance with the Fish Camp TPA Specific Plan, which results in 88 parking stalls. Per the California Accessible Code (2013 California Building Code Chapter 11B), seven cabins would be designed to conform to the requirements of the Americans with Disabilities Act (ADA) Standards for Accessible Design (Exhibit 3-4). Therefore, these seven cabins would have an ADA-compliant parking space. There would also be an ADA-compliant parking stall at the clubhouse for registration. Parking would be clustered, as shown on the circulation plan (Exhibit 3-9), to maintain visual separation between parked vehicles and the cabins. Per the Fish Camp TPA Specific Plan, 0.333 parking stalls are required per employee, resulting in 6 parking stalls needed for the 18 new Tenaya Cabins employees. Sufficient employee parking would be provided through four parking stalls for employees at the Tenaya Cabins and an additional five parking stalls available at the Tenaya Lodge (359 available stalls with 354 of those stalls required for the Lodge).

**TRANSIT SERVICE AND PEDESTRIAN ACCESS**

The Yosemite Area Regional Transportation System (YARTS) provides regularly scheduled public transit service (bus service) in the Yosemite region, including gateway communities along its routes such as Fish Camp. YARTS has a year-round bus route along Highway 41 connecting Fresno, Coarsegold, Oakhurst, Fish Camp, Wawona, and Yosemite Valley. There are regularly-scheduled stops at the Tenaya Lodge for both directions (to Yosemite and to Fresno) (YARTS 2016a and b).

The Tenaya Cabins Project would not add a new YARTS stop, but rather would utilize the existing YARTS stop at the Tenaya Lodge (YARTS 2016a and b). DN would provide shuttle service from the Tenaya Cabins to the Lodge to both employees and visitors to connect to the YARTS bus service to or from Yosemite. As it does for other employees at the Tenaya Lodge and Cottages, DN would offer an incentive mileage program for...
anyone living over 50 miles from the project site, YARTS monthly passes, and would encourage and coordinate carpooling among employees.

A pedestrian path (“walking trail”) would be constructed through the project site as shown on the site plans (Exhibits 3-4 and 3-9). The path would be approximately 8-feet wide constructed of decomposed granite and would connect to a proposed boardwalk connecting the Tenaya Cabins to the Lodge. The boardwalk, located at the southwest corner of the project site, would follow an existing dirt road and would be approximately 185-feet long, approximately 12-feet wide, and would be constructed of wood or composites, connecting to the existing roadway leading to the Tenaya Lodge. The boardwalk would be raised off the ground, placed on 5-foot footings (to be verified by geotechnical borings and design). The pedestrian path and boardwalk would be maintained by DN for year-round access between the two sites. Furthermore, the project would be constructed in compliance with Americans with Disabilities Act (ADA) requirements.

INFRASTRUCTURE AND UTILITIES

The Tenaya Cabins Project and the ½-acre single-family residential parcel would be served by a number of utility providers, as summarized in Table 3-1. Utilities would be installed underground within the limits of the paved project roads and existing Tenaya Lodge roads where feasible, and would comply with separation standards set by the State of California and the Mariposa County Health Department. The proposed utility connections are shown on Exhibits 3-11 and 3-12 and each utility service is described in greater detail, below.

<table>
<thead>
<tr>
<th>Table 3-1</th>
<th>Utility and Public Service Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Service/Utility</strong></td>
<td><strong>Agency/Entity</strong></td>
</tr>
<tr>
<td>Water Supply (wells)</td>
<td>Private - Delaware North</td>
</tr>
<tr>
<td>Sewer and Wastewater Treatment</td>
<td>Private - Delaware North</td>
</tr>
<tr>
<td>Recycled Water (for irrigation)</td>
<td>Private - Delaware North</td>
</tr>
<tr>
<td>Stormwater Drainage</td>
<td>Private - Delaware North</td>
</tr>
<tr>
<td>Fire and Life Safety</td>
<td>Mariposa County Fire Department, CAL FIRE, USFS</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>Mariposa County Sheriff's Department</td>
</tr>
<tr>
<td>Public Schools</td>
<td>Wawona Elementary School (charter school), Yosemite Union High School District (located in Madera County)</td>
</tr>
<tr>
<td>Electricity</td>
<td>Pacific Gas and Electric (PG&amp;E)</td>
</tr>
<tr>
<td>Telephone</td>
<td>Sierra Telephone</td>
</tr>
<tr>
<td>Data and cable television service</td>
<td>Northland Cable TV</td>
</tr>
<tr>
<td>Propane</td>
<td>Ferrellgas</td>
</tr>
<tr>
<td>Solid Waste Hauling</td>
<td>Mariposa County Total Waste Systems, Inc.</td>
</tr>
<tr>
<td><strong>Source:</strong> Compiled by Ascent Environmental, Inc. 2015</td>
<td></td>
</tr>
</tbody>
</table>

**Water**

Water for domestic and firefighting purposes would be provided by the three existing wells in the Tenaya Lodge water system, located on the Tenaya Lodge property. Treatment to potable drinking water standards is and would be provided at the well head of each well. Approximately 6,750 linear feet of water pipeline would be needed to connect Parcel 1 and Parcel 2 to the existing Tenaya Lodge water system (see the light-blue line on Exhibits 3-11 and 3-12). The pipes would be placed under the proposed project roads and would connect to the existing system and the proposed water tank. The existing Tenaya Lodge water pipelines have capacity to handle the additional water demand for the cabins, clubhouse, and single-family home and would not need upgrading.
Fire Water System
Fire hydrants would be located adjacent to the paved access road per the requirements of Mariposa County Fire Department. Per Mariposa Fire Department requirements, the hydrants would be placed with a minimum separation of 25 feet and a maximum separation of 50 feet from stand pipes and fire department connections. A 150,000-gallon water storage tank would also be required for fire storage per Mariposa County requirements. The storage tank would be constructed as part of this project next to the existing storage tank located east of the Tenaya Lodge (Exhibit 3-11). The tank would have the same dimensions as the existing Tenaya Lodge storage tank; it would be approximately 33 feet in diameter and approximately 24 feet tall. Approximately 2,575 linear feet of fire-service pipeline would be needed to connect the project site and the new storage tank. Per Mariposa County requirements, all cabins and the clubhouse would be equipped with sprinklers, and would comply with the wildland/urban interface fire construction requirements of CAL FIRE and the California Building Code.

Sewer and Wastewater Treatment and Disposal
Wastewater would be collected with a below-grade piping system located under the proposed project roads and gravity fed to a lift station located near the low point of the property, as identified on Exhibit 3-11. From the lift station, wastewater would be pumped to the new Tenaya Lodge Wastewater Treatment Plant (WWTP) located south of the project site on the southwestern side of the Tenaya Lodge property, south of the cottages. The new WWTP became operational in January 2016 and has capacity to treat a daily average maximum of 80,000 gallons per day of wastewater (Blair, Church & Flynn 2011). Approximately 4,425 linear feet of sewer pipeline and approximately 2,300 linear feet of new sewer force main would be needed to connect Parcel 1 and Parcel 2 to the Tenaya Lodge WWTP as shown on Exhibit 3-11.

The project would include expansion of the existing Tenaya Lodge center leach field (located north of the existing Tenaya Lodge and south of the project site). An additional 637 linear feet of leach lines would be constructed to provide disposal capacity for the proposed Tenaya Cabins at full occupancy, which would increase the total leach field disposal capacity from 33,600 gallons per day (gpd) to 42,195 gpd.

Recycled Water and Water Conservation Measures
Recycled water (i.e., effluent treated to California Code of Regulations Title 22 tertiary treatment standards) from the Tenaya WWTP would be utilized for irrigation of onsite landscaping. Approximately 3,075 linear feet of recycled water pipeline (“purple pipe”) would be installed as shown on Exhibits 3-11 and 3-12, connecting the project site to the existing recycled water system, west of the Tenaya Lodge, between the Lodge and the cottages.

In addition, the following water conservation measures would be included in the Tenaya Cabins Project to reduce water usage:

- limited native and low-water-use landscaping;

- use of recycled water for landscape irrigation, if needed, from the new Tenaya Lodge Wastewater Treatment Plant; purple piping to deliver recycled water to the project site would be installed as part of this project; and

- use of high-efficiency water fixtures (e.g., faucets, toilets) in all buildings.

Drainage and Erosion Control
Onsite drainage facilities would be designed to ensure that there are no substantial changes to the hydrology of the existing watershed. Project runoff would be retained and infiltrated onsite to the greatest extent possible via swales along the main access road and the snow-storage areas (Exhibit 3-4). The project would utilize BMPs and other Low Impact Development measures. Low Impact Development (LID) means using a land planning and engineering design approach to managing stormwater runoff that emphasizes conservation and use of onsite natural features to protect water quality. Stormwater runoff would be
retained and infiltrated such that post-development peak flows leaving the project site would be equal to the pre-development (existing) peak flows.

**Solid Waste Disposal**
Solid waste from the project site would be hauled to the Mariposa County Sanitary Landfill, a Class III landfill located approximately 2.2 miles north of the community of Mariposa on Highway 49. The landfill has a maximum permitted capacity of 1,971,000 cubic yards, remaining capacity of 1,193,088 cubic yards, and an estimated life through 2065 (CalRecycle 2015). The solid waste hauler serving the Tenaya Lodge is Mariposa County Total Waste Systems, Inc.

Bear resistant garbage containers or enclosures would be used at the Tenaya Cabins and at the single-family parcel.

**Dry Utilities**
Electricity would be extended from existing Pacific Gas and Electric facilities, requiring approximately 1,200 linear feet of underground electrical line. The project would include a back-up emergency generator with a 200 kilowatt capacity, for use when necessary during power outages. Natural gas service is not available in the area, and has not been proposed for the project. Propane from a private supplier and an onsite distribution system is proposed to serve the project. A propane tank would be located near the clubhouse, southwest of the pool (Exhibit 3-11), or smaller tanks would be utilized at each fire pit in lieu of a larger tank and distribution system to each fire pit. The propane tank(s) would have at least 25-feet of separation from surrounding buildings. It is estimated that approximately 1,150 linear feet of propane line would be needed on the project site if a propane tank is installed near the clubhouse. Alternatively, propane may be provided from the existing Tenaya Lodge 18,000-gallon tank located south of the main lodge building to provide heating, hot water, and fireplace for each cabin. This would require approximately 2,000 linear feet of propane line to provide service to the site and an additional approximately 4,000 linear feet of pipe to service each cabin and the clubhouse. Telephone (Sierra Telephone), data, and cable television service (Northland Cable TV) would be extended from Tenaya Lodge, so the services are integrated with the main lodge, requiring approximately 1,150 linear feet of communications bank and approximately 1,100 linear feet of underground lines.

**PUBLIC SERVICES**

**Fire and Life Safety**
The project site is located in an area classified as having a Very High threat of wildfire on the California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zones in State Responsibility Areas (SRA) for Mariposa County (CAL FIRE 2007) areas served by CAL FIRE. Mariposa County Fire Department provides structural fire protection to developed population centers, such as the Fish Camp TPA. CAL FIRE is responsible for wildland fire protection in all privately owned lands that are wildlands, grasslands, or timber production areas. The U.S. Department of Agriculture (USDA) Forest Service (USFS) and National Park Service provide fire protection to the Sierra National Forest and Yosemite National Park. These federal, state, and county fire protection agencies have an agreement to mutually assist each other in cases of fires located on the boundaries of their jurisdictions. The nearest fire station is the Fish Camp (Company 33) station, located at Highway 41 and Summit Road in Fish Camp, approximately 0.5 mile west of the project site. The station is staffed by three volunteers on an on-call basis. Existing equipment includes one Type-1 engine, one Type-6 4WD engine, and one 3,000 gallon water tender. Average response time varies depending on availability of personnel. If volunteers in Fish Camp are available during an emergency call, response time is approximately two minutes. However, if Fish Camp volunteers are unavailable, engines are dispatched from the Yosemite National Park Wawona and Cedar Valley fire stations through a mutual aid agreement. In this case, the average response time is approximately 10 to 25 minutes. The nearest USFS fire station is the USFS Sierra National Forest station at Westfall, approximately 4 miles from the project site. The nearest CAL FIRE fire station to Fish Camp is located in Bass Lake, approximately 10 miles from the project site (Mariposa County 2001).
**Law Enforcement**
The Mariposa County Sheriff’s Department provides law enforcement services to Fish Camp and the project site. The community is served from the station in Mariposa. Average response time for Fish Camp is approximately 45 minutes. The County Sheriff’s Department employs 31 sworn officers. The Sheriff’s Department currently patrols the Fish Camp area twice a week. In 2015, there were a total of 51 calls for law enforcement service and deputy response; 17 at the Tenaya Lodge and 34 in the Fish Camp TPA (Binnewies, pers. comm. 2016).

**Schools**
Although the project site is located in Mariposa County, it is served by the Yosemite Union High School District in Madera County. The Yosemite Union High School District consists of five high schools. Three are located in Oakhurst and are attended by students from Fish Camp: Yosemite High School, Ahwahnee High School, a continuation high school, and Evergreen High School. Elementary school services for students in Fish Camp is provided by the Wawona Elementary School, which is a charter school located on Chilnualna Falls Road in Wawona.

**CONSTRUCTION**
Tenaya Cabins Project construction is estimated to begin in 2017. Construction could take up to 18 months, depending on when construction starts and how much time construction is on hold due to winter conditions. Construction would be phased in the following order: site preparation, grading, building construction (including utilities), paving, and architectural coating. It is estimated that construction would result in approximately one acre of disturbance per day the site preparation and grading phases. It is assumed that soil would be balanced onsite; therefore, there would be no soils imported or exported from the project site. However, haul trips would be required to transport the 54 pre-fabricated cabins as well as materials (drain rock and pipes) for the leach field expansion.

**CONSTRUCTION METHODS**
All construction staging for site work, as well as for the Highway 41 improvements, would be within the project boundary. Areas shown to be disturbed by the project would be utilized as material storage and staging areas. The existing parking lot at Tenaya Lodge may also be utilized for material storage and construction staging.

Types of standard construction equipment that would be used include:

- Grader
- Rubber-tired Dozer
- Tractor
- Loader
- Backhoe
- Crane
- Forklift
- Generator Set
- Welder
- Air Compressor
- Cement Mixer
- Paver
- Roller
- Excavator

A summary of the estimated construction-related trips is shown in Table 3-2. The total number of offsite construction trips would not necessarily occur on the same day, because construction activities would vary daily. One hundred and eight (108) hauling trips were added to the building construction phase to represent the amount of trips needed to transport the 54 pre-fabricated cabins. In addition, forty (40) haul trips were added to represent trips needed to import materials (drain rock and pipes) for the leach field expansion.
### Table 3-2  Estimated Construction Offsite Trips

<table>
<thead>
<tr>
<th>Activity</th>
<th>Construction Trips per Day</th>
<th>Total Construction Trips</th>
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<td>Worker</td>
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<tr>
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<td>0</td>
</tr>
<tr>
<td>Architectural Coating</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: FirstCarbon Solutions 2015

Immediately upon completion of ground disturbance for roads, utilities, cabins, clubhouse, and other improvements, the applicant would revegetate exposed soils and install erosion control measures as recommended by the Natural Resource Conservation Service/Resource Conservation District, and in compliance with a stormwater pollution prevention plan.

### 3.5 POTENTIAL APPROVALS AND PERMITS REQUIRED

This EIR will be certified by the lead agency, Mariposa County, and may be used by other federal, regional, state, and local agencies for additional permits and approvals that might be required. DN (or subsequent property owners) would obtain all applicable permits. Table 3-3, Required Permits and Authorizations, lists the potential permits and approvals required for project implementation.

The required entitlements for the Tenaya Cabins Project from Mariposa County include:

- General Plan/Fish Camp Specific Plan Land Use and Zoning Amendment from existing SFR-1 Acre classification to Resort Commercial classification for proposed Parcel 1 and a change to SFR ½ Acre land use classification for proposed Parcel 2 (½ acre parcel).

- Two Parcel Land Division to create a ½ acre residential parcel, the remaining proposed as Resort Commercial.

- Conditional Use Permit for:
  - 54 pre-manufactured cabins of approximately 750± square feet each (approximately 675± square feet of room space plus approximately 75 square feet of deck), and
  - a multi-function clubhouse, outdoor deck and recreation area to provide guest registration, laundry, retail, hospitality, banqueting, food service, pool, barbeque and hot tub. The clubhouse outdoor area/deck is designed to seat 60± people. Amplified sound for events at the clubhouse would conclude at 10:00 p.m.; however, events could continue past that time.
**Table 3-3 Expected Permits and Authorizations**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit/Authorization</th>
<th>Action Requiring Permit Approval or Review</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Fish and Wildlife Service</td>
<td>Section 7 Consultation (through the U.S. Forest Service review process)</td>
<td>Potential impacts to a federally listed species or their habitat</td>
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<tr>
<td>U.S. Army Corps of Engineers</td>
<td>Section 404 Permit</td>
<td>Potential impacts to jurisdictional wetlands or waters</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td></td>
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</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>Section 1602 Streambed Alteration Agreement</td>
<td>Potential disturbance to the bed or bank of jurisdictional waters</td>
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<td></td>
<td>2081 Incidental Take Permit</td>
<td>Potential impacts to a state-listed species</td>
</tr>
<tr>
<td>California Department of Forestry</td>
<td>Timber Harvest Plan</td>
<td>Harvesting of timber on private lands</td>
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<tr>
<td></td>
<td>Timber Conversion Permit</td>
<td></td>
</tr>
<tr>
<td>Central Valley Regional Water Quality Control Board (5F)</td>
<td>Section 401 Water Quality Certification</td>
<td>Potential impacts to state water quality; required when a federal permit is issued</td>
</tr>
<tr>
<td></td>
<td>Board Order No. R6T-2007-0008 – Waiver of Waste Discharge Requirements Related to Timber Harvest and Vegetation Management Activities</td>
<td>Potential impacts to state water quality resulting from tree and vegetation removal activities</td>
</tr>
<tr>
<td></td>
<td>Statewide Construction General Permit No. CAS0000002 - Board Order No. WQO 2009-0009-DWQ</td>
<td>Discharges of stormwater runoff associated with construction activity involving land disturbance of 1 or more acres</td>
</tr>
<tr>
<td></td>
<td>Stormwater pollution prevention plan</td>
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<tr>
<td>California Department of Transportation, District 6</td>
<td>Encroachment Permit</td>
<td>Construction, operation, and maintenance within, under, or over state highway rights-of-way</td>
</tr>
<tr>
<td><strong>Local</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mariposa County</td>
<td>Lead Agency for certification of CEQA document Legislative and Regulatory Authority for Project Entitlements</td>
<td>Requested changes in land uses and development entitlements: General Plan/Specific Plan Zoning Amendment Land Division Conditional Use Permit Grading Permit Building Permit</td>
</tr>
<tr>
<td>Mariposa County Air Pollution Control District</td>
<td>Dust Control Authority to Construct</td>
<td>Disturbance of more than 1 acre of topsoil Stationary sources</td>
</tr>
</tbody>
</table>

Source: Compiled by Ascent Environmental 2015.
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4 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

4.1 APPROACH TO THE ENVIRONMENTAL ANALYSIS

As described in Chapter 1, “Introduction,” this Draft EIR evaluates the significant environmental effects of the Tenaya Cabins. Sections 4.2 through 4.14 provide detailed analysis of each resource area (e.g., air quality, water quality) affected by the project. Each section includes a discussion of the applicable regulatory background; existing environmental setting; the potential for the project to significantly affect the environment; and recommended mitigation measures to reduce or avoid potentially significant impacts, defined further as follows:

Regulatory Background: This subsection presents information on the laws, regulations, plans and policies that relate to the environmental topic. Regulations originating from the local, state, and federal levels are each discussed as appropriate.

Existing Environmental Setting: This subsection describes the existing environmental conditions (as of February 2015) on the proposed project site and surrounding area, in accordance with State CEQA Guidelines Section 15125. The discussions of the environmental setting focus on information relevant to the resource under evaluation. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the location where impacts would be expected. For example, air quality impacts are assessed for the air basin, whereas cultural resource impacts are assessed for the project site.

Environmental Impacts and Recommended Mitigation Measures: This subsection identifies the significance criteria used to determine the level of significance of the environmental impacts for each resource topic. Methods and assumptions used to frame and conduct the impact analysis, as well as issues or potential impacts not discussed further (i.e., issues for which the project would have no impact) are also described.

Project impacts are organized numerically in each subsection (e.g., Impact 4.4-1, Impact 4.4-2, Impact 4.4-3, etc.). A bold-font impact statement, a summary of each impact, and its level of significance precedes the discussion of each impact. The discussion that follows the impact summary includes the substantial evidence supporting the impact significance conclusion. An impact can be found to be significant, less-than-significant, or it can be concluded the project has no impact. Potentially significant environmental effects (effects with some uncertainty) are treated as significant environmental effects. If an impact is significant, mitigation measures are then recommended to reduce potentially significant effects to less-than-significant levels, when feasible, and the significance of the impact after implementation of mitigation is described. Mitigation measures are organized numerically to correspond to the impact they address. For example, Impact 4.4-1 would be mitigated with Mitigation Measure 4.4-1.

4.2 EFFECTS FOUND NOT TO BE SIGNIFICANT

As explained in the following resource discussions, the Tenaya Cabins Project would have no impact or a less-than-significant impact on the following resources. Therefore, these resource topics are not further analyzed in this EIR.
AGRICULTURAL RESOURCES

The Tenaya Cabins Project site is not located on - or adjacent to - farmland or land associated with a Williamson Act contract; therefore, the project would not convert farmland to non-agricultural use nor would it conflict with zoning for agricultural use or a Williamson Act contract (Mariposa County 2002). Therefore, no impact to agricultural resources would occur.

POPULATION AND HOUSING

No residences are located within the Tenaya Cabins Project site, which is undeveloped forested land. Therefore, no existing homes would be removed or displaced due to project implementation. The project would provide a half-acre parcel for one future single family residence.

During construction of the Tenaya Cabins, approximately 43 total construction workers would be temporarily employed. However, over the approximately 6 month construction period, only the necessary workers would be onsite for each phase, so that it is unlikely a full 43 workers would be needed at any given time. Rather the peak number of construction workers during building construction or paving would be approximately 12 or 13 workers. Once constructed, operation of the Tenaya Cabins is estimated to increase the overall employment at Tenaya Lodge by 18 employees.

Of Oakhurst’s estimated 2,282 population, it is estimated that the available labor force is 1,000 people. As of October 16, 2015, Oakhurst had an unemployment rate of 7.4 percent (Employment Development Department [EDD] 2015a), meaning that approximately 74 people would be unemployed. Furthermore, Mariposa County had an estimated a labor force of 8,560 persons, with an unemployment rate of 4.9 percent and Madera County had an estimated labor force of 63,100 with an unemployment rate of 7.7 percent (EDD 2015b). It is assumed that the temporary construction workers and 18 permanent employees would be able to be met by local/regional residents.

Rural Economic Recreation land uses in Mariposa County are required to ensure that housing is available for employees and required to provide such housing on the same site if employee housing is not available in the local community. General Plan Land Use Element Section 5.3.03.D(1) provides that a developer of resort land uses shall incorporate an analysis of the housing market to ensure that there is adequate housing for the total number of employees. Zoning Ordinance Section 17.148.010 defines employee housing as: “Housing for workers employed on land owned by the property on which such housing is located.” The Mountain Preserve Zone (MPZ), County Code Chapter 17.36 and the General Forest Zone (GFZ), County Code Chapter 17.32 allow employee housing with a Conditional Use Permit (Mariposa County 2016).

The existing year-round employees at the Tenaya Lodge and Cottages secure their own housing and are located either in the immediate area of Tenaya Lodge, which is Mariposa County and Eastern Madera County (Fish Camp, Oakhurst, Bass Lake, Ahwahnee, North Fork, Coarsegold, etc.) or commute from larger cities, such as Fresno or Madera. Currently, the majority of Tenaya’s employees commute approximately 14 miles from Oakhurst to work at the lodge. It is expected that temporary construction workers and future Tenaya Cabins’ employees would also come primarily from the Oakhurst area. For the past two years, DN has offered seasonal internship housing to 15 employees who are employed at the Tenaya Lodge or Cottages during the peak season, which is approximately mid-May to mid-October. DN currently employs a total of 427 staff during the summer season. Therefore, during peak season, DN offers employee housing in Fish Camp for 3.5 percent of the employees.

DN would provide the same percentage of summer-season employee housing for the Tenaya Cabins, meaning that 3.5 percent of the additional 18 employees, or one employee, would be offered summer housing in Fish Camp. The remaining 17 employees would be anticipated to commute from the same areas as current employees, which is Eastern Madera County or from the Cities of Fresno or Madera. DN would continue to offer incentives, YARTS monthly passes, and carpool opportunities for those traveling greater than 50 miles.
Consistent with General Plan Land Use Element Section 5.3.03.D(1), DN is completing a housing market analysis and exploring additional housing opportunities in Fish Camp and other locations for seasonal housing. However, the provision of employee housing for the Tenaya Cabins Project would not require construction of additional housing units. Compliance with County requirements for employee housing would be resolved through the project’s Conditional Use Permit.

The Tenaya Cabins Project would not induce substantial growth, either directly or indirectly, and would not displace housing necessitating the construction of replacement housing. Therefore, population, employment, and housing impacts due to the Tenaya Cabins Project would be less than significant and will not be discussed further in this Draft EIR.

**SCHOOLS**

Although the project site is located in Mariposa County, it is served by the Yosemite Union High School District in Madera County. The Yosemite Union High School District consists of five high schools. Three are located in Oakhurst and are attended by students from Fish Camp. The Yosemite Union High School District consists of five high schools. Three are located in Oakhurst and are attended by students from Fish Camp. These are Yosemite High School serving grades 9-12 with an enrollment of 698; Ahwahnee High School, a continuation high school serving grades 10-12 with an enrollment of 18; and Evergreen High School serving grades 9-12 with an enrollment of 32 (California Department of Education 2014b, c, d).

Elementary school services for students in Fish Camp is provided by the Wawona Elementary School, which is a charter school located on Chilnualna Falls Road in Wawona. Enrollment at Wawona Elementary School varies from 5 to 25 students depending on the year and the number of families with children living in the area (California Department of Education 2014a). The Yosemite Union High School District collects developer impact fees from development projects for the construction and reconstruction of school facilities as authorized by Government Code Section 65995. The project would be required to pay the fees in effect for commercial and residential development at the time building permits are issued.

As described above under population and housing, the Tenaya Cabins Project would provide for only one permanent residence. The temporary and permanent employees related to the Tenaya Cabins could be met by existing population in the region. Therefore, the project would not require new or expanded school facilities, as the schools that serve the Fish Camp area have sufficient capacity. Therefore, the project would have no impact on schools.

**PARKS AND RECREATION**

The Tenaya Lodge is a full-service resort. The 249-room lodge offers conference facilities, a fitness center, restaurant, bar and grill, day spa facilities, and a deli. The Lodge bases much of its business on the recreational potential of the area, offering tours and outdoor programs that include equestrian activities, fishing, mountain biking, hiking, rafting, rock climbing, and a ropes course.

The project site and the Fish Camp TPA are surrounded by a variety of recreational opportunities affiliated with the forest and wilderness. The Highway 41 entrance to Yosemite National Park is 1.5 miles north of the project site. Yosemite National Park hosts approximately four million visitors per year. Yosemite has 1,200 square miles of scenic wild lands, 840 miles of trails, and 8 miles of paved bike paths. The Park offers some of the most majestic scenery in the world, with its combination of granite cliffs and peaks, waterfalls, multiple creeks, and the Merced River. During winter months snowshoeing, ice skating, and cross county and downhill skiing are additional recreational attractions.

In addition, Fish Camp is virtually surrounded by the Sierra National Forest. Summerdale Campground is located immediately north, between Fish Camp and Yosemite National Park. From Fish Camp, Chowchilla Mountain Road, White Chief Mountain Road, and Jackson Road provide access to multiple campgrounds within the National Forest. Recreational opportunities in the region include camping, hiking, bicycling.
horseback riding, skiing, snowboarding, snowshoeing, snowmobiling, sight-seeing, fishing, hunting, and off-highway vehicle (OHV) recreation.

The proposed construction of 54 cabins could increase the visitation to the region, including Yosemite National Park and the Sierra National Forest. However, additional visitation would not require the construction or expansion of recreational facilities, or cause substantial physical deterioration to occur or be accelerated, either of which could have an adverse effect on the environment. Rather, the proposed project would provide lodging near these outdoor recreation and wilderness areas, reducing the need for lodging inside Yosemite National Park or the National Forest. The Tenaya Cabins project would not increase visitation to the point of requiring new or physically altered recreation facilities, or causing noticeable deterioration of existing facilities. The impact to recreation services would be less than significant and will not be discussed further in the EIR.
4.3 LAND USE AND FOREST RESOURCES

This section evaluates the potential land use and forest resource impacts of the proposed Tenaya Cabins Project. The existing land use characteristics are described and the relationship between the proposed project and existing plans and policies are addressed. Land use changes and the potential loss of forest resources are also addressed. Excerpts from the relevant Mariposa County planning documents and ordinances are presented below; complete copies of the documents and ordinances may be obtained by contacting the Mariposa County Planning Department.

4.3.1 Regulatory Background

FEDERAL

The project site is located on private land. No federal laws, policies, or regulations exist that apply to the project with respect to forest resources.

STATE

California Public Resources Code

“Forest land” is defined in Public Resources Code (PRC) Section 12220(g) as:

land that can support 10% 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.

“Timberland” is defined in PRC Section 4526 as:

land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others.

“Timberland Production Zone” is defined in Government Code Section 51104(g) as:

an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, “timberland preserve zone” means “timberland production zone.”


The FPA (California Public Resources Code - Section 4511-4517) established the state Board of Forestry and Fire Protection, whose mandate is to protect and enhance the state’s unique forest and wildland resources. This mandate is carried out through enforcement of the California Forest Practice Rules (Title 14, CCR, Chapters 4, 4.5 and 10). The California Department of Forestry and Fire Protection enforces the laws that regulate logging on non-federal lands in California. Additional rules enacted by the State Board of Forestry and Fire Protection are also enforced to protect forest and wildland resources.
Z’berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976
According to the Z’berg-Warren-Keene-Collier Forest Taxation Reform Act (California Government Code - Section 51110-51119.5: Article 2), enacted in 1976, counties must provide for the zoning of land used for growing and harvesting timber as TPZs. A TPZ is a 10-year restriction on the use of land, and replaced the use of agricultural preserves (Williamson Act contracts) on timberland. Land use under a TPZ is restricted to growing and harvesting timber, and to compatible uses approved by the County. In return, taxation of timberland under a TPZ is based only on such restrictions in use.

California Timberland Productivity Act of 1982
The California Timberland Productivity Act of 1982 (California Government Code - Section 51100-51104) identifies the benefits of the State’s timberlands and acknowledges the threat of timberland loss via land use conversions. The law identifies policies intended to preserve timberland, including maintaining an optimum amount of timberland, discouraging premature conversion, discouraging expansion of urban land uses into timberlands, and encouraging investments in timberland. The law establishes TPZ on all qualifying timberland, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses. The law also provides that timber operations conducted in a manner consistent with forest practice rules (Z’berg-Nejedly Forest Practices Act of 1973 [FPA]) shall not be or become restricted or prohibited because of any land use in or around the locality of those operations.

California Forest Practice Rules
The California Forest Practice Rules of 2012 define the timber harvest activities that are regulated under Title 14, California Code of Regulations, Chapters 4, 4.5, and 10, and under the FPA, Division 4, Chapter 8, PRC. The California Department of Forestry and Fire Protection (CAL FIRE) is the enforcing agency responsible for ensuring that logging and other forest harvesting activities are conducted in a manner that preserves and protects fish, wildlife, forests, and streams.

Before any harvesting activities occur, landowners must prepare a Timber Harvest Plan (THP), which outlines the timber proposed for harvesting, the methods of harvesting, and the steps that will be taken to prevent damage to the environment. THPs are required to be prepared by Registered Professional Foresters. When a timberland owner proposes to carry out a project that would result in timberland being converted to a non-timber growing use, the owner must secure a Timberland Conversion Permit from CAL FIRE. Projects that would result in the conversion of less than three acres of timberland may qualify for an exemption from this provision.

LOCAL

Mariposa County General Plan
The Mariposa County General Plan (2006) provides a broad framework for the development of Mariposa County. The Land Use element of the General Plan establishes the following goals and policies that are applicable to the Tenaya Cabins Project.

Goal 5-1: Maintain the rural character of Mariposa County.

Policy 5-1a: New development shall be in keeping with the County’s rural character.

The Conservation and Open Space element of the General Plan establishes the following goals and policies that are applicable to the project.

Goal 11-4: Conserve and enhance the ecosystems, plant communities, wildlife habitats, and the inherent diversity of both plant and animal species for the recreational, commercial, aesthetics, and basic ecosystem needs.
Policy 11-4b: Site development and grading review should minimize the remove of native trees and groves of trees.

The project site and its surroundings are designated as “Planning Area” in the Mariposa County General Plan (Mariposa County 2006:5.22). Planning areas identify “town,” “community,” and “special” planning areas. The project area lies within the jurisdiction of the Town of Fish Camp, which is designated as “Town Planning Area” (TPA) and functions in accordance with the County General Plan and the Fish Camp TPA Specific Plan, as further described below.

Mariposa County Code
The Mariposa County Zoning Ordinance, Title 17 of the County Code, establishes standards and regulations to implement the policies contained in the General Plan. For areas designated as TPA, Specific Plans shall be adopted pursuant to Section 5.3.01 of the County General Plan. Standards and regulations pertaining to land use policies may be established in the specific plan which conflict with those defined in Title 17 of the County Code. When such an instance occurs, the specific plan standards supersede the County standards (Mariposa County Code section 17.12.010).

Fish Camp Town Planning Area Specific Plan
Mariposa County adopted the Fish Camp TPA Specific Plan in 1983 (last amended in March 2016) for 280 acres in the central Sierra Nevada Mountains that is virtually surrounded by National Forest Land. Fish Camp is an unincorporated community, and is governed by Mariposa County. The Fish Camp TPA Specific Plan provides a comprehensive mix of zoning and land uses associated with its rural scale “urban” character. The Fish Camp TPA Specific Plan does not contain supplementary policies that exceed the stringency of those found in the General Plan. Pursuant to Mariposa County Code section 17.12.010, the Fish Camp TPA Specific Plan establishes land use policies and development standards for lands in the TPA, which include single- and multi-family residential, resort commercial, and general forest. Parcel size for single-family residential ranges from a minimum of 0.5-acre to 5-acres. The Fish Camp TPA Specific Plan also discusses issues and suggests “mitigation policies and procedures” in relation to domestic water supply, traffic and circulation, topography and soil erosion, the water quality of Big Creek, special status species, and fire protection.

4.3.2 Existing Environmental Setting

Project Site
The project site is located in the Town of Fish Camp in Mariposa County on APN 010-350-008. As shown in Exhibit 4.3-1, the Tenaya Cabins Project site is zoned Single Family Residential 1-Acre Minimum (Mariposa County 2016:20). Per the Fish Camp TPA Specific Plan, this classification allows for one single-family residence per parcel and one secondary unit as well as accessory buildings incidental to permitted uses. Conditional uses in this classification include home occupations in conformance with the Specific Plan, utility substations designed to serve adjacent uses and neighborhood parks and open space. However, the project site is undeveloped and contains natural features including rock formations, vegetation, a pond (Rainbow Lake), meadow, and mixed conifer trees. Because the project site is forested, and exceeds the 10 percent threshold of native tree coverage, it can be considered forest land as defined by the PRC.

Utility connections to serve the Tenaya Cabins Project are proposed on the Tenaya Lodge property, which is designated Resort Commercial. In addition, entry intersection improvements are proposed along Highway 41, a Caltrans right-of-way.

Adjacent Land Uses
The project site is bounded by the existing Tenaya Lodge (on land designated Resort Commercial) to the south, State Highway 41 (Highway 41) and rural residences (on land designated 0.5-acre Single Family Residential) to the west, the Big Creek Inn, Owl’s Nest Lodging, the Wood Family Cabin, and the Sugar Pine
Exhibit 4.3-1

Fish Camp Town Planning Area Specific Plan Land Use Designations

Source: Mariposa County, Fish Camp Town Planning Area Specific Plan 2004
Cabin (on land designated Resort Commercial) to the north, and Big Creek and rural residences (on land
designated 0.5-acre Single Family Residential) to the east. Several other businesses and lodging
establishments exist near the project site. The Fish Camp General Store is located on Highway 41 to the east
of the project site and the Tin Lizzie Inn can be found east of the project site on Laurel Way. The White Chief
Mountain Lodge and the Bear Club Den can be found northeast of site along White Chief Mountain Road.

To the west lies the Jack L. Boyd Outdoor School, a public facility operated by the Merced County Office of
Education. The entrance into Yosemite National Park is located approximately 2 miles (2.9 miles on Highway
41) north of the project site and the community of Sugar Pine lies approximately 2 miles (5.8 miles on
Highway 41) south of the project site. The Town of Fish Camp is virtually surrounded by the Sierra National
Forest lands and on the western boundary by private timber holdings.

4.3.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA

Based on Appendix G of the CEQA Guidelines, the project would the project could have a significant adverse
effect related to Land Use and Forest Resources if it would:

Land Use

- physically divide an established community;

- conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the
  project adopted for the purpose of avoiding or mitigating an environmental effect;

- conflict with any applicable habitat conservation plan or natural community conservation plan;

Forest Resources

- conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code
  section 12220[g]), timberland (as defined in Public Resources Code section 4526), or timberland zoned
  Timberland Production (as defined by Government Code section 51104[g]);

- result in the loss of forest land or conversion of forest land to non-forest use; or

- involve other changes in the existing environment which, due to their location or nature, could result in
  conversion of forest land to non-forest use.

METHODS AND ASSUMPTIONS

Evaluation of potential Land Use and Forest Resources impacts is based on a review of documents
pertaining to the project site, including the Mariposa County General Plan (2006), the Mariposa County Code
(Zoning Ordinance), Fish Camp TPA Specific Plan, and the proposed Tenaya Cabins project description and
site plans. In determining the level of significance, this analysis assumes that the project would comply with
relevant state and local ordinances and regulations, as well as the General Plan policies presented above.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Habitat Conservation Plans and Natural Community Conservation Plans

Mariposa County does not contain any natural community conservation plans; however, the Pacific Gas and
Electric San Joaquin Valley Operations and Maintenance (O&M) habitat conservation plan (HCP) (Federal
Register 73 FR 71668), issued November 25, 2008, covers 12.1 million acres of Central Valley Habitat and
extends into Mariposa County. The HCP contains portions of San Joaquin, Stanislaus, Merced, Fresno, Kings,
Kern, Mariposa, Madera, and Tulare counties. The Tenaya Cabins Project site is located approximately 5 miles to the northeast of the HCP. The proposed project does not lie within the vicinity of lands governed by this HCP, nor are any other HCPs adopted for the project site or surrounding area; therefore, implementation of the project would not conflict with any such plans. No impact related to an applicable habitat conservation plan or natural community conservation plan would occur and this issue is not discussed further in this Draft EIR.

Zoning or Rezoning of Forest land, Timberland, or Timberland Zoned Timberland Production
The Fish Camp TPA Specific Plan land use map designates the project site 1-acre minimum Single Family Residential. No portion of the project site is zoned forest land, timberland, or timberland zoned Timberland Production and the project would have no impact related to rezoning of such forest lands or timberlands. This issue is not discussed further in this Draft EIR.

IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.3-1: Land use compatibility and potential to divide an established community

The Tenaya Cabins project site is located in the Town of Fish Camp, which contains single- and duplex residences, the Tenaya Lodge, White Chief Mountain Lodge, Jack L. Boyd Outdoor School and Camp Green Meadows Fish Camp, and designated general forest areas. Project implementation would be consistent with the Fish Camp TPA Specific Plan and compatible surrounding land uses and would not result in the division of an established community. This impact would be less than significant.

The Tenaya Cabins Project site is located within the boundaries of the Fish Camp TPA Specific Plan, which guides future development of the Fish Camp area. The surrounding lands are designated and utilized for Resort Commercial and Single Family Residential uses. The rezoning of Parcel 1 from Single Family Residential 1-acre to Resort Commercial and development with 54 cabins and a clubhouse on Parcel 1, as well as a future single-family residence on the ½-acre Parcel 2, would be consistent with the surrounding land uses, in particular the Tenaya Lodge to the south, the inns and cabins to the north, and the residential parcels to the east and west. Although the project would occur within an existing community and would develop a currently undeveloped property, the proposed zoning change from residential to resort commercial and the proposed developed uses are consistent with those allowed by the Fish Camp TPA Specific Plan. The cabins, clubhouse, and residence would not divide the established community of Fish Camp, but rather would be compatible with its existing and planned land uses. This impact would be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.3-2: Conflict with relevant plans, policies, and zoning adopted for the purpose of avoiding or mitigating an environmental effect

Implementation of the project would be consistent with the goals and policies established by the Mariposa County General Plan and the Fish Camp TPA Specific Plan such that rural quality and natural resources would be conserved during and after project implementation. This impact would be less than significant.

Implementation of the project would involve a land division of APN 010-350-008 into “Parcel 1” for the Tenaya Cabins Project, and “Parcel 2” for a single-family residential home. The two parcels are shown on the proposed site plan (Exhibit 3-3). Parcel 1 would be rezoned from Single Family Residential 1-acre to Resort Commercial. Parcel 2 would be rezoned from Single Family Residential 1-acre to Single Family Residential ½-acre per Fish Camp TPA Specific Plan and Mariposa County requirements. The Fish Camp TPA Specific Plan would be amended to reflect the changed land classifications for the project site and ensure project consistency with the Fish Camp TPA Specific Plan and the County General Plan.
The Tenaya Cabins Project would be consistent with the applicable Mariposa County General Plan goals and policies. General Plan Goal 5-1 establishes the desired character of Mariposa County as rural, and Policy 5-1a stipulates that new developments must be in keeping with the County’s rural character. Consistent with Policy 5-1a, the stated objective of the Tenaya Cabins Project is to provide visitors to the Tenaya Lodge with a less-developed option that provides a more natural and rustic atmosphere. The proposed site plan was designed to minimize site disturbance and preserve the existing natural features of the site, including rock formations, trees, the Big Creek riparian corridor, Rainbow Lake, and wetlands. Furthermore, layout of the cabins is intended to maximize the buffer between the cabins and Highway 41. The building form, mass, materials, colors, landscaping, and outdoor features of the clubhouse and cabins is designed to blend with the existing natural setting and to be appropriate within the context of the Sierra Mountain environment. Conceptual designs of the cabins and the clubhouse are shown in Exhibits 3-5 and 3-6. Finally, all development on the project site is required to comply with the development standards established in the Fish Camp TPA Specific Plan, as approved by Mariposa County.

General Plan Goal 11-4 contains policies directed towards the conservation of biological resources (i.e., ecosystems, plant communities, wildlife habitats) for the promotion of recreational, commercial, aesthetics, and basic ecosystems needs. Specifically, Policy 11-4b requires that removal of native trees and groves of trees be minimized during site development and grading of projects and requires environmental review of biological and hydrologic resources pursuant to the applicable federal or state regulations. Consistent with Policy 11-4b, as stated, the site plan was intended to minimize impacts on the natural features of the site including minimization of tree removal; further, the project is undergoing environmental review in this Draft EIR pursuant to CEQA. Impacts associated with biological resources are discussed in Section 4.4, “Biological Resources,” and impacts related to hydrology and water quality are discussed in Section 4.11, “Hydrology and Water Quality.” Technical studies are provided in the appendices to this Draft EIR. Release of this Draft EIR demonstrates compliance with this policy.

General Plan Goal 11-5 instructs development to avoid erosion and loss of topsoil during construction and operation activities and Policy 11-5a directs development to minimize impacts associated with grading activities. Consistent with Policy 11-5a, prior to grading activities associated with the development of cabins and clubhouse, the project applicant would secure all the appropriate grading permits in order to minimize impacts of grading. Immediately upon completion of ground disturbance for roads, utilities, cabins, clubhouse, and other improvements, the applicant would revegetate exposed soils and install erosion control measures. Issues related to soil disturbance, erosion, and water quality are discussed further in Section 4.11, “Hydrology and Water Quality.”

The Fish Camp TPA Specific Plan defines development standards for each land use designation in the TPA. The Tenaya Cabins Project would be required to comply with the development standards established for Resort Commercial land use (Parcel 1) and for Single-Family Residential ½-acre land use (Parcel 2). The standards establish the minimum lot area, setbacks, sign standards, parking standards, height standards, and density standards. The Fish Camp TPA Specific Plan also addresses resource issues particular to the TPA and recommends measures to reduce and avoid resource impacts in the TPA. As described below, the Tenaya Cabins Project is consistent with the suggested policies and procedures.

The Fish Camp TPA Specific Plan recognizes that domestic water in the Fish Camp TPA is supplied by groundwater wells in a fractured groundwater basin and that although the current water supply systems have historically provided adequate water to the area, future development could overtax or impact these systems. Therefore, the Specific Plan recommends that development proposals demonstrate adequate and reliable water for both domestic and fire protection. Consistent with this recommendation, this EIR includes a detailed groundwater study to determine the project’s water demands at peak periods, to determine if there is sufficient water for domestic demands and fire protection, and to evaluate the potential impact on existing wells in the Fish Camp TPA. The analysis, which determined that there is sufficient groundwater supply from the existing Tenaya Lodge wells to support the Tenaya Cabins Project, as well as less-than-significant impacts to surrounding wells after implementation of mitigation, is discussed in Sections 4.11, “Hydrology and Water Quality,” and 4.12, “Utilities and Public Services,” of this Draft EIR.
The Fish Camp TPA Specific Plan recognizes that Highway 41 provides not only the primary access to development in the TPA, but to Yosemite National Park’s south entrance. There are safety and easement concerns on Highway 41 and the Specific Plan recommends that development proposals be reviewed for road capacity, safety, and maintenance issues and that all encroachments to Highway 41 should be reviewed and approved by Caltrans. Consistent with these recommendations, the applicant prepared a transportation study and coordinated with Caltrans and the County related to the design of the project entryway, Highway 41 easements, additional trips because of the project, and safety concerns. The transportation analysis, peer-reviewed for this EIR, is discussed in detail in Section 4.6, “Transportation and Circulation.”

The Fish Camp TPA Specific Plan addresses concerns related to development near Big Creek and possible impacts to this surface water. As recommended in the Specific Plan, the Tenaya Cabin site plan does not propose any development within the Big Creek flood zone or the jurisdictional riparian zone around the creek. The project would also be connected to the Tenaya Lodge wastewater treatment plant and would not rely on any septic system. The project would include expansion of the Tenaya Lodge center leach field to accommodate the project-related increase in tertiary-treated effluent discharge from the WWTP. An additional 637 linear feet of leach lines would be constructed to provide disposal capacity for the proposed Tenaya Cabins at full occupancy. Further, the project would implement erosion control measures and this EIR has evaluated the Tenaya Lodge groundwater wells capacity. These resource issues are addressed throughout this Draft EIR in Section 4.4, “Biological Resources,” Section 4.11, “Hydrology and Water Quality,” and Section 4.12, “Utilities and Public Services.”

Finally, the Fish Camp TPA Specific Plan recognizes that the TPA is within an area classified as having a Very High threat of wildfire (CAL FIRE 2007). Therefore, the project is required to meet the state’s fire safe regulations with regard to emergency access, signage, water for fire protection, and fuel clearance around structures. The site plan, circulation plan, and water supply studies have taken these requirements into account. Fire protection is further evaluated in Section 4.13, “Hazards,” Section 4.6, “Transportation and Circulation,” addresses emergency access requirements, and Section 4.12, “Utilities and Public Services,” addresses water supply.

The Fish Camp TPA Specific Plan would be amended to reflect the Resort Commercial and Single Family Residential ½-acre land use designations for the project site. The subsequent development of cabins, a clubhouse and a future single family residence would be consistent with relevant policies of the Mariposa County General Plan (2006), the development standards of the Fish Camp TPA Specific Plan, and the resource-specific recommendations of the Specific Plan. Therefore, this impact is less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.3-3: Result in the loss of forest land or the conversion of forest land to non-forest use

The project site is currently zoned 1-acre Single Family Residential under the Fish Camp TPA Specific Plan. Although the site is not zoned forest land, it is undeveloped and forested, supporting 10 percent native tree cover and meeting the “forest land” definition (Public Resources Code Section 12220[g]). Project implementation would result in the removal of some trees, which may be harvested for sale. Therefore, the applicant would secure a Timberland Conversion Permit and receive approval of a Timber Harvest Plan prior to any tree removal. Further, the project site would continue to support at least 10 percent native tree cover after project construction. Therefore, the project would result in a less-than-significant conversion of forest land to non-forest use.

As stated above, no portion of the Tenaya Cabins Project site is zoned forest land, timberland, or timberland zoned Timberland Production; the project would have no impact related to rezoning of forest lands or timberlands.
The project site is zoned Single Family Residential; however, the project site is undeveloped and forested. The project site meets the criteria of “forest land” as defined by Public Resources Code Section 12220(g) as 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. The majority of the site is montane coniferous forest, which is a habitat type common in the region. Timber is not currently harvested from the project site, but forest thinning may occur for fire safety and fuels management.

The locations of the proposed cabins and utility connections were selected to reduce tree removal. Nonetheless, the construction of the project would require the removal of trees, including trees greater than 20 inches diameter at breast height (Exhibit 4.5-3), although the total number of trees has not been determined. The area for tree removal would be clearly demarcated and the work plan would specify that no tree outside the demarcated area is to be damaged or removed. If any tree outside the demarcated area is damaged, replanting would be required. Based on an estimation of disturbance for the entire footprint identified on the site plan (Exhibit 3-4), tree cover remaining after project construction would still be 15 percent or greater.

Before any tree removal would occur, the project applicant would secure a Timberland Conversion Permit and receive approval of a THP prepared by a Registered Professional Forester from CAL FIRE in accordance with California Forest Practice Rules in effect at the time. After review and approval of a THP, CAL FIRE inspectors periodically inspect the logging operation to ensure compliance with the THP and all laws and regulations. When a THP operation has been complete the timber owner must submit a completion report to CAL FIRE, which then inspects the area to certify compliance with all requirements. Furthermore, the project would leave an estimated 15 percent or greater tree cover on the project site, which would continue to provide public benefits such as aesthetics, biodiversity, water quality, and recreation. Therefore, the project’s forest resource impact is considered less than significant.

Mitigation Measures

No mitigation is required.
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4.4 BIOLOGICAL RESOURCES

This section describes the existing biological resources on the Tenaya Cabins Project site and vicinity and provides an analysis of the potential biological resource impacts associated with project implementation. The main sources of information for this chapter include technical reports prepared for the project, which are provided in Appendix C of this Draft EIR, and applicable federal, state, and local regulations.

4.4.1 Regulatory Background

FEDERAL

Federal Endangered Species Act
The U.S. Fish and Wildlife Service (USFWS) regulates the taking of a species listed as threatened or endangered under the ESA. In general, persons subject to the Endangered Species Act (ESA) (including private parties) are prohibited from “taking” endangered or threatened fish and wildlife species on private property, and from “taking” endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take. If a proposed project would result in take of a federally-listed species, either the project applicant must acquire an incidental-take permit, under Section 10(a) of ESA, or if a federal discretionary action is involved, the federal agency consult with USFWS under Section 7 of the ESA.

Migratory Bird Treaty Act
The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. The current list of species protected by MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Bald and Golden Eagle Protection Act
The Bald and Golden Eagle Protection Act, enacted in 1940 and amended multiple times since, prohibits the taking of bald and golden eagles without a permit from the Secretary of the Interior. Similar to the ESA, the Bald and Golden Eagle Protection Act defines “take” to include “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb” (16 USC 668-668c). For the purpose of the act, disturbance that would injure an eagle, decrease productivity, or cause nest abandonment, including habitat alterations that could have these results, are considered take and can result in civil or criminal penalties.

Fully Protected Species
Protection of fully protected species is described 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. The California Department of Fish and Wildlife (CDFW) has informed nonfederal agencies and private parties that their actions must avoid take of any fully protected species.

Section 404 of the Clean Water Act
Section 404 of the Clean Water Act (CWA) establishes a requirement for a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of
the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates and issues permits for activities that involve the discharge of dredged or fill materials into waters of the United States. Fills of less than 0.5 acre of nontidal waters of the United States for residential, commercial, or institutional development projects can generally be authorized under USACE’s nationwide permit (NWP) program, provided that the project satisfies the terms and conditions of the particular NWP. Fills that do not qualify for a NWP require a letter of permission or an individual permit.

Section 401 Water Quality Certification
Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the State’s water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine regional water quality control boards (RWQCBs). The project site is within the jurisdiction of the Central Valley RWQCB.

STATE

California Endangered Species Act
The California Endangered Species Act (CESA) prohibits the taking of state-listed endangered or threatened species, as well as candidate species being considered for listing. Applicants may obtain a Section 2081 incidental take permit if the impacts of the take are minimized and fully mitigated and the take would not jeopardize the continued existence of the species. A “take” of a species, under CESA, is defined as an activity that would directly or indirectly kill an individual of a species. The CESA definition of take does not include “harm” or “harass” as is included in the federal ESA.

California Fish and Wildlife Code Section 1602 – Streambed Alteration
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 (formerly California Department of Fish and Game) under Sections 1600 et seq. of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the channel, bank, or bank of any river, stream, or lake designated by CDFW, or use any material from the streambeds, without first notifying CDFW of such activity and obtaining a Lake or Streambed Alteration Agreement authorizing such activity. “Stream” is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. CDFW’s jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

California Fish and Wildlife Code Sections 3503-3503.5 Protection of Bird Nests and Raptors
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 (i.e., hawks, owls, eagles, and falcons), including their nests or eggs. Violations of these codes include destroying active nests by removing the vegetation in which the nests are located and disturbance of nesting pairs that results in the failure of active raptor nests.

California Native Plant Protection Act
In addition to CESA, the California Native Plant Protection Act provides protection to endangered and rare plant species, subspecies, and varieties of wild native plants in California. The California Native Plant Protection Act definitions of “endangered” and “rare” closely parallel the CESA definitions of endangered and threatened plant species.
Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires that each of the nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCBs’ jurisdiction includes waters of the United States as well as areas that meet the definition of “waters of the state.” Waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCBs have the discretion to take jurisdiction over areas not federally protected under Clean Water Act Section 404 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetland functions and values of waters of the state is typically required by the RWQCBs.

LOCAL AGENCIES

Mariposa County General Plan

The following Goals, Policies and Implementation Measures from the Mariposa County General Plan are applicable to biological resources within the project site.

Goal 11-1: Conserve and enhance the ecosystems, plant communities, wildlife habitats, and the inherent diversity of both plant and animal species for the recreational, commercial, aesthetic, and basic ecosystems needs.

This conservation goal is supported by the Policy to conserve the diversity of native ecosystems, plant communities, wildlife habitat, and plant and animal species in the County. There are also several supporting Implementation Measures applicable to the project. These Implementation Measures include;

- Policy 11-4a(2): Site development and grading review should minimize the removal of native trees and groves of trees.
- Policy 11-4a(3): The County shall develop and enforce standards that reduce or eradicate invasive species affecting the agricultural and natural ecosystems.
- Policy 11-4a(5): The County shall utilize collaborative planning efforts to coordinate local efforts to eradicate invasive plant species.
- Policy 11-4a(6): The County shall require site surveys in compliance with Federal and State regulations as part of environmental review to determine:
  - The presence or absence of endangered species and their habitat;
  - The presence or absence of threatened or rare wildlife and plant species and their habitat;
  - The presence or absence of breeding raptors and migratory birds;
  - The presence or absence of sensitive native plant communities;
  - The presence or absence of native wildlife migration or travel corridors
  - The presence or absence of jurisdictional wetland or other waters of the U.S.
- Policy 11-4a(8): During project review and environmental analysis, the County shall comply with Federal and State regulations to require measures that:
  - Protect endangered species and their habitat;
  - Protect threatened or rare wildlife and plant species and their habitats;
  - Protect breeding raptors and migratory birds;
  - Protect and avoid, to the extent feasible, sensitive native plant communities;
  - Protect and avoid, to the extent feasible, native wildlife migration or travel corridors; and
  - Protect and avoid, to the extent feasible, jurisdictional wetland or other waters of the U.S.
Fish Camp Town Planning Area

The Fish Camp Town Planning Area Specific Plan (Mariposa County 1983, as amended) identifies four species of rare and endangered plants—Rawson’s flaming trumpet (Collomia rawsoniana), Yosemite woolly sunflower (Eriophyllum nubigenum), Madera leptosiphon (Leptosiphon serrulatus), and orange lupine (Lupinus citrinus var. citrinus)—and directs that “until the area is fully surveyed all projects should be reviewed to ascertain possible impacts to rare and endangered plants.” The Specific Plan also states, “If potential impacts are identified, adequate mitigation measures should be required.”

4.4.2 Existing Environmental Setting

This section describes the biological resources in the project site that are most relevant to the significance criteria and corresponding impact analysis. The existing biological conditions on the project site were determined by utilizing the information contained in the Tenaya Lodge Explorer Cabins Biotic Report Addendum (H.T. Harvey and Assoc. 2016a) and other studies as provided in Appendix C of this Draft EIR, which included:

- Tenaya Lodge Explorer Cabins Biotic Report (H.T. Harvey and Assoc. 2014)
- Tenaya Lodge Explorer Cabins Special-status Plant Surveys (H.T. Harvey and Assoc. 2015a)
- California Spotted Owl and Northern Goshawk Surveys for Tenaya Lodge Explorer Cabins (H.T. Harvey and Assoc. 2015b)
- Tenaya Lodge Explorer Cabins Special-status Bat Surveys (H.T. Harvey and Assoc. 2015c)
- Tenaya Lodge Explorer Cabins Biotic Report Addendum (H.T. Harvey and Assoc. 2016a)
- Tenaya Lodge Explorer Cabins Preliminary Delineation of Wetlands and Other Waters (H.T. Harvey and Assoc. 2016b)
- Tenaya Lodge Explorer Cabins Leach Field Expansion (H.T. Harvey and Assoc. 2016c)

OVERVIEW OF PHYSICAL CONDITIONS AND LAND USE

The Tenaya Cabins Project site (assessor’s parcel number 010-350-008) is located within the Fish Camp Specific Plan and is currently zoned for single-family residential on one-acre minimum lots (SFR-1 Acre), but is currently undeveloped forested land, with evidence of past uses including; a system of unpaved roads that may have historically been used for logging, an old cement foundation and well which provide evidence of former residential occupancy. The project site includes a one-acre pond (Rainbow Lake) at the northern end, Big Creek on the eastern side, and meadow and wetlands on the southern portion of the site. The total acreage assessed for biological resources includes Highway 41 and the utility connections to the Tenaya Lodge. Therefore, the total acreage of the project site evaluated is 30.03 acres, whereas assessor’s parcel number 010-350-008 represents 26.89 acres of this total.

Elevations on the project site range from 4,970 to 5,050 feet above sea level. This elevation and latitude in the central Sierra Nevada is within the main timber belt in the region, dominated by lower montane coniferous forest. The climate is generally warm and dry in the summer, with cool, wet winters. Winter precipitation can be in the form of rain or snow, and this elevation is often within the transition between the two forms of precipitation.

Vegetation Communities and Habitat Types

The vegetation and habitat types present on the Tenaya Cabins Project site are shown in Exhibit 4.4-1 and described in Table 4.4-1. The majority of the project site, 22.52 acres, is lower montane coniferous forest, a common habitat type that consists mainly of mature trees (predominantly white fir, sugar pine, and incense cedar) with little understory.
**Table 4.4-1  Vegetation Communities/Habitat Types on the Project Site**

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Description</th>
<th>Approximate Acres</th>
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</thead>
<tbody>
<tr>
<td><strong>Aquatic Habitats</strong></td>
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<tr>
<td>Perennial Stream</td>
<td>Big Creek, a perennial stream, occurs along the northern, eastern, and northeastern portions of the project site. At the time of the October 2014 survey, water flow was moderately slow. The banks of the stream are lined by alder/white fir/incense cedar riparian complex, except for the dam along the northeastern edge of Rainbow Lake, where there is wet meadow and willow shrub riparian, and near the eastern end of the site where there is willow shrub riparian. The bank vegetation is very complex with clumps of wetland grasses, common scouring rush (<em>Equisetum hyemale</em> ssp. <em>affine</em>), mountain boykinia (<em>Boykinia major</em>), California mugwort (<em>Artemisia douglasiana</em>), common ladyfern (<em>Athyrium filix-femina</em>), western bracken fern (<em>Pteridium aquilinum</em> var. <em>pubescens</em>), American cowparsnip (<em>Heracleum maximum</em>), northern willow herb (<em>Epilobium ciliatum</em>), and seep monkey flower (<em>Mimulus guttatus</em>). Canopy cover was very high over most of the stream, except in areas near Rainbow Lake and at the eastern end of the property where the shrubby willows occur. The stream alternates between riffles, runs and pools (to 2 ft deep). Substrate is mainly cobble and rock, with boulders and low shores of cobble or sand. Most of the bank on one side of the creek (alternating sides) is undercut with complex tunnels, alcoves, clumps of vegetation, and exposed roots. A moderate amount of large woody debris is in the channel.</td>
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<td>Intermittent Stream</td>
<td>A small intermittent stream drains the southern wet meadow into Big Creek. The water source is primarily groundwater in the wet meadow, and it contained water during the site visits. It has an incised channel with silt substrate, and is approximately 2 to 3 ft deep by approximately 3 ft wide. Upstream, the stream channel is incompletely formed and is discontinuous. The stream is vegetated by tall scouring rush, which also is present in the surrounding areas.</td>
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<td>Freshwater Pond</td>
<td>In the northwestern corner of the site, there is a perennially flooded freshwater pond (Rainbow Lake) formed by an earthen dam on the east side that impounds water seeping from wet meadow areas to the south (described above). The dam separates Rainbow Lake from Big Creek. Rainbow Lake is encircled by dense red-tinged bulrush, and about half of the pond is covered by submergent pondweed. Rainbow Lake has gradually sloping edges and a sandy, even bottom covered with a layer of silt. It is less than 3 ft deep, and likely has been filled over the years by sediment. Rainbow Lake contains non-native fishes and amphibians.</td>
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<td>Drainage Channel</td>
<td>Two drainage channels act as overflow channels for Rainbow Lake, with one on each side of the dam. The southern channel is connected to the pond, whereas the northern channel apparently drains water through a subsurface connection, but is depicted on the USGS Fish Camp 7.5-minute quadrangle. Vegetation in the channels was representative of the adjacent wet meadow or riparian communities.</td>
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<tr>
<td><strong>Wetland Habitats</strong></td>
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<tr>
<td>Willow Shrub Riparian/Wetland</td>
<td>Two areas dominated by shrubby Pacific willow (<em>Salix lasiandra</em> var. <em>lasiandra</em>) occur along the banks of Big Creek. One area is located along the eastern extent of the site on a terrace adjacent to the stream, and the other is located between the dam that separates Rainbow Lake and the stream on the northern portion of the site. The understory is dominated by common scouring rush and western bracken fern.</td>
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<tr>
<td>Aspen Forested Wetland</td>
<td>Several groves of quaking aspens (<em>Populus tremuloides</em>) occur on the project site. These groves have a predominately herbaceous understory. They occur in a low swale that drains into Big Creek on the eastern end of the property.</td>
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<tr>
<td>Wet Meadow</td>
<td>There are several wet meadow habitats on the project site. One small wet meadow area occurs under lower montane coniferous forest canopy along the western portion of the site and drains into Rainbow Lake. Two larger wet meadows intergrade with freshwater emergent wetland habitat as the soils become more mesic. The wet meadow in the southern portion of the site is characterized by small fruited bulrush (<em>Scirpus microcarpus</em>), Sierra checker mallow (<em>Sidalcea reptans</em>), and California corn lily (<em>Veratrum californicum</em> var. <em>californicum</em>). The other two meadows are dominated by herbaceous plants, including Canada goldenrod, rusty slender sedge (<em>Carex subfusca</em>), and common cowparsnip (<em>Heracleum maximum</em>). Small fruited bulrush is dominant along the shore of Rainbow Lake. Based on the presence of these and other hydrophytic plants, water likely remains at or near the surface for most of the growing season.</td>
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</table>
The Tenaya Lodge Explores Wetland Habitats and Waters of the United States/Waters of the State.

Sensitive natural communities have limited distribution statewide or are within a county or region that provides important habitat value to native species. To assess the sensitive natural communities within the project site, the list of Vegetation Alliances and Associations (CDFG 2010) was queried and alliances considered to be highly imperiled were considered sensitive. In addition, the CNDDB was queried for sensitive natural communities recorded in the CNDDDB as occurring in the nine-quadrangle search area. On the project site, fresh water pond, perennial stream, intermittent stream, willow shrub riparian/wetland, aspen forested wetland, and wet meadow are considered sensitive natural communities, as shown on Exhibit 4.4-1.

The CNDDDB listed two other sensitive natural communities in the project vicinity, Central Valley Drainage Hardhead/Squawfish Stream and Big Tree Forest (CNDDDB 2015). Neither of these communities occurs on the project site. Big Creek is not a Central Valley Drainage Hardhead/Squawfish Stream due to its moderate to high velocities (in winter) and cold water temperatures. Big Tree Forest comprises Sierra redwood (Sequoia giganteum), which does not occur on the project site.

**Wetland Habitats and Waters of the United States/Waters of the State**

The Tenaya Lodge Explorer Cabins Preliminary Delineation of Wetlands and Other Waters (H.T. Harvey and Assoc. 2016b, Appendix C) identified wetland habitats that may be considered waters of the United States and or waters of the State. The preliminary wetland delineation evaluated a larger study area (39.46 acres) than the project site (30.03 acres). The potentially jurisdictional features on the project site include: wet meadow, white alder riparian wetlands (the wetted portion of alder/white fir/incense cedar riparian complex discussed in Table 4.4-1), willow shrub riparian wetlands, aspen forested wetlands, and other waters.

### Table 4.4-1 Vegetation Communities/Habitat Types on the Project Site

<table>
<thead>
<tr>
<th>Habitat Type</th>
<th>Description</th>
<th>Approximate Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forested Habitats:</strong></td>
<td></td>
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<tr>
<td>Alder/White Fir/Incense Cedar Riparian Complex (includes white alder riparian wetland)</td>
<td>This habitat occurs along the banks of Big Creek. White alder (Alnus rhombifolia) and Pacific willow (Salix lasiandra var. lasiandra) occur in the overstory of wetter zones, whereas white fir (Abies concolor) and incense cedar (Calocedrus decurrens) occur on less mesic sites. The understory is predominantly common scouring rush (Equisetum hyemale ssp. affine), with smaller contributions from Canada goldenrod (Solidago canadensis), western bracken fern, and common ladyfern (Athyrium filix-femina). Beaked hazelnut (Corylus cornuta) and western azalea (Rhododendron occidentale) shrubs also occur in the understory in drier locations.</td>
<td>0.52</td>
</tr>
<tr>
<td>Lower Montane Coniferous Forest</td>
<td>This community covers most of the site and consists mainly of mature trees with little understory. White fir and sugar pine (Pinus lambertiana) predominate, and incense cedar also occurs in large numbers. Ponderosa pine (Pinus ponderosa) and California black oak (Quercus kelloggii) are sparse, and the majority of these oaks are less than 20 inches dbh. The forest understory varies across the site from white fir and incense cedar seedlings and saplings to mixed shrub and herbaceous species, including green leaf manzanita (Arctostaphylos patula), western bracken fern, sticky cinquefoil (Drymocallis glandulosa), and lupine (Lupinus sp.). In many areas, there is no understory and the ground is covered with leaf litter. Small clearings, meadows and small rock outcrops occur throughout this community.</td>
<td>22.52</td>
</tr>
<tr>
<td><strong>Developed Areas:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culvert</td>
<td>There are several existing culverts located between the Tenaya Cabins site and the Tenaya Lodge that are part of the project site.</td>
<td>0.03</td>
</tr>
<tr>
<td>Developed</td>
<td>This category contains Highway 41, as well as parking and other developed areas within the adjacent Tenaya Lodge.</td>
<td>3.75</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30.03</td>
</tr>
</tbody>
</table>

Source: Adapted from H.T. Harvey and Assoc. 2016a (Appendix C)
Wildlife Movement Corridors
The project site does not contain any mapped wildlife movement corridors or essential connectivity areas, as mapped by the California Essential Habitat Connectivity Project (a peer-reviewed statewide assessment of important habitat linkages) (Spencer et al. 2010). The project’s goal was to identify large remaining blocks of intact habitat or natural landscape at a coarse spatial scale, and model linkages between them that are important to maintain as corridors for wildlife. This coarse-scale, statewide map was based primarily on the concept of ecological integrity over a very large region, rather than the specific movement and other life history requirements of particular species, and identified essential connectivity areas that support this large scale connectivity.

SPECIAL-STATUS SPECIES
Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- officially listed by California or the federal government as endangered, threatened, or rare;
- candidate for state or federal listing as endangered, threatened, or rare;
- taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- species identified by CDFW as Species of Special Concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local planning documents; and
- taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR) of 1B or 2. The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
  - CRPR 1A - Plants presumed to be extinct in California;
  - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2 - Plants that are rare, threatened, or endangered in California but more common elsewhere;
  - CRPR 3 - Plants about which more information is needed (a review list); and
  - CRPR 4 - Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, and 2 may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines CCR Section 15380. CDFW recommends, and local governments may require, that CRPR 1A, 1B, and 2 species be addressed in CEQA projects. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Section 15380; however, these species may be evaluated by the lead agency on a case by case basis to determine significance criteria under CEQA.

The term “California species of special concern” is applied by CDFW to animals not listed under the federal ESA or CESA, but that are considered to be declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CDFW’s fully protected status was California’s first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however,
some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

A list of special-status species that are known or could potentially occur in the project area or immediate vicinity was developed through a review of the technical reports prepared for the project discussed above.

**Special-status Plants**

The special-status plant species with potential to occur or known to occur in the project site are shown in Table 4.4-2 and Exhibit 4.4-2. An assessment of the potential for species to occur and a survey of the project site for special status plants were initially performed in the Tenaya Lodge Explorer Cabins Biotic Report (H.T. Harvey and Assoc. 2014) and further updated in the Tenaya Lodge Explorer Cabins Special-status Plant Surveys (H.T. Harvey and Assoc. 2015a) and the Addendum to the Tenaya Lodge Explorer Cabins Biotic Report (H.T. Harvey and Assoc. 2016a and c) (see Appendix C of this Draft EIR). Three surveys for special-status plant were conducted from April through July of 2015. These surveys detected no special-status species, but identified two species that have limited distribution (CRPR 4), Coleman’s rein orchid (*Piperia colemanii*), and oak-leaved nemophila (*Nemophila parviflora var. quercifolia*).

<table>
<thead>
<tr>
<th>Common Name and Scientific Name</th>
<th>Regulatory Status</th>
<th>Habitat and Flowering Period</th>
<th>Potential to Occur in the Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrams’ onion (<em>Allium abramsii</em>)</td>
<td>18.2 Federal</td>
<td>Lower montane coniferous forest, upper montane coniferous forest. Often on granitic sand substrates. 2,093–10,006 ft. Blooms May–July.</td>
<td>Unlikely. Although suitable communities and soils exist, and the site is within the elevational range of the species, the project site appears to be outside of the species’ local distribution. The only record in the vicinity is a historic collection near Bass Lake, but locality has not been verified. All documented locations are between Bass Lake and Shaver Lake. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Bolander’s bruchia (<em>Bruchia boladeri</em>)</td>
<td>4.2 Federal</td>
<td>Lower montane coniferous forest, upper montane coniferous forest, meadows and seeps. Damp soil. 5,577–9,187 ft. Fertile N/A.</td>
<td>Low. Suitable communities and hydrologic conditions are present, especially in the wet meadow, but the project site is below this species’ elevational range. Recorded from higher elevations surrounding the area.</td>
</tr>
<tr>
<td>Bolander’s clover (<em>Trifolium bolanderi</em>)</td>
<td>18.2 Federal</td>
<td>Meadows and seeps, lower montane coniferous forest, upper montane coniferous forest. Mesic substrates, moist mountain meadows. 6,689–8,531 ft. Blooms June–August.</td>
<td>Unlikely. Although suitable communities and hydrologic conditions are present, and the species is recorded 6 miles east of the project, the Project site is outside the species elevation range. The nearest localities are at 7,000 to 7,600 ft elevation. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Bolander’s woodreed (<em>Cinna bolanderi</em>)</td>
<td>18.2 Federal</td>
<td>Meadows and seeps, upper montane coniferous forest. Mesic substrates, streamsides. 5,479–8,006 ft. Blooms July–September.</td>
<td>Unlikely. Suitable communities and hydrologic conditions are present and the species is recorded in the vicinity, but the project site is slightly below this species’ elevational range. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Brook pocket moss (<em>Fissidens aphanotaxifolius</em>)</td>
<td>2B.2 Federal</td>
<td>Lower montane coniferous forest, upper montane coniferous forest, rock, stream channels, waterfalls. 6,562–7,218 ft. Fertile N/A.</td>
<td>Low. Suitable habitat is present on and adjacent to the project site, however the project site is below the elevational range of the species.</td>
</tr>
</tbody>
</table>
### Table 4.4-2  
<table>
<thead>
<tr>
<th>Common Name and Scientific Name</th>
<th>Regulatory Status¹</th>
<th>Habitat and Flowering Period</th>
<th>Potential to Occur in the Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coleman’s rein orchid</strong> (Piperia colemannii)</td>
<td>Federal</td>
<td>4.3</td>
<td>Lower montane coniferous forest, chaparral. 3,937–7,546 ft. Blooms June-August.</td>
</tr>
<tr>
<td><strong>Congdon’s woolly sunflower</strong> (Eriophyllum congdonii)</td>
<td>State</td>
<td>SR</td>
<td>Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Rocky, metamorphic substrate, in cracks in rock outcroppings and talus; sometimes with Quercus douglasii and Aesculus californica. 1,640–6,234 ft. Blooms April–June.</td>
</tr>
<tr>
<td><strong>Congdon’s lewisia</strong> (Coleman congdonii)</td>
<td>State</td>
<td>SR</td>
<td>Chaparral, cismontane woodland, lower montane coniferous forest, upper montane conifer forest, valley and foothill grassland. Granitic or metamorphic, mesic sites, north exposures, in crevices on slopes among rocks, 1,640–9,187 ft. Blooms April–June.</td>
</tr>
<tr>
<td><strong>Grey-leaved violet</strong> (Viola pinetorum spp. grisea)</td>
<td>Federal</td>
<td>1B.3</td>
<td>Upper montane coniferous forest, subalpine coniferous forest, meadows and seeps. 4,921 – 11,155 ft. Blooms April –July.</td>
</tr>
<tr>
<td><strong>Jepson’s dodder</strong> (Cuscuta jepsonii)</td>
<td>Federal</td>
<td>1B.2</td>
<td>Coniferous forest. Streambanks. 3,937 – 7,546 ft. Blooms July-September.</td>
</tr>
<tr>
<td><strong>Madera leptosiphon serrulatus</strong></td>
<td>Federal</td>
<td>1B.2</td>
<td>Cismontane woodland, lower montane coniferous forest. Dry slopes, often on decomposed granite. 984–4,266 ft. Blooms April–May.</td>
</tr>
<tr>
<td><strong>Mud sedge</strong> (Carex limosa)</td>
<td>Federal</td>
<td>2B.2</td>
<td>Lower montane coniferous forest, upper montane coniferous forest, meadows and seeps, bogs and fens, marshes and swamps. 3,937 – 8,858 ft. Blooms June-August.</td>
</tr>
<tr>
<td><strong>Orange lupine</strong> (Lupinus citrinus var. citrinus)</td>
<td>Federal</td>
<td>1B.2</td>
<td>Chaparral, cismontane woodland, lower montane coniferous forest. Rocky, decomposed granitic outcrops, usually open areas on flat to rolling terrain. 1,246–5,578 ft. Blooms April–July.</td>
</tr>
<tr>
<td>Common Name and Scientific Name</td>
<td>Regulatory Status(^3)</td>
<td>Habitat and Flowering Period</td>
<td>Potential to Occur in the Project Site</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Oval-leaved viburnum (Viburnum ellipticum)</td>
<td>2B.3</td>
<td>Lower montane coniferous forest, cismontane woodland, and chaparral. 705 - 4,600 ft. Blooms May-June.</td>
<td>Unlikely. Suitable habitat is present, the project site is within the species' elevational range, and species documented to occur within 5 miles of project site. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Rawson's flaming trumpet (Collomia rawsoniana)</td>
<td>1B.2</td>
<td>Riparian forest, lower montane coniferous forest, meadows and seeps. Mesic substrates, on stabilized alluvium in riparian zones. 2,559–7,218 ft. Blooms July–August.</td>
<td>Unlikely. Suitable communities and soils are present, the site is within the species' elevational range, and there are records in the vicinity. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Nuttall's ribbonleaf pondweed (Potamogeton ephydrus)</td>
<td>2B.2</td>
<td>Marshes and swamps (shallow, freshwater). 1,210–7,126 ft. Blooms June–September.</td>
<td>Unlikely. Rainbow Lake may be suitable, the site is within the species' elevational range, and there are records in the vicinity. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Short-leaved hulsea (Hulsea brevifolia)</td>
<td>1B.2</td>
<td>Lower montane coniferous forest, upper montane coniferous forest. Granitic or volcanic soils in forest openings and road cuts, gravelly or sandy substrates. 4,921–10,499 ft. Blooms May–August.</td>
<td>Unlikely. Suitable communities and soils are present, the site is within the species' elevational range, and there are records 3 mi upstream from the project site in Big Creek and 1 mi east in Lewis Fork. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Slender-stalked monkeyflower (Mimulus gracilipes)</td>
<td>1B.2</td>
<td>Chaparral, cismontane woodland, lower montane coniferous forest. Thin granitic soil in cracks in large granite rocks, often in burned or disturbed areas. 1,640–4,266 ft. Blooms April–June.</td>
<td>Unlikely. Suitable communities are present but specific soils required are absent and known to occur in the vicinity at lower elevations. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Slender stemmed monkeyflower (Mimulus filicaulis)</td>
<td>1B.2</td>
<td>Chaparral, cismontane woodland, lower montane coniferous forest. Thin granitic soil in cracks in large granite rocks, often in burned or disturbed areas. 1,640–4,266 ft. Blooms April–June.</td>
<td>Unlikely. Suitable communities are present but specific soils required are absent and known to occur in the vicinity at lower elevations. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Small’s southern clarkia (Clarkia australis)</td>
<td>1B.2</td>
<td>Cismontane woodland, lower montane coniferous forest. Open, rocky sites. 2,624–6,808 ft. Blooms May–Aug.</td>
<td>Unlikely. Suitable communities and soils are present, the site is within the species' elevational range, and records are in the vicinity about 5 miles away. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Yellow-lip pansy monkeyflower (Mimulus pulchellus)</td>
<td>1B.2</td>
<td>Lower montane coniferous forest, meadows and seeps. Vernal wet sites, sandy decomposed granite soils and moist meadows. 1,968–6,562 ft. Blooms April–July.</td>
<td>Unlikely. Suitable communities and soils are present, the site is within the species' elevational range, and it is known to occur in the vicinity. Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Yosemite onion (Allium yosemitense)</td>
<td>SR 1B.3</td>
<td>Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Rocky, metamorphic or granitic substrate, also on slopes and walls. 1,755–7,218 ft. Blooms April–July.</td>
<td>Unlikely. Suitable communities and soils are present, the site is within the species' elevational range, and it is known to occur in the vicinity. Species not detected by surveys conducted during blooming period.</td>
</tr>
</tbody>
</table>
### Table 4.4-2: Special-status Plant Species and Likelihood to Occur in the Project Site

<table>
<thead>
<tr>
<th>Common Name and Scientific Name</th>
<th>Regulatory Status¹</th>
<th>Habitat and Flowering Period</th>
<th>Potential to Occur in the Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yosemite popcorn flower (Plagiobothrys torreyi var. torreyi)</td>
<td>1B.2</td>
<td>Lower montane coniferous forest, meadows and seeps. 3,938-4,495 ft. Blooms April - June</td>
<td>Unlikely. Suitable communities and soils are present, the site is within the species’ elevational range, and it is known to occur within 5 miles (Yosemite Valley). Species not detected by surveys conducted during blooming period.</td>
</tr>
<tr>
<td>Yosemite woolly sunflower (Eriophyllum nubigenum)</td>
<td>1B.3</td>
<td>Chaparral, lower montane coniferous forest, upper montane coniferous forest. South facing slopes on granitic slabs and domes; gravelly soils. 5,003-9,023 ft. Blooms May-Aug.</td>
<td>Unlikely. Suitable communities are present, but suitable soils are absent and the site is at the lower edge of the species’ elevational range. Known to occur in the vicinity. Species not detected by surveys conducted during blooming period.</td>
</tr>
</tbody>
</table>

¹Regulatory Status Codes:

**Federal:**
- SR = designated rare under the California Native Plant Protection Act

**State:**
- CRPR = California Rare Plant Rank
- 1A = Plants presumed extinct in California
- 1B = Plants considered rare or endangered in California and elsewhere
- 2 = Plants considered rare or endangered in California, but more common elsewhere.
- 3 = Plants about which more information is needed – a review list.
- 4 = Plants of limited distribution in California – a watch list.

### Potential for Occurrence Definitions:

**Present**—Species was observed in the project site during site visits conducted for this analysis or was documented there by another reputable source.

**High**—All of the species’ specific life history requirements can be met by habitat present in the project site, and populations are known to occur in the immediate vicinity.

**Moderate**—Some or all of the species life history requirements are provided by habitat in the project site; populations may not be known to occur in the immediate vicinity, but are known to occur in the region.

**Low**—Species not likely to occur because of marginal habitat quality or distance from known occurrences.

**Unlikely**—None of the species’ life history requirements are provided by habitat in the project site or the project site is outside of the known distribution for the species, or not detected by surveys during blooming period. Any occurrence would be very unlikely.

Sources: H.T. Harvey and Assoc. 2014 and 2016a, 2015a (see Appendix C of this Draft EIR); CDFW 2016b; CNPS 2016.
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Exhibit 4.4-2
Known Special-Status Plant Occurrences on the Project Site
Special-status Wildlife
The following section summarizes the special-status wildlife species that occur or have the potential to occur in the project site. An assessment of the potential for species to occur and a survey of the project site were initially performed for the Tenaya Lodge Explorer Cabins Biotic Report (H.T. Harvey and Assoc. 2014) and further updated in the California Spotted Owl and Northern Goshawk Surveys for Tenaya Lodge Explorer Cabins (H.T. Harvey and Assoc. 2015b), and Tenaya Lodge Explorer Cabins Special-status Bat Surveys (H.T. Harvey and Assoc. 2015c). As a result of these assessments, Yosemite toad (Anaxyrus canorus), California spotted owl (Strix occidentalis occidentalis), great gray owl (Strix nebulosus), northern goshawk (Accipiter gentilis), olive-sided flycatcher (Contopus cooperi), Vaux’s swift (Chaetura vauxi), fisher (Pekania pennant), California mastiff bat (Eumops perotis californicus), and pallid bat (Antrozous pallidus) have at least a moderate potential to occur within the project site or were detected during surveys, as summarized in Table 4.4-3. The other species in Table 4.4-3 that are unlikely to occur or that have a low potential to occur on the project site are not evaluated further in this EIR.

<p>| Table 4.4-3: Special-status Animal Species and Likelihood to Occur in the Project Site |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|</p>
<table>
<thead>
<tr>
<th>Common Name and Scientific Name</th>
<th>Regulatory Status1</th>
<th>Habitat Associations</th>
<th>Potential to Occur in the Project site2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fish</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steelhead Oncorhynchus mykiss (Central Valley DPS)</td>
<td>FT</td>
<td>Anadromous or resident inland; rivers in the Sacramento and San Joaquin Valley and their tributaries; needs cold water and gravel substrates.</td>
<td>Unlikely, Project site is outside the known range of the species.</td>
</tr>
<tr>
<td>Delta smelt Hydromus transpacificus</td>
<td>FT</td>
<td>Upper estuarine areas in or just upstream of the mixing zone between fresh and salt water in the San Francisco Bay-Delta.</td>
<td>Unlikely, Project site is outside the known range of the species.</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California red-legged frog Rana draytonii</td>
<td>FT</td>
<td>Forages and breeds in streams with deep slow-moving pools, stock ponds, reservoirs, springs, lagoons, marshes; usually with dense shoreline, emergent, or submersed vegetation but also found at sites lacking vegetation; uses riparian and most upland habitats in winter and for dispersal; 0 – 5,000 ft.</td>
<td>Unlikely, Marginally suitable habitat is present in Rainbow Lake due to shallow warm conditions and nonnative predators; marginally suitable habitat is present in Big Creek due to cold, shaded conditions; project site is at the upper limit of the species’ historic elevational range and species has been extirpated from this part of its geographic range.</td>
</tr>
<tr>
<td>Foothill yellow-legged frog Rana boylii</td>
<td>-</td>
<td>Rocky streams and rivers from sea level to about 6,365 ft. Prefers small to moderate-sized streams with cobble substrate, open sunny banks, isolated pools, and backwaters; juveniles occupy riparian and streamside habitat adjacent to the wetted channel; overwintering habitat not well understood, but they remain close to streams.</td>
<td>Unlikely, Suitable aquatic conditions are present in Big Creek and the species was recorded historically at this location. However, this species was not detected during focused surveys, and it appears to be extirpated from this area.</td>
</tr>
<tr>
<td>Sierra Nevada yellow-legged frog Rana sierra</td>
<td>FE ST SSC</td>
<td>Lakes, ponds, and streams from 3,525 to over 12,000 ft. Prefers open or rocky shorelines with gentle slope; overwinters in deep aquatic habitats.</td>
<td>Unlikely, Marginally suitable to unsuitable aquatic habitat is present in Rainbow Lake; species has been observed in the vicinity; but the species was not detected during focused surveys. Aquatic predators present in Rainbow Lake would probably preclude this species from occurring.</td>
</tr>
<tr>
<td>Common Name and Scientific Name</td>
<td>Regulatory Status¹</td>
<td>Habitats Associations</td>
<td>Potential to Occur in the Project Site²</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------</td>
<td>-----------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Yosemite toad Anaxyrus canorus</td>
<td>FT</td>
<td>Seasonal snowmelt ponds in montane wet meadows, seasonal ponds in conifer forest usually not more than 330 feet from permanent water, at elevations of 4,800 to 12,000 ft.; rodent burrows are used for overwintering and as temporary refugia during summer (California Herps 2016).</td>
<td>Moderate. Project site is near the lower end of the species’ elevational range and suitable habitats are present. Forced surveys for amphibians and reptiles were conducted in fall of 2014, however these surveys focused on Big Rainier Creek and the pond on the site and did not include the wet meadow habitat that would be utilized by this species in the spring.</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bald eagle Haliaeetus leucocephalus</td>
<td>BGEPA SE FP</td>
<td>Large lakes, reservoirs, coasts, and rivers; nests within 1 mi of water in large, old-growth, or dominant live tree with open branches, especially in ponderosa pine; roosts communally in winter in dense, sheltered remote conifer stands; forages over water, prey includes fish, birds, reptiles, amphibians, invertebrates, and mammals.</td>
<td>Low. Rainbow Lake provides marginally suitable foraging opportunities due to its small size, but the species is known to occur throughout the region, and there are observations at Bass Lake and along the Merced River.</td>
</tr>
<tr>
<td>Black swift Cypseloides niger</td>
<td>-</td>
<td>Mountainous areas; nests on cliffs near ocean, waterfalls or river canyons.</td>
<td>Low. Could be present on a transitory basis and breeds in this area, but breeding microhabitat is not present on the project site.</td>
</tr>
<tr>
<td>California spotted owl Strix occidentalis</td>
<td>- SSC</td>
<td>Montane forests, dense, shaded forested canyons; forages, roosts, and nests in multi-layered old growth conifer forest, especially north-facing slopes; forages on small and medium-sized mammals; roosts in oak forests in winter; nests in snag and tree cavities, and broken tree tops, or seldom in mistletoe, abandoned raptor nests, caves, cliffs or on ground.</td>
<td>High. Suitable resources for foraging and nesting are present, though human disturbance around project site is high. A pair was detected about 2,200-5,000 ft. south of the project site during a survey by H.T. Harvey and Assoc. biologists in 2010, and there are numerous locations in the CNDDB throughout the vicinity. Present in this area year-round. Unlike to nest in the project area as no individuals were detected on the project site or vicinity during focused surveys by H.T. Harvey and Assoc. biologists in 2015.</td>
</tr>
<tr>
<td>Great gray owl Strix nebulosa</td>
<td>-</td>
<td>Large meadows or meadow complexes with adjacent fir or pine forests at elevations of 2,460 to 7,380 ft. Nests in large, broken-topped large diameter snags or existing nests of other bird species; roosts in dense forest with high canopy closure; forages on small mammals from low, exposed perches near meadows.</td>
<td>Moderate. The wet meadows are marginally suitable for foraging due to small size; suitable nesting substrates are absent.</td>
</tr>
<tr>
<td>Northern goshawk Accipiter gentilis</td>
<td>- SSC</td>
<td>Conifer forests, often old-growth stands; nests on north-facing slopes, near water, in dense stands but near openings; forages on birds and small mammals in mature mixed conifer forests with meadows and riparian habitat.</td>
<td>High. Suitable vegetation for foraging and nesting are present, though human disturbance in area is high. Feathers were found about 3,000 ft. south of the project site during a survey by H.T. Harvey and Assoc. biologists in 2010. Unlike to nest on site as no goshawk were detected on the project site during focused surveys by H.T. Harvey and Assoc. biologists in 2015.</td>
</tr>
<tr>
<td>Olive-sided flycatcher Contopus cooperi</td>
<td>- SSC</td>
<td>Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds. Winters at forest edges and clearings where tall trees or snags are present.</td>
<td>High. Suitable communities are present, breeds in this area, and numerous records from Fish Camp area.</td>
</tr>
</tbody>
</table>
### Table 4.4-3

<table>
<thead>
<tr>
<th>Common Name and Scientific Name</th>
<th>Regulatory Status(^1) Federal</th>
<th>State/Other</th>
<th>Habitat Associations</th>
<th>Potential to Occur in the Project site(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peregrine falcon <em>Falco peregrinus anatum</em></td>
<td>-</td>
<td>FP</td>
<td>Breeds in open landscapes with cliffs (or skyscrapers at elevations up to about 12,000 ft., as well as along rivers, coastlines or in cities. In migration and winter found in any open habitat, commonly along barrier islands, mudflats, coastlines, lake edges, and mountain chains. Nesting sites are 25–1,300 ft. high on cliffs.</td>
<td>Low. Present year-round in this region and may occur on a transitory basis, but suitable structures for breeding are absent. Recorded near Wawona.</td>
</tr>
<tr>
<td>Short-eared owl <em>Asio flammeus</em></td>
<td>-</td>
<td>SSC</td>
<td>Open country, including prairie, meadows, tundra, moorlands, marshes, savanna, and open woodland; nests on the ground.</td>
<td>Unlikely. Suitable communities are not present and wintering only in this area.</td>
</tr>
<tr>
<td>Snowy plover <em>Charadrius alexandrinus</em></td>
<td>-</td>
<td>SSC</td>
<td>Barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds.</td>
<td>Unlikely. Suitable open habitat is not present; Rainbow Lake on the site has a densely vegetated shore that would be unsuitable.</td>
</tr>
<tr>
<td>Vaux’s swift <em>Chaetura vauxi</em></td>
<td>-</td>
<td>SSC</td>
<td>Nests in coniferous or mixed forest; forages in forest openings, especially above streams.</td>
<td>High. Suitable nesting and foraging communities are present, and there are observations from near the project site during the breeding season.</td>
</tr>
<tr>
<td>Willow flycatcher <em>Empidonax traillii</em></td>
<td>-</td>
<td>SE</td>
<td>Densely vegetated riparian associations of cottonwoods and willows; open, cup nest in upright fork of willow or other shrub at a height of 1.5 to 10 ft. Roosts in dense willow thickets; forages mostly on insects from low, exposed branches.</td>
<td>Low. Willows along Big Creek are sparse and lack sufficient structure and inundation to support this species, but nesting has been documented at Bass Lake and could occur on a transitory basis.</td>
</tr>
<tr>
<td>Reptiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern western pond turtle <em>Actinemys marmorata</em></td>
<td>-</td>
<td>SSC</td>
<td>Ponds, lakes, rivers, streams, marshes, brackish lagoons and irrigation ditches with a mosaic of vegetation and open areas for basking; uses upland areas for nesting and in winter including woodland, forest, grassland, chaparral and grasslands.</td>
<td>Low. Suitable aquatic habitat present in Big Creek and Rainbow Lake. However, the species was not detected during focused surveys. Adult bullfrogs in Rainbow Lake could negatively influence this species’ occurrence.</td>
</tr>
<tr>
<td>Mammals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Badger <em>Taxidea-taxus</em></td>
<td>-</td>
<td>SSC</td>
<td>Open grasslands at the edge of scrub and woodland habitats, savannas, meadows, desert scrub and agricultural fields; found in California up to timberline in large mountain meadows; low to moderate slopes; requires friable soils for burrows.</td>
<td>Low. Suitable vegetative and soil conditions are present in limited areas on the site, including forest openings, areas of prior disturbance, and along the forest/wet meadow edges; site is within species’ range, and a historic locality is from Wawona. However, the species’ current distribution in the Sierra Nevada is poorly understood, and there are no recent records in the vicinity.</td>
</tr>
<tr>
<td>Fisher <em>Pekania pennant</em> (West Coast DPS)</td>
<td>-</td>
<td>C</td>
<td>Mature, structurally complex conifer-hardwood forests; large diameter (≥18 in) live and dead standing hardwoods (primarily black oak) and conifers for resting, often in areas of high canopy closure (60–100%), shrub cover, and density of large (≥240-in) snags, and within 330 ft. of water. Den sites include a variety of protected cavities, rocky areas, brush piles, under upturned trees, and hollow logs, trees, and snags.</td>
<td>High. Suitable habitat is present, the CNDDB includes a 1971 record of the species from the vicinity, and radio-collared animals have been detected in the vicinity in the past year. A fisher skull was found on a neighboring property during a survey by H.T. Harvey and Assoc. biologists in 2010. The focused habitat assessment for this study found few trees and snags suitable for denning. They are unlikely to den on the site, but may forage or move through the site.</td>
</tr>
</tbody>
</table>
### Table 4.4-3 Special-status Animal Species and Likelihood to Occur in the Project Site

<table>
<thead>
<tr>
<th>Common Name and Scientific Name</th>
<th>Regulatory Status¹</th>
<th>Habitat Associations</th>
<th>Potential to Occur in the Project site²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Nevada mountain apiontomy</td>
<td>-</td>
<td>Montane riparian forests above 5,600 ft., with dense shrub story along streams; deep friable soils for burrows.</td>
<td>Low. Suitable habitat is present along Big Creek, and there is a historical record (1931) from within 5 miles of the project site. However, site is below elevational range and no recent records in the vicinity.</td>
</tr>
<tr>
<td>Sierra Nevada red fox</td>
<td>-</td>
<td>A variety of communities including wet meadows and forested areas; dense vegetation and rocky areas for cover and den sites; den sites include rock outcrops, hollow logs and stumps, and burrows in loose soil.</td>
<td>Low. Suitable breeding and foraging habitat occur on the site; there is one CNDDB record from 1980 less than 5 miles from the project site and a historic record 6 miles east-southeast of Wawona. Lower elevation records may be misidentification of the nonnative subspecies. This subspecies appears to have been extirpated from this part of its range and is only known to occur near Lassen Peak and Sonora Pass.</td>
</tr>
<tr>
<td>California mastiff bat</td>
<td>-</td>
<td>Open, semi-arid to arid communities, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral; roosts in crevices in cliff faces, high buildings, and tunnels.</td>
<td>Present. Species detected at the project site during acoustic surveys in 2015.</td>
</tr>
<tr>
<td>Pallid bat Antrozous pallidus</td>
<td>-</td>
<td>Forages in open dry communities including grasslands, shrublands, woodlands, and forests. Roosts in rocky outcrops, caves, crevices, mines, hollow trees, and buildings that moderate temperature. Night roosts on porches and open buildings.</td>
<td>Present. Species detected at the project site during acoustic surveys in 2015.</td>
</tr>
<tr>
<td>Spotted bat Euderma maculatum</td>
<td>-</td>
<td>Cracks, crevices, and caves, primarily in fractured rock cliffs for roosting; desert-scrub, pinyon-juniper woodland, ponderosa pine, mixed conifer forest, canyon bottoms, rims of cliffs, riparian areas, fields, and open pasture for foraging.</td>
<td>Unlikely. Cliff habitat for roosting not found in the vicinity of the project site. The species is not expected to forage on the project site.</td>
</tr>
<tr>
<td>Townsend’s big-eared bat</td>
<td>-</td>
<td>Desert scrub, sagebrush, chaparral, and deciduous and coniferous forests; prefers mesic habitats. Roosts in caves, cliffs, mines, tunnels and bridges. Preys on moths and beetles.</td>
<td>Unlikely. Suitable structures for roosting are absent. Protocol surveys did not detect the species (H.T. Harvey and Assoc. 2015c).</td>
</tr>
<tr>
<td>Western red bat Lasiurus blossevilli</td>
<td>-</td>
<td>Trees and forest edges adjacent to streams, fields or urban areas for roosting; forest edges and open areas for foraging.</td>
<td>Unlikely. Suitable resources for foraging and roosting are present. Protocol surveys did not detect the species (H.T. Harvey and Assoc. 2015c).</td>
</tr>
</tbody>
</table>

1 Regulatory Status Definitions:

Federal:
- **FT** = Threatened species under the Federal Endangered Species Act
- **FE** = Endangered species under the Federal Endangered Species Act
- **PPT** = Proposed for listing as threatened under the Federal Endangered Species Act
- **FC** = Candidate for listing under the Federal Endangered Species Act
- **BGPA** = Protected under the Bald and Golden Eagle Protection Act

State/Other:
- **SE** = Endangered under the California Endangered Species Act
- **ST** = Threatened under the California Endangered Species Act
- **C** = Candidate for listing

**DPS** = distinct population segment

2 Potential for Occurrence Definitions:

- **Present**—Species was observed in the project site during site visits conducted for this analysis or was documented there by another reputable source.
- **High**—All of the species’ specific life history requirements can be met by habitat present in the project site, and populations are known to occur in the immediate vicinity.
- **Moderate**—Some or all of the species’ specific life history requirements are provided by habitat in the project site; populations may not be known to occur in the immediate vicinity, but are known to occur in the region.
- **Low**—Species not likely to occur because of marginal habitat quality or distance from known occurrences.
- **Unlikely**—None of the species’ specific life history requirements are provided by habitat in the project site and/or the project site is outside of the known distribution for the species, or species not detected during protocol surveys. Any occurrence would be very unlikely.

Sources: H.T. Harvey and Assoc. 2014, 2015b, 2015c and 2016a (see Appendix C of this Draft EIR); CDFW 2016a
4.4.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA
Based on Appendix G of the CEQA Guidelines, the project would the project could have a significant adverse effect related to biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;

- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;

- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

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

- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

METHODS AND ASSUMPTIONS
Evaluation of biological resource impacts is based on a review of documents pertaining to the project site and listed in Section 4.4.1, “Regulatory Setting,” Section 4.4.2, “Existing Environmental Setting,” the biological resource technical studies provided in Appendix C of this Draft EIR, and the project description provided in Chapter 3, “Project Description” as well as in Appendix A of this Draft EIR.

In determining the level of significance, this analysis assumes that the project would comply with relevant state and local policies, ordinances and regulations.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan
The project site is not located within any adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional or state habitat conservation plan; therefore, the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. This topic is not addressed further in this EIR.

Migratory Bird Treaty Act
Loss of active nests of common species during project implementation would not substantially reduce the abundance of any common species, nor cause any common species to drop below self-sustaining levels. As such, the project would not have a significant impact on common migratory birds as defined by the significance criteria established for this document (list above). Therefore, impacts to common migratory birds are not further addressed in this EIR.
Consistency with Mariposa County General Plan Policy on Noxious Weeds
The Tenaya Cabins Project would require grading and other soil disturbing activities that could potentially increase the spread of noxious weeds. Noxious weeds may be carried into the site by construction equipment, or existing infestations could be spread to other areas of the site. As discussed in Section 4.4.1, “Regulatory Setting,” the Mariposa County General Plan contains a policy to conserve the diversity of native ecosystems, plant communities, wildlife habitat, and plant and animal species in the County, and implementation measures related to addressing noxious weeds, including the enforcement of standards that reduce or eradicate invasive species affecting the agricultural and natural ecosystems, such as yellow-star thistle (*Centaurea solstitialis*). To maintain consistency with the Mariposa County General Plan and address the spread of noxious weeds into and within the project site, noxious weed BMPs shall be included in site management plans. The content of these BMPs shall be developed in coordination with the Mariposa County Agricultural Commissioner, and would include specifications for equipment cleaning, soil movement, revegetation, and weed abatement. Therefore, project implementation would be consistent with Mariposa County General Plan provisions regarding noxious weeds and this issue is not further addressed in this EIR.

**IMPACT ANALYSIS AND MITIGATION MEASURES**

**Impact 4.4-1: Loss of forest habitat and movement corridors**

The Tenaya Cabins Project would convert an estimated 25.39 acres of the 30.03 acre project site, from natural habitat to development. The majority of this development would be within montane coniferous forest, which is a habitat type common in the region. The location of the site and proximity to existing development limits its suitability as a wildlife corridor. The development of the project site would not result in a substantial loss of habitat for any species or substantial interference with wildlife movement. Therefore, the impact of the project on natural habitat types and movement corridors would be less than significant.

The majority of the project site (22.52 acres) is currently undeveloped forest lands. A small percentage of the project site contains streams, wetlands, and other sensitive habitats (3.73 acres) (Table 4.4-1) (Exhibit 4.4-1). The quality of the habitat on the site is affected by clearings from historical uses on the site, and the location of the site relative to existing development and infrastructure, including Highway 41 to the west, and developed parcels to the west, south, and north of the site.

The project has been designed to avoid sensitive habitats, including Rainbow Lake, the Big Creek riparian corridor, and the wet meadow and wetland habitats at the southern end of the site. Therefore, the temporary and permanent disturbance due to the project would be focused in the montane coniferous forest, which is a habitat type common in the region, as well as disturbed areas (such as existing roadways for utility connections, and leach field expansion) (Exhibit 4.4-3). Within the developed area shown on Exhibit 4.4-3, trees, rock outcroppings, and vegetation would be largely avoided, as described in Chapter 3, “Project Description,” providing some continued habitat value while also meeting project goals to provide visual and noise buffers around the proposed cabins. However, project construction would require the removal of trees or potential impacts to remaining trees, including some possibly greater than 20 inches diameter at breast height (Exhibit 4.4-4). The project site trees may be used by black-backed woodpecker (*Picoides arcticus*) and other more common wildlife species. The physical disturbance of an estimated 25.39 acres of the site and tree removal within that area would not result in a substantive loss of large trees or lower montane conifer habitat for black-backed woodpecker and other more common wildlife species, as this habitat type and large trees are relatively common within the forest that surrounds Fish Camp. In addition, removal of trees would not be a regulatory issue as Mariposa County does not currently have an adopted tree protection ordinance.

Project construction and operations would increase human disturbance on the site, including noise and lighting, which would have ongoing effects on the use of the site for some common wildlife species found onsite (e.g., mule deer, western gray squirrel, varied thrush) (H.T. Harvey and Assoc. 2014). However, the project site is surrounded by development in the Fish Camp TPA and currently subject to disturbance from...
Exhibit 4.4-3

Potential Impacts to Common and Sensitive Habitats
Exhibit 4.4-4  
Tree Inventory on the Project Site
the adjacent Tenaya Lodge and Highway 41. The increased human disturbance would not substantially affect use of the site by common wildlife, as the greatest levels of disturbance would be located within the lower montane conifer habitat type, which is common in the region, and the site is located adjacent to existing development. The project footprint would not remove habitat within the riparian areas on site and the upland portions of the site would retain suitability for wildlife movement for more common species that utilize the area, such as mule deer from the Oakhurst Herd. In addition, the project site is located adjacent to Highway 41 and existing development which currently limits the suitability of the site as a corridor for wildlife species that would be more sensitive to human disturbance, and the project site is not located within an ECA that would indicate its importance as a regional corridor.

While the project would convert existing natural habitat to development the majority of this development would be within a habitat type common in the region, and the location of the site and proximity to existing development limits its suitability as a wildlife corridor. Therefore the impact of the project on natural habitat types and movement corridors would be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.4-2: Impacts to special-status plant species

No special-status plant species are known to occur on the site; however, two watch list (CRPR 4) plant species are documented on the project site—Coleman’s rein orchid and oak-leaved nemophila. The mapped population of oak-leaved nemophila would be avoided by project activities. One of two mapped populations of Colman’s rein orchid would likely be damaged or destroyed during project construction; however this would not be a substantial adverse effect on this species as a whole. Project impacts to special-status plant species would be less than significant.

Based on the three botanical surveys performed in April-July 2015 (H.T. Harvey and Assoc. 2015a) two watch list (CRPR 4) plant species, which have limited distribution but do not meet the definition of endangered, rare, or threatened, are known to be present on the project site: oak-leaved nemophila, and Coleman’s rein orchid (Table 4.4-1) (Exhibit 4.4-2). There is suitable habitat on the project site for other special-status species (Table 4.4-1); however, these species are unlikely to be present on the project site as they were not detected by the surveys that were performed during their blooming period (H.T. Harvey and Assoc. 2015a). Although the surveys conducted for special-status plants did not include the utility connections to the Tenaya Lodge or leach field expansion, the trenching and installation of utilities in this area would follow existing roads and disturbed areas and would not occur in areas of suitable habitat for the species. As such, it is highly unlikely that special-status plants would occur within the utility line footprint or be affected by project construction and surveys are not needed.

The potential adverse effects on special-status plant habitat would be similar as those discussed above for natural habitats (e.g., habitat conversion, damage during grading and trenching, dust), with the addition of the potential for ongoing trampling by guests, and the potential for the introduction and spread of noxious weeds during and after construction activities.

Of the two CRPR 4 plant species that are documented to occur in the project site, oak-leaved nemophila was found approximately 45 feet away from the proposed disturbance footprint (Exhibit 4.4-2) and would not be adversely affected by implementation of the project. One of the observed occurrences of Coleman’s rein orchid is located directly within and adjacent to the disturbance footprint at the planned entrance to the site and individuals may be destroyed by grading for the road. Coleman’s rein orchid has a CRPR rank of 4.3, which indicates that the species is of limited distribution or infrequent throughout a broader area in California. Coleman’s rein orchid has been documented at seven locations within Mariposa County, the majority of which are within Yosemite National Park. The onsite population is a small percentage of the known population and road grading would not substantially reduce habitat for the species, cause the population to drop below self-sustaining levels, or substantially reduce the range of the species.
Implementation of the Tenaya Cabins Project would not result in a substantive impact to special-status plant species. This impact would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Impact 4.4-3: Impacts to special-status bird species**

There are five special-status bird species that have a moderate or higher potential to forage within the project site. Of these, only olive-sided flycatcher and Vaux’s swift are likely to nest on the project site. Implementation of the Tenaya Cabins Project would not substantively reduce habitat in the region for these species. However, the project could result in loss of special-status species bird nests during project construction. Should loss of nests occur, it would be a significant impact.

The special-status bird species with a moderate or higher potential to occur in the project site include: California spotted owl (Strix occidentalis occidentalis), great gray owl (Strix nebulosa); northern goshawk (Accipiter gentilis), olive-sided flycatcher (Contopus cooperi) and Vaux’s swift (Chaetura vauxi). For regulatory status, habitat associations, and potential to occur in the project site see Table 4.4-3 above.

California spotted owl and northern goshawk may forage on the project site, but are unlikely to nest based on focused surveys conducted for both these species in 2015; neither species was detected. The existing development adjacent to the project site also limits nesting suitability for these species. California spotted owls are known to occur within one mile of the project site on adjacent U.S. Forest Service lands (H.T. Harvey and Assoc. 2015b). There is also marginally suitable foraging habitat great gray owl on site, although the wet meadow habitats used by the species for foraging are small and located near existing development. It is unlikely that great gray owls would nest within the project site, because there are no large broken top snags that are typically used for nesting (H.T. Harvey and Assoc. 2014).

Both olive-sided flycatcher and Vaux’s swift are known to occur in the vicinity of the project site and there is suitable nesting (coniferous forest) and foraging (forest openings and riparian areas) within the project site. Implementation of the Tenaya Cabins Project is not likely to result in substantive adverse effects on habitat for special-status bird species as the project is designed to have minimal impact on the upland habitat within the project site, would avoid riparian habitats, and the habitats that would be effected are common in the region. However, short-term construction activities could adversely affect olive-sided flycatcher and Vaux’s swift through tree removal and other vegetation removal that could damage or destroy nests and result in the mortality of individuals. Construction activities could also result in noise and additional human activity that could temporarily reduce the suitability of habitat within the project site. While the temporary disturbance of foraging habitat would not be substantive, as other similar habitats are abundant near the project site, the potential damage to or destruction of nests of special-status bird species would be a significant impact.

**Mitigation Measures**

**Mitigation Measure 4.4-3: Avoid and minimize impacts to special-status bird species**

To minimize potential disturbance to nesting birds, vegetation removal, grading and other ground disturbing activities associated with construction of the project shall occur during the non-breeding season (September 1 - February 28), unless it is not feasible to do so, in which case the following measures shall also be applied.

If construction activity is scheduled to occur during the nesting season (February 28 to September 1), a qualified biologist shall conduct preconstruction surveys to identify active special-status bird nests within the project site that could be affected by project construction. Surveys shall be performed before activities occur.
(e.g., grading, tree removal, trenching, construction) and no less than 14 days and no more than 30 days before the beginning of activity. If no nests are found, no further mitigation is required.

If active nests are found, impacts on special-status bird species shall be avoided by establishment of appropriate buffers around the nests, as determined by a qualified biologist in consultation with CDFW. No project activity shall commence within the buffer area until a qualified biologist confirms that any young have fledged or the nest is no longer active. A 50-foot buffer around olive-sided flycatcher and Vaux’s swift nests are generally adequate to protect them from disturbance, but the size of the buffer may be adjusted by a qualified biologist in consultation with CDFW depending on site specific conditions and species sensitivity to disturbance. Monitoring of the nest by a qualified biologist during construction activities may be required to determine if activity has potential to adversely affect the nest, and to allow for increased buffer size or other measures to avoid impacts to the nest.

**Significance after Mitigation**

Implementation of Mitigation Measure 4.4-3 would avoid adverse effects on nesting special-status bird species through use of a limited construction period, by surveying for active nests if the limited construction period is not feasible, implementing nest buffers, and monitoring nests to adjust measures if needed. Implementation of Mitigation Measure 4.4-3 would reduce impacts to special-status birds to a less-than-significant level.

**Impact 4.4-4: Impacts to fisher**

Fisher is known to occur in the vicinity of the project site, and may occur within the project site although resting and denning sites are limited and human disturbance of the surrounding area is high. Implementation of the Tenaya Cabins Project would remove and likely reduce suitability of fisher habitat within the project site. Project construction could also result in disturbance of occupied den sites potentially causing mortality, and ongoing pest control could result in the poisoning of individual fishers. Mortality of fisher adults or kits would be a significant impact.

The West Coast distinct population segment (DPS) of fisher is a candidate threatened species under CESA. Fisher use coniferous forest and deciduous riparian habitats for foraging and denning. Specifically, fisher use natural platforms in large trees (e.g., brooms, mistletoe) and cavities for resting, and similar structures plus hollow logs and other similar structures on the ground (e.g., rock piles and crevices) for denning. Fisher are known to den in the vicinity of the project site with the closest location occurring 0.5 mile away, though no fisher sign has detected during focused survey of the majority of the project (H.T. Harvey and Assoc. 2014). Five suitable large trees and snags for denning are located within the project site and other suitable trees may be present along the utility corridor, which was not surveyed for potential den sites (H.T. Harvey and Assoc. 2016a). There are also many trees that would support resting sites, however the proximity of the site to existing development further reduces the suitability of the habitat. Fisher may forage within the project site; however, the relative lack of denning structures and existing disturbance adjacent to the site makes it unlikely that the species utilizes the project site for denning.

Although the project site is located directly adjacent to existing development and focused surveys did not detect any den sites, large trees and snags for resting and denning are present, therefore the implementation of the Tenaya Cabins Project would result in the removal of marginal quality habitat for fisher. Construction of roads, paths, utility connections, and structures would require removal of lower montane conifer habitat as well as removal of five potential resting trees (H.T. Harvey and Assoc. 2014, see Appendix C of this Draft EIR). The construction of the project and long term activities would increase lighting, noise, and human presence which would also affect the marginal habitat remaining on the project site. Although the project may result in loss of marginally suitable habitat for fisher, more suitable habitat for fisher is not uncommon within the region and loss of this marginally suitable habitat is not likely to have a substantive adverse effect on fisher.
Implementation of the Tenaya Cabins Project would remove marginally suitable habitat for fisher within the project site. However, due to the marginal nature of the habitat to be effected in the context of the amount of higher quality habitat in the region, this impact to habitat would not likely be substantive. However, project construction could also result the removal of the five potential den trees or construction in the immediate vicinity of those trees. If these activities occur while a den site is active, this could cause abandonment of the den and mortality of adults or kits. The disturbance of active den sites would be a significant impact.

**Mitigation Measures**

**Mitigation Measure 4.4-4: Avoid and minimize impacts to fisher**

Although the USFWS has determined that the West Coast DPS of fisher does not require the protection of the ESA, the USFWS has recommended that a conference assessment be prepared and a conference report or conference opinion be obtained from the USFWS (Nagano, pers. comm., 2016). Because of this recommendation, reference to the USFWS is included in the following mitigation.

The five trees previously identified as containing cavities that are potentially suitable for fisher den sites, and all trees along the utility corridor that contain suitable cavities that were not previously surveyed for potential den sites, shall be surveyed (using trail cameras) no more than 7 days before the initiation of construction activities within 0.25 miles of potentially suitable den sites to determine whether there are occupied dens. The protocol for pre-construction surveys of potential den sites shall be developed in coordination with CDFW and USFWS. If no occupied dens are detected then no further mitigation is required.

If any occupied dens are detected, CDFW and USFWS shall be immediately notified and a disturbance-free buffer of 0.25 mile shall be flagged around the den at ground level. Monitoring of the den site, and any adjustment or removal of buffers shall occur in consultation with CDFW and USFWS. If buffer areas cannot be avoided during construction activities, the following construction schedule shall be implemented.

If construction activities must be conducted within the established buffer areas from occupied fisher dens, work in these areas must take place between July 1 and March 1, which is outside of the kit-rearing season. During this period and prior to work occurring within the established buffer, as indicated above the monitoring of the den and the removal of the buffer shall be conducted in coordination with. Once it has been determined that there would be no potential for mortality as a result of den disturbance, the tree may be removed or work conducted within the buffer area with oversight by the qualified biologist.

**Significance after Mitigation**

Implementation of Mitigation Measure 4.4-4 would avoid mortality of fisher adults and kits by avoiding occupied den sites within the project site, either through buffers or by limiting construction including tree removal to outside of the denning season. By implementing these measures impact to fisher would be reduced to a less-than-significant level.

**Impact 4.4-5: Impacts to special-status bats**

There are two species of special-status bats that are known to forage on the project site: pallid bat and California mastiff bat. Of these two, pallid bats may also roost on the project site as there is suitable roosting habitat present. The Tenaya Cabins Project has a potential to remove pallid bat roosts, and should these roosts be occupied, mortality of pallid bats could occur. This impact would be significant.

Based on suitable habitat, species range and the results of acoustical and roost surveys conducted in 2015 (H. T. Harvey and Assoc. 2015c, see Appendix C of this Draft EIR), two species of special-status bats are known to occur within the project site (Table 4.4-3): California mastiff bat and pallid bat. These two species were detected foraging on the project site by acoustical surveys. No active roosts for pallid bat were detected although there are potential roosting sites available. The rock crevices in cliffs and buildings that are used by the California mastiff bat as roosts are absent from the project site. Suitable foraging habitat for Townsend’s big-eared bat (Corynorhinus townsendii) and suitable roosting and foraging habitat for western red bat
(Lasiurus blossevillii) are also found within the project site, although these species were not detected during surveys. For regulatory status of each of the special-status bat species discussed here see Table 4.4-3 above.

The Tenaya Cabins Project is not likely to have an adverse effect on the foraging habitat of special-status bat species (e.g., pallid bat and California mastiff bat), because tree removal and construction of roads, paths and structures would not reduce the suitability of the habitat for these bat species that often use forest openings, meadows other similar habitats for foraging.

Construction of the project may have short term adverse effects on pallid bat, which was detected by surveys of the site and may use tree cavities for roosting within the project area. Construction activities that occur directly adjacent to roosts could cause those roosts to be abandoned, and removal of trees that contain occupied roosts could cause mortality of special-status bats which would be a significant impact.

Mitigation Measures

Mitigation Measure 4.4-5: Avoid and minimize impacts to special-status bats.
To determine if special-status bats may be affected by construction, preconstruction acoustic surveys shall be conducted during an appropriate seasonal period to detect bats, which at this elevation would be mid-April to mid-October. If no special-status bat species are detected, no further mitigation is required.

If special-status bat species are detected, surveys to determine the presence of any roosting bats in tree cavities, under bark, or in foliage shall be conducted by a qualified biologist. All trees in the project footprint plus a 300-foot buffer (on the subject property) shall be surveyed. To avoid impacts to roosting bats, if any roost sites are detected, a disturbance-free buffer of 300 foot shall be flagged, and shall not be removed until a qualified biologist has determined that the roost site is no longer in use.

If buffer areas cannot be avoided, removal of trees with active roots must occur after August 31 and before October 15 to avoid impacts to roosting bats. Construction activities during that time would not have adverse impacts on maternity roosts because young bats would be independent from their mothers and flying. In addition, day roosts could be identified because bats would still be emerging nightly to forage.

A passive eviction plan shall be developed in consultation with CDFW. The eviction plan may include opening the roosting cavity to allow air flow, placing a one-way door on the entrance(s) to the roost, or disturbing the roost using a high-frequency broadcasting device. The roost shall be monitored with acoustic surveys to ensure that no bats are in the roosts before the trees are removed.

Significance after Mitigation
Implementation of Mitigation Measure 4.4-5 would reduce the likelihood of disturbance or destruction of roosts for special-status bat species, through the implementation of preconstruction surveys, buffers around roost sites, a limited construction period if buffers cannot be implemented, and procedures for ensuring no bats are present in roosts that are required to be removed. Implementation of these measures would reduce this impact to a less-than-significant level.

Impact 4.4-6: Impacts to Yosemite toad
The construction of the Tenaya Cabins Project would result in an estimated 0.01 acres of permanent effects wet meadow habitat, as well as an estimated 0.02 acres of temporary effects that are likely to occur during construction of the clubhouse facilities and the boardwalk between the project and the Tenaya Lodge. This habitat is suitable for Yosemite toad. These permanent and temporary direct effects on habitat would not be substantive due to the relatively small area affected. However, indirect effects on habitat due to reduced water quality that result from construction and project operations, as well as construction activities that could result in mortality of individual Yosemite toad would be significant. These effects would constitute a significant impact.
Yosemite toad is listed under FESA as threatened and is a CDFW Species of Special Concern. Yosemite toad breeds in snowmelt ponds within wet meadow habitats in the spring and uses rodent burrows for refuge in the summer and winter. The project site contains suitable wet meadow habitat for Yosemite toad, and is at the bottom of the elevational range of the species. Although Yosemite toad was not detected during focused amphibian surveys of the project site, these surveys were not conducted specifically for this species.

As illustrated on Exhibit 4.4-3, the Tenaya Cabins Project is anticipated to permanently adversely affect 0.01 acres of wet meadow/freshwater emergent wetland breeding habitat for Yosemite toad due to construction of the boardwalk between the project site and the Tenaya Lodge. In addition, during grading for clubhouse facilities and construction of the boardwalk, there could be temporary adverse effects on approximately 0.02 acres of wet meadow/freshwater emergent wetland breeding habitat for the species. Indirect impacts to wet meadow breeding habitat for Yosemite toad could include runoff from construction activities and other adverse effects from changes in drainage and water quality during project operations as discussed in Section 4.11, “Hydrology and Water Quality,” that could reduce the overall quality of the habitat.

The permanent and temporary effects on Yosemite toad breeding habitat would not be substantive given the relatively small size of the effect when compared to both the amount of wet meadow habitat on the project site (2.22 acres) (Exhibit 4.4-1) and the region. However, potential indirect effects on water quality of breeding habitat from project operations and construction activities, as well as construction activities that could result in the mortality of individual Yosemite toad though trampling, burying, or other means would be a significant impact.

Mitigation Measures
In addition to the implementation of Mitigation Measures 4.11-1, 4.11-2, and 4.11-3 identified in Section 4.11, “Hydrology and Water Quality,” which address drainage and water quality during construction and project operations, thereby avoiding indirect impacts to Yosemite toad breeding habitat, the following mitigation measure shall be implemented:

Mitigation Measure 4.4-6: Avoid and mitigate for impacts to Yosemite toad

Construction limits in suitable habitat for Yosemite toad (e.g., wet meadow) shall be clearly demarcated with high visibility construction fencing to minimize the disturbance area. No construction activities, including staging or stockpiling materials, shall occur outside of the construction limits.

Before any construction activities begin, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training session shall include a description of Yosemite toad and its habitat, natural history, legal status, general measures that are being implemented to conserve Yosemite toad as they relate to the project, and the boundaries within which the project may be accomplished. Instructions on actions to take if a toad is encountered on the project site shall be provided, including name and phone number of biological monitor and USFWS contact information.

A qualified biologist shall survey the work site two weeks before the onset of activities in areas of suitable habitat for Yosemite toad (e.g., wet meadow). The pre-construction surveys shall focus on areas that toads may occupy, such as mammal burrows and cover areas under rocks, and shall identify eggs, tadpoles, juvenile, and adult lifestages.

If a Yosemite toad is found on the project site, all construction activities in areas of potential habitat shall halt and USFWS shall be contacted. The project shall comply with requirements of the Endangered Species Act to exempt take of Yosemite toad, which may require additional conservation measures such as:

- Delaying construction within wet meadow habitat until the meadow is dry to allow juvenile toads to disperse.
- Excluding toads from the work site, by installing a fabric silt fence that is monitored and maintained for the duration of construction activities between the work area and the adjacent habitat.
Having a biological monitor on-site during construction to monitor the work areas for Yosemite toads.

**Significance after Mitigation**
Implementation of Mitigation Measure 4.4-6 would reduce adverse effects on Yosemite toad from construction of the project to a less-than-significant level.

**Impact 4.4-7: Impacts to sensitive habitats, wetlands, and waters**

The construction of the Tenaya Cabins Project would result in an estimated 0.01 acres of permanent effects to sensitive habitats, and potentially jurisdictional wetlands or waters, as well as an estimated 0.02 acres of temporary effects that are likely to occur during construction of the clubhouse facilities and the boardwalk between the project and the Tenaya Lodge. This impact would be significant.

A total of 3.73 acres meeting the definition of potentially jurisdictional wetlands or other waters are found within the 30.03 acre project site: freshwater pond (0.03 acre), perennial stream (0.25 acre), intermittent stream (0.02 acre), drainage channel (0.04 acre), willow shrub riparian/wetland (0.03), aspen forested wetland (0.62 acre), alter/white fir/incense cedar riparian complex (0.52 acre), and wet meadow (2.22 acres).

As illustrated on Exhibit 4.4-3, the Tenaya Cabins Project is anticipated to permanently adversely affect 0.01 acre of potentially jurisdictional wet meadow/freshwater emergent wetland due construction of the boardwalk between the project site and the Tenaya Lodge. In addition, during grading for clubhouse facilities and construction of the boardwalk there could be temporary adverse effects to approximately 0.02 acre of wet meadow/freshwater emergent wetland that is potentially jurisdictional. These activities would likely be subject to USACE jurisdiction under Section 404 of the CWA and could require Section 401 certification from RWQCB.

The implementation of the project could also result in other effects to jurisdictional wetlands through stormwater discharge and erosion of disturbed soils during construction, which could result in siltation and increased turbidity, and discharge of petroleum, pesticides, fertilizers and other pollutants, as described in Section 4.11, “Hydrology and Water Quality,” (see Impacts 4.11-1 through 4.11-3). The anticipated permanent and temporary effects on jurisdictional wetlands and sensitive habitats would be a significant impact.

**Mitigation Measures**
In addition to the implementation of Mitigation Measures 4.11-1, 4.11-2, and 4.11-3 identified in Section 4.11, “Hydrology and Water Quality,” which address drainage and water quality during construction and project operations, the following mitigation measures shall be implemented.

**Mitigation Measure 4.4-7: Avoid and mitigate for impacts to sensitive habitats, wetlands, and waters**

As a first priority, the project applicant shall seek to avoid impacts to sensitive habitats through project design, setbacks, and other avoidance measures.

To avoid temporary impacts to the water quality of wet meadow in the vicinity of the clubhouse and boardwalk, no vehicles or equipment shall be refueled within 100 feet of jurisdictional areas unless a bermed and lined refueling area is constructed. Spill kits shall be maintained on the site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks. No vehicles or construction equipment shall be stored overnight within 100 feet of jurisdictional areas unless drip pans or ground covers are used.
In addition, a minimum 25-foot construction setback shall be observed, where feasible, from the outer edge of all wet meadow and forested/shrub wetland/riparian communities, as shown in Exhibit 4.4-1. Setbacks shall be fenced or flagged before construction occurs in adjacent areas. In areas where a setback is not feasible, such as for the construction of the boardwalk and clubhouse, encroachment of the work area into wet meadow habitats will be kept to a minimum and similarly flagged or fenced. If a 25 foot buffer is not feasible a reduced setback may be utilized in other areas of the project site if approved by a qualified biologist.

To facilitate site management and ensure avoidance of sensitive habitats, all wetlands, riparian areas and streams and their setback areas shall be clearly delineated on plan sets. No construction- or operation-related vehicular access shall occur through wetlands, riparian areas, or streams. A biological monitor shall be present during construction to ensure the setback areas are avoided.

If impacts to jurisdictional wetlands or other waters of the United States is not possible, the project applicant shall implement the following measures to compensate for the loss of wetlands and other waters of the United States.

The preliminary wetland delineation shall submitted to and verified by USACE. If, based on the verified delineation, it is determined that fill of waters of the United States would result from project implementation, authorization for such fill shall be secured from USACE.

Based on the 0.01 permanent impact identified, the project may qualify for use of a Nationwide Permit if required criteria are met.

For those wetlands that cannot be avoided, the project applicant shall replace all wetland habitat at acreage and location agreeable to USACE and the RWQCB and as determined during the Section 401 and Section 404 permitting processes, and shall implement all permit conditions.

**Significance after Mitigation**
Implementation of Mitigation Measure 4.4-7 would reduce adverse effects on sensitive habitats and jurisdictional wetlands and waters from construction of the project to a less-than-significant level.
4.5 CULTURAL RESOURCES

This section analyzes and evaluates the potential impacts of the project on known and unknown cultural resources (also known as heritage resources) and on unknown fossil deposits of paleontological importance. Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or architectural) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges).

Paleontological resources include mineralized, partially mineralized, or unmineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains that are more than 5,000 years old and occur mainly in Pleistocene or older sedimentary rock units.

Information on the specific location of cultural resources within the project site or the broader study area is confidential and is not to be released to the public or other unauthorized entity, consistent with Section 304 of the National Historic Preservation Act (NHPA), Section 9 of Archaeological Resources Protection Act, and California Office of Historic Preservation guidelines. For this reason, the EIR does not contain text, tables, or maps revealing the locations or detailed descriptions of cultural resources. Decision-makers have access to this information upon request.

The impact analysis for archaeological and historical resources is based on the findings and recommendations of the confidential report titled Fish Camp Campground Development Project Phase I Cultural Resource Assessment Fish Camp, Mariposa County, California (First Carbon Solutions 2016). This confidential report is on file at Mariposa County.

4.5.1 Regulatory Background

FEDERAL

National Historic Preservation Act

Among those statutes enacted by Congress that affect historic properties, the National Historic Preservation Act of 1966 (NHPA) is the most significant law that addresses historic preservation. One of the most important provisions of the NHPA is the establishment of the National Register of Historic Places (NRHP), the official designation of historical resources. Districts, sites, buildings, structures, and objects are eligible for listing in the Register. Nominations are listed if they are significant in American history, architecture, archeology, engineering, and culture. The NRHP is administered by the National Park Service. To be eligible, a property must be significant under criterion A through D (described below); and ordinarily be 50 years of age or more.

A. Are associated with events that have made a significant contribution to the broad patterns of our history; or

B. Are associated with the lives of persons significant in our past; or
C. Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history.

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee recognition in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

Once a heritage resource has been recorded and if it is determined to be significant, the potential impacts (or effects) of a project on a heritage property are assessed. Federal regulatory impact thresholds are contained in Section 106 of the NHPA and accompanying regulations (36 Code of Federal Regulations [CFR] Part 800). Section 106 requires that federal agencies consider the effects of their actions on significant archaeological properties prior to implementing a project or “undertaking.” The criteria of effect are found in 36 CFR 800.0(a) and state that:

An undertaking has an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register.

The Advisory Council’s regulations require that the federal agency apply the criteria of adverse effect to historic properties that will be affected by a proposed undertaking (36 CFR 800.9b). An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association, or the quality of data suitable for scientific analysis. These seven aspects of integrity are described as:

- Location. Integrity of location refers to whether a property remains where it was originally constructed or was relocated.

- Design. Integrity of design refers to whether a property has maintained its original configuration of elements and style that characterize its plan, massing, and structure. Changes made after original construction can acquire significance in their own right.

- Setting. Integrity of setting refers to the physical environment surrounding a property that informs the characterization of the place.

- Materials. Integrity of materials refers to the physical components of a property, their arrangement or pattern, and their authentic expression of a particular time period.

- Workmanship. Integrity of workmanship refers to whether the physical elements of a structure express the original craftsmanship, technology and aesthetic principles of a particular people, place or culture at a particular time period.

- Feeling. Integrity of feeling refers to the property’s ability to convey the historical sense of a particular time period.

- Association. Integrity of association refers to the property’s significance defined by a connection to a particular important event, person or design.

The National Register Bulletin also provides guidance in the evaluation of archaeological site significance. If a heritage property cannot be placed within a particular theme or time period, and thereby lacks “focus,” it is considered not eligible for the NRHP. In further expanding upon the generalized National Register criteria, evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, flumes, etc.) are considered in terms of four related criteria that account for specific elements that define engineering
and construction methods of linear features: (1) size and length; (2) presence of distinctive engineering features and associated properties; (3) structural integrity; and (4) setting. The highest probability for National Register eligibility exists within the intact, longer segments, where multiple criteria coincide.

STATE

California Register of Historical Resources
All properties listed in or formally determined eligible for listing in the NRHP are eligible for the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant within the context of California’s history. The CRHR is a statewide program of similar scope and with similar criteria for inclusion as those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historic resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations (CCR) Title 15, Chapter 11.5, Section 4850. The CRHR criteria are similar to the NRHP criteria and are tied to CEQA because any resource that meets the criteria below is considered a historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

1. Is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

2. Is associated with the lives of persons important to local, California, or national history.

3. 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.

4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a resource must meet one of the above criteria and retain integrity. The CRHR uses the same seven aspects of integrity as the NRHP.

California Environmental Quality Act
CEQA requires public agencies to consider the effects of their actions on both “historical resources” and “unique archaeological resources.” Pursuant to Public Resources Code (PRC) Section 21084.1, a “project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

Historical Resources
“Historical resource” is a term with a defined statutory meaning (PRC, Section 21084.1; determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC, Section 5024.1).

2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will be presumed to be historically or
culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register of Historical Resources (Public Resources Code, Section 5024.1), including the following:

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

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

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

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

4) The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. Public Resources Code, Section 21083.2, subdivision (g), states that unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

HEALTH AND SAFETY CODE, SECTIONS 7052 AND 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC).

CALIFORNIA NATIVE AMERICAN HISTORICAL, CULTURAL, AND SACRED SITES ACT

The California Native American Historical, Cultural and Sacred Sites Act applies to both State and private lands. The Act requires that upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are of a Native American, the coroner must notify the
NAHC. The NAHC then notifies those persons most likely to be descended from the Native American’s remains. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

**PUBLIC RESOURCE CODE, SECTION 5097**

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

**ASSEMBLY BILL 52**

Assembly Bill (AB) 52, signed by Governor Edmund G. Brown, Jr., in September of 2014, establishes a new class of resources under CEQA: “tribal cultural resources” (TCRs). AB 52, as provided in PRC Sections 21080.3.1, 21080.3.2, and 21082.3, requires that lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation once the lead agency determines that the application for the project is complete, prior to the issuance of a Notice of Preparation (NOP) of an environmental impact report (EIR) or notice of intent to adopt a negative declaration or mitigated negative declaration. AB 52 also requires revision to CEQA Appendix G, the environmental checklist. This revision would create a new category for TCRs.

AB 52 currently applies to those projects for which a lead agency had issued a NOP of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration on or after July 1, 2015. The first NOP for this proposed project was issued in February 2015. However, the revised NOP was issued on July 17, 2015. Therefore, the requirements of AB 52 apply and Mariposa County has initiated consultation with Tribes that have requested consultation. Correspondence in compliance with AB 52 is provided in Appendix D of this Draft EIR.

**LOCAL**

**Mariposa County General Plan**

Chapter 14, Historic and Cultural Resources, of the Mariposa County Wide General Plan identifies issues and programs related to the preservation, rehabilitation, and use of historic resources, as well as the preservation and assessment of cultural resources.

**Goal 14-6:** Avoid demolition or destruction of historic and cultural resources.

**Policy 14-6a:** Seek alternatives to demolition or destruction of historic resources.

- Implementation Measure 14-6a(1): Prior to the approval of a demolition permit for any historic site, structure, or cultural place the Historic Sites and Records Preservation Commission shall review the application pursuant to CEQA and determine whether alternatives to the proposed demolition or destruction shall be required.

- Implementation Measure 14-6a(2): Prior to the approval of a demolition permit or grading permit for a cultural place the Southern Sierra Miwuk Nation Consultation Committee shall review the
application pursuant to CEQA and determine whether alternatives to the proposed demolition or destruction shall be required.

**Goal 14-7:** Include Native American representatives in discretionary project review.

- **Policy 14-7a:** Encourage cooperation and communication between County officials and the Native American population of Mariposa County.

- Implementation Measure 14-7a(1): Mariposa County shall invite the participation of representatives of the Native American community in the review of discretionary projects for which there is a likelihood of potential archaeological artifacts and cultural places.

### 4.5.2 Existing Environmental Setting

**PALEONTOLOGICAL SETTING**

Significant nonrenewable vertebrate and invertebrate fossils and unique geologic units have been documented throughout California. The fossil yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks (refer to geologic timescale in Table 4.5-1). Paleontological potential refers to the likelihood that a rock unit will yield a unique or significant paleontological resource. All sedimentary rocks, some volcanic rocks, and some low-grade metamorphic rocks have potential to yield significant paleontological resources. Depending on location, the paleontological potential of subsurface materials generally increases with depth beneath the surface, as well as with proximity to known fossiliferous deposits.

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*Source: U.S. Geological Survey 2010*
Pleistocene or older (older than 11,000 years) continental sedimentary deposits are considered as having a high paleontological potential while Holocene-age deposits (less than 10,000 years old) are generally considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms. Metamorphic and igneous rocks have a low paleontological potential, either because they formed beneath the surface of the earth (such as granite), or because they have been altered under high heat and pressures, chaotically mixed or severely fractured. Generally, the processes that form igneous and metamorphic rocks are too destructive to preserve identifiable fossil remains.

Mariposa County is located in central California on the western slopes of the central Sierra Nevada Mountains. Elevation in the County ranges from approximately 300 feet along the western boundary to over 10,000 feet in the mountainous eastern part. The western half of the County consists of gently sloping foothills with generally thin soils and hard underlying metamorphic bedrock. The northeastern half of the County (generally above Highway 49) consists of steep to extremely steep foothills and mountains that generally ramp upwards to the northeast to the crest of the Sierra Nevada range (Mariposa County 2006:8-40).

The oldest rocks found in the Sierra are metamorphosed marine sedimentary rocks of Ordovician age, found in the north-central part of the County. At that time, sediments slowly accumulated on an ancient ocean floor, eventually reaching thousands of feet in thickness while compressing the lower layers of sediment into rock. Periodically, underwater volcanic activity covered the ocean floor with pillow and sheet flow basalts (Mariposa County 2006:8-40).

In the Mesozoic Era the Pacific tectonic plate began sliding under the North American plate. This subsidence resulted in the deposition of thick sequences of pillow basalts, chert and slate. Deep within the earth, extreme heat and pressure caused the Pacific plate to melt into molten rock, or magma. The magma rose upward within the Earth’s crust and crystallized below the surface to form granitic rock along a linear belt that was to become the future Sierra Nevada. Some of the magma broke through to the surface, creating a string of volcanoes. Because of the high elevation of the Sierra Nevada, however, the volcanic and other rocks covering the granite were subject to rapid erosion and by Late Cretaceous time, the granitic rocks became exposed at the Earth’s surface (Mariposa County 2006:8-41).

In the Cenozoic Era, the continental crust east of the Sierra Nevada began to extend in an east-west direction, developing into a series of north/south-trending valleys and mountain ranges. Through a combination of uplift of the Sierran block and down dropping of the area to the east, the Sierra Nevada region acquired a tilted-block aspect with a long, gentle slope westward to the Central Valley. Four Ice Ages occurred in the Pleistocene, causing the advance and retreat of the glaciers that carved the Sierran crest and upper valleys into the landscape of today. The Sierras continue to slowly uplift (Mariposa County 2006:8-41).

The Fish Camp area is underlain exclusively with Mesozoic Granite. Estimates place the intrusion of this granitic mass from 64 to 135 million years ago. Although a relatively homogenous mixture, specific granitic rocks vary in structure and name depending on the amounts of feldspars, biotite, muscovite and quartz contained in them. Near the northeastern portion of the area, remnants from andesitic volcano flows can be found. These flows are caused by andesitic eruptions from vents in the Sierra some 20 million years ago. Such flows were similar in appearance to hot mud and often followed stream channels. Such a flow has formed a low ridge north of Big Creek and east of Highway 41 (Mariposa County 2016).

**REGIONAL PREHISTORY**

Despite the fact that the Sierra Nevada mountain range encompasses often rugged terrain, the archaeological record documents use for thousands of years and has connections to the cultural history of both California’s Central Valley to the west, and the high desert of the Great Basin to the east. Overviews of the archaeology of the south central Sierra Nevada has resulted in determining the following three chronological sequences within the Yosemite National Park area of the Sierra Nevada: Crane Flat (ca. >500 B.C.–A.D. 500), Tamarack (ca. A.D. 500–1200), and Mariposa (ca. A.D. 1200–1800). Studies suggest the transition from Tamarack to Mariposa spans approximately 300 years (ca. A.D. 1200-1500).
Cultural Resources

Ascent Environmental

Mariposa County

4.5-8

Crane Flat Complex (ca. >500 B.C. – A.D. 500)
The Crane Flat Complex time period is characterized by heavy projectile points, suggesting the use of atlatl and dart points. Archaeological investigations since 1980, although largely confined to isolated projectile points or modest assemblages, have documented earlier initial use of both upper and lower elevation settings than previously known. Extending the record of human use into the more distant past, these finds often reveal the use of large stemmed points similar to those associated with the time period in the Great Basin, or less, frequently, possible fluted points like those in related Late Pleistocene and Early Holocene occupation in areas to the east and west. The Crane Flat Complex is also characterized by ground stone tools such as manos and millingstones for processing plants. One of the most difficult problems for Sierra Nevada archaeologists with respect to ground stone tools is determining when the shift from millingstones to mortars occurred in the region. Here as elsewhere in California, such a shift has generally been taken to represent an increasing emphasis on acorns in the diet, although ethnographic data indicate that mortars can be used to process a variety of vegetal and animal products, as well as minerals.

Tamarack Complex (ca. A.D. 500 – 1200)
This time period is characterized by points weighing 1 to 3 grams, inferring use of bows and arrows. Ground stone tools include bedrock mortars and cobble pestles. The Tamarack Complex components usually represent transient use.

Mariposa Complex (ca. A.D. 1500 – 1800)
The Mariposa Complex time period is characterized by lightweight projectile points and use of the bow and arrow, bedrock mortars and cobble pestles, clamshell disc beads, and steatite vessels. This phase has been equated with the ancestors of the Sierra Miwok presently inhabiting the region.

ETHNOGRAPHY

Ethnographically, the study area is located within the territory of the Merced Tribelet of the Southern Sierra Miwok, one of three linguistically and geographically distinct groups of the eastern Miwok that inhabited the western Sierra Nevada from the Cosumnes River to the north, down to the Fresno River in the south. In addition, the project location is at the southernmost end of Miwok territory, and is very near the Chukchansi Foothill Yokuts, who held the region immediately south of Oakhurst, located approximately 14 miles to the south. The federally-recognized Picayune Rancheria of Chukchansi Indians of California have always lived in California (2016). During the years after the Gold Rush (1849) anthropologists visited the land of the Chukchansi (fringes of the San Joaquin Valley and the foothills of the Sierra Nevada). They grouped California Tribes together by their languages; hence, the Chukchansi are grouped with approximately 60 other Tribes in the greater Central Valley. These people were referred to by early researchers as “Yokuts,” meaning “people”. However, there is no “Yokut Tribe,” and each Tribe had its own name and its own traditional use areas (Picayune Rancheria of Chukchansi Indians of California 2016). The Fish Camp area could have been included in the seasonal round of Miwok, Chukchansi Foothill Yokuts, or both.

The Southern Sierra Miwok territory originally contained at least 15 major villages (First Carbon Solutions 2016). Villages were of two kinds: those in which the lineage chiefs or “royal families” lived, and those where the common folk resided. Each village was the headquarters of a localized lineage group and usually numbered about 21 residents. Population estimates for these tribelets range from less than 700 to an estimated 2,500.

Miwok villages were usually located close to reliable water sources, often on a knoll or terrace above a river or creek. Gentle slopes with a southerly exposure (also near water) were also preferred locations. Archaeological surveys conducted in Miwok territory (e.g., New Melones Reservoir, Don Pedro Reservoir, Camanche Reservoir) have shown that small, seasonal-use camps can occur in widely disparate settings and near very small, ephemeral streams. Typical Southern Sierra Miwok structures were slab-bark huts. Ethnographically, the villages of the tribal chief contained the assembly house, a large semi-subterranean structure capable of holding up to 200 people, which was the site of all ritual and social gatherings. The
tribelet chief’s village was a central, dominant village with outlying satellite settlements that was united by common political and social ties. Miwok social organization was built on lineage, which was the corporate land holding element of patrilineal, exogamous, moieties.

The Southern Sierra Miwok were hunter-gatherers who focused on the gathering of wild plant foods and the hunting of mammals for subsistence. The acorn was the dominant plant food item, but was supplemented by a wide range of greens, nuts, seeds, and roots, which were gathered on a seasonal basis. Meat sources were primarily deer and rabbits, although bear, beaver, rodents, birds, and fish were also consumed. The Monache, the Southern Sierra Miwok aboriginal group that occupied the western slope of the Sierra Nevada, principally lived between 3,000 and 7,000 feet elevation. The Monache, often called the Western Mono, shared a distinct language in the Western branch of the Numic family with their neighbors to the east, the Eastern Mono and the Owens Valley Piute. The Monache were not a single people but comprised at least five tribal groups: the North Fork Mono, the Wobonuch, the Michahay, the Waksachi, and the Patwisha.

The Monache focused on the gathering of wild plant foods, as well as hunting and fishing for subsistence. Acorns and pine nuts were the main plant staples, although seeds, Yucca roots, and Manzanita berries were also eaten. The North Fork Mono, whose territory included the headwaters of the San Joaquin and Kings Rivers, seasonally visited the eastern slope of the Sierra to gather pine nuts.

**REGIONAL HISTORY**

The post-contact history of California is generally divided into three different time periods: the Discovery and Spanish Mission Period (1769 to 1821), the Mexican Period (1822 to 1846), and the American Period (1847 to present).

**Discovery and Spanish Mission Period (A.D. 1769 to 1821)**

In 1772, a band of Spanish soldiers led by Pedro Fages explored through Tejon Pass into the San Joaquin Valley. Over the next 50 years, Spanish expeditions came into the southern Valley looking for suitable mission sites, but they also pursued escaped mission Indians and recovered stolen horses. Similar expeditions continued during the Mexican period.

**Mexican Period (A.D. 1822 to 1846)**

After years of political in-fighting and warfare, Mexico achieved its independence from Spain in 1821 and Alta California became the northern frontier of the State of Mexico in 1822. The Mission padres were then forced to swear allegiance to Mexico in that year. In 1848, California became part of the United States after signing the Treaty of Guadalupe-Hidalgo with Mexico. During that same year, gold was discovered to the north at Sutter’s Mill. This event ultimately had a profound effect upon the development of the upper San Joaquin Valley and the western slope of the Sierra Nevada.

**American Period (A.D. 1847 to present)**

By 1849, thousands of gold miners occupied the hills around Mariposa. The mining of this region never produced the monetary yields found in the northern gold fields of Sacramento, Placer, and Nevada Counties. Gold was discovered in Coarsegold River around 1850 by a group of Texas miners. More than $90,000 in gold was taken from the area during the gold rush. Although several large mines operated for several decades, many miners soon turned to other livelihoods.

Euro-American settlement and use of this region increased continually over the next several decades. The community of Coarse Gold, located approximately 21 miles south of Fish Camp, was among the first settlements established in the area during the first days of the gold rush. Some of the early permanent settlers began subsistence farming, locating along creeks or valleys with favorable land. By the 1860s, ranchers from the San Joaquin Valley were herding their cattle through this region to the higher Sierras for grazing. The first supply center was not established in the region until 1872, when a store was opened in Fresno Flats (now Oakhurst). Both of the communities of Oakhurst and Fresno Flats grew in population and provided supplies to mines and lumber companies in the surrounding area.
Transportation routes through the area were primarily undeveloped wagon and cattle trains. One commercial route through the area was constructed by the Yosemite Stage and Turnpike Company in the 1870s to provide stage service between the railroad terminus at Raymond and Wawona Station. The area of Summerdale (Fish Camp) was a station along this state route. Portions of the stage route were later converted for use as Highway 41. The existing Highway 41 was not constructed until the mid-1900s.

Commercial lumber harvesting was one of the first enterprises to be developed with the early settlements. The California Lumber Company was established in 1874. In 1886, a water flume was built to move lumber from the Sugar Pine Lumber Co. to the City of Madera. The flume extended 63 miles, from 8 miles northeast of present-day Oakhurst on the Fresno River to present-day Madera in the San Joaquin Valley, where a mill was constructed. The Famous flume was in use as late as 1932. The California Lumber Company declared bankruptcy in 1878, and was purchased and reestablished as the Madera Flume and Trading Company. The company was reorganized as the Madera Sugar Pine Company in 1899, which established a lumber mill, town, and railhead at Sugar Pine. The company quickly expanded its railroad-based operations into the surrounding mountains. The lumber mill burned down in 1922; however, operations lasted into the depression era, terminating operations in 1933.

**RECORDS SEARCHES**

**Paleontology Records Search**

A search of the University of California Museum of Paleontology database was conducted on February 22, 2016. Records of paleontological finds maintained by the University of California Berkeley Museum of Paleontology (2016) state that there are 15 localities at which fossil remains have been found in Mariposa County. These occur in the Mariposa geologic formations, to the northwest of Fish Camp, near Jerseylade. The database did not list any paleontological resources in or near Fish Camp.

**Central California Information Center Records Search**

On November 20, 2013, staff at the Central California Information Center at California State University, Stanislaus located in Turlock, California, conducted the cultural resources records search. To identify any historic properties in or near the project area, current inventories of the National Register of Historic Places, the California Historical Landmarks, and the California Points of Historical Interest were examined. The California State Historic Resources Inventory for Mariposa County was also reviewed to determine any local resources that have been previously evaluated for historic significance.

The results of the records search indicated one prehistoric/historic resource (P-22-594/CA-MRP-280/H) has been recorded within the project area, and six previous archaeological investigations have been conducted within the project area. The prehistoric component of this site consists of a large lithic scatter, while the historic component is the foundation of a house. In addition, 13 studies have been conducted within the 0.50-mile search radius. None of the studies included the project area, indicating the project area has not been previously investigated or surveyed.

**Native American Consultation and Other Interested Parties**

On October 8, 2014, a letter was sent to the NAHC requesting a search of the Sacred Lands File and a current list of Native American individuals and groups with potential interests in the project. A response was received on October 15, 2014, indicating that the record search of the sacred land file failed to indicate the presence of Native American traditional cultural properties in the immediate project area. The NAHC letter identified two individuals/groups as current contacts with potential interests in the project and stated that these individuals/groups may have knowledge of cultural resources in the project area. On October 27, 2014, letters were sent to Lois Martin, Chairperson of the Southern Sierra Miwuk Nation and Les James, Spiritual Leader of the Southern Miwuk Nation requesting additional information or input. After a lack of response, follow-up phone calls were made to the listed tribal representatives on November 10, 2014, but yielded no results.
The scoping efforts related to preparation of this EIR involved the following outreach and consultation with tribes:

- February 9, 2015: County publishes Notice of Preparation of an EIR for the project
- February 19, 2015: County sends email with Notice of Preparation
- March 10, 2015: Letter from Chukchansi Indians expressing concerns including need for review of cultural resources report prior to consultation.
- March 26, 2015: Meeting at County planning offices with Mary Motola (Tribe) and Steve Engfer (County); cultural resource assessment copy provided.
- July 17, 2015: County revised and recirculated the Notice of Preparation of an EIR for the project to reflect project description changes that included an increase from 34 cabin units to 54 cabin units and increase to 88 parking spaces to serve the 54 cabin units. The revised NOP included an invitation for agency site visit and tribal onsite consultation scheduled for August 13, 2015.
- August 13, 2015: An onsite meeting was held to discuss the proposed Tenaya Cabins and tribal concerns. Native American representatives present included Christina McDonald of the North Fork Rancheria, Mary Motola of the Picayune Rancheria of the Chukchansi Indians, and Kim Barnett of the Picayune Rancheria of the Chukchansi Indians.
- March 2, 2016: The County sent letters of outreach related to AB 52 tribal consultation for the Tenaya Cabins Project pursuant to PRC 21080.3 notification requirements. Letters were sent onto Mary Motola, THPO/Cultural Resources Director for the Picayune Rancheria of Chukchansi Indians, to Judy E. Fink and/or Christina McDonald of the North Fork Rancheria of Mono Indians of California, Lois Martin of the American Indian Council of Mariposa County, Southern Sierra Miwuk Nation, and Ron Goode of the North Fork Mono Tribe.
- May 5, 2016: Based on response requesting consultation from Mary Motola with the Picayune Rancheria of Chukchansi Indians, a tribal consultation conference call was held with Mary Motola (Tribe), Mariposa County Planning Department, Delaware North (project applicant), and Ascent Environmental (the County’s consultant for the EIR) to discuss tribal concerns related to the Draft EIR. The group discussed evaluation of TRCs and potential mitigation. (The other Tribes were not involved in the call, as the County did not receive consultation requests from them.)

Additionally, comments on the scope of the Draft EIR were received from the following tribal representatives:

- Christina McDonald, Environmental Director, North Fork Rancheria of Mono Indians of California
- Lois M. Martin, Chairperson, American Indian Council of Mariposa County, Southern Miwuk Nation

**PEDESTRIAN SURVEY**

From October 22 to October 24, 2014, archaeologists conducted surface and subsurface archaeological investigations at the project area. An intensive, on-foot, transect-style reconnaissance was first conducted throughout the entire project area. Transect spacing during the reconnaissance was approximately 5 to 10 meters. No new sites were discovered during the pedestrian survey. After surface inspection, nine hand-excavated shovel test pits (STPs) were dug to confirm the boundaries of the previously-identified site, P-22-594/CA-MRP-280/H. Four out of nine (all related to the known site) STPs revealed archaeological material, confirming the site’s known boundaries.

**Application of NRHP and CRHR Criteria**

NRHP and CRHR criteria were used to evaluate the historic significance of the buildings and potential historic and archeological sites on the project site. The NRHP criteria for eligibility are codified in 36 CFR Part
60 and explained in guidelines published by the Keeper of the NRHP. The NRHP and CRHR are discussed in more detail above under “Regulatory Setting.” Eligibility for listing on the NRHP and the CRHR rests on twin factors of significance and integrity. A resource must have both significance and integrity to be considered eligible. Loss of integrity, if sufficiently great, will become more important than the historical significance a resource may possess and render it ineligible. Likewise, a resource can have complete integrity, but if it lacks significance, it must also be considered ineligible.

The evaluations utilized above under Section 4.5, “Existing Conditions,” use the letter/number criterion references from the NRHP and CRHR, respectively. The evaluations are also based on the U.S. Department of the Interior, National Park Service Bulletin 15, How to Apply the National Register Criteria for Evaluation, which is the recognized national standard for evaluation of historic significance (U.S. Department of the Interior 2013).

**P-22-594/CA-MRP-280/H (Keller House)**

This house dates back to 1945. The house foundation is constructed of concrete and measures approximately 44 feet north-south by 23 feet east-west. Steps remain from the original construction at the north end of the foundation. An addition, possibly for a stepped porch, is located at the foundation’s southeast corner. Remnants of a chimney and fireplace are located at the northwest corner of the foundation. The residential structure was burned at an unknown time. In addition, presumably associated with the foundation, is a small, mortared stone structure—a “wishing well” that is located 12 feet north of the foundation. The wishing well has a wood shake roof supported by four wood posts.

The property was assessed under Criterion A/1 for its potential significance as part of any historic trends or events that may have made a significant contribution to the broad patterns of our history. The building was constructed as part of the overall continuing commercial and residential development of the Fish Camp area that began in the 1880s and continues to the present time. However, because this building is not associated with events that have made a significant contribution to the broad patterns of our nation’s, California’s, or local history, it does not appear to meet Criterion A/1. The Keller family was one of the pioneering families in the Fish Camp area in the 1880s and was considered important in the history of the local community. However, the 1945 property does not appear to be eligible for listing under Criterion B/2 because it has no known association with persons who made specific significant contributions to the broad patterns of our nation’s, California’s, or local history. The single-family residence no longer exists because of the fire that destroyed it and therefore the property does not appear to meet the criteria for significance under Criterion C/3 as a good example of any style of architecture. In order for buildings, structures, or objects to be significant under Criterion D/4, they need to “be, or must have been, the principal source of information.” This is not the case with this property. Therefore, the property does not appear to meet the criteria for significance under Criterion D/4.

This property does not appear to meet the criteria for the NRHP or the CRHR and therefore is not considered to be significant for the purposes of CEQA.

**P-22-594/CA-MRP-280/H (lithic scatter)**

The lithic scatter portion of P-22-594/CA-MRP-280/H is extensive, measuring approximately 170 meters (north to south) by 100 meters (east to west). The lithic scatter is composed almost entirely of obsidian debitage with two areas of concentrated material. The full site boundary of the prehistoric component of CA-MRP-280/H is divided by Highway 41. A compilation of data within all existing reports for the site as a whole details Locus A as a large obsidian lithic scatter including primary flakes, secondary flakes, utilized flakes, and a number of bedrock mortars. Locus B is described as five bedrock mortars and an obsidian lithic scatter to the south, which also contained primary flakes, secondary flakes, utilized flakes, and some hammerstone tools. Past reports consider the Locus B lithic scatter to be thin, uneven, and largely disturbed by logging activities.

A portion of the lithic scatter considered part of Locus B lies within the Tenaya Cabins Project area. During the course of the pedestrian survey and test pits, the description of this lithic scatter was confirmed as being thin, uneven, and largely disturbed by logging activities, but no diagnostic tools, utilized flakes, or hammerstones were observed. Furthermore, the results of the subsurface testing show that the prehistoric lithic scatter is confined to the northern portion of the project area.
The prehistoric portion of CA-MRP-280/H located within the project area was assessed under Criterion A/1 for its potential significance as part of any historic trends or events that may have made a significant contribution to the broad patterns of prehistory and with Criterion B/2 for its potential significance and association with a person of importance in prehistory. The lithic production scatter is a common example of obsidian napping within the Yosemite region and is not believed to be associated with a particular significant event or person of importance in prehistory. Therefore, the site does not appear to meet Criterion A/1 or Criterion B/2. The prehistoric portion of CA-MRP-280/H located within the project area was also assessed under Criterion C/3 for its potential significance as a property which embodies the distinctive characteristics of a type, period, method of construction or style of architecture, represents the work of a master architect, builder or craftsman, possesses high artistic values, or represents a significant or distinguishable entity whose components lack individual distinction. The lithic production scatter is a common example of obsidian napping within the Yosemite region and contained no evidence for prehistoric architecture. Therefore, the site does not appear to meet Criterion C/3. Finally, the prehistoric portion of CA-MRP-280/H located within the project area was assessed under Criterion D/4 for its potential significance and its ability to convey information. Limited Phase II subsurface testing was conducted as part of the project investigation and all pertinent information discovered is contained within the confidential cultural resources report on file at Mariposa County. As a lithic scatter without diagnostic features, the site has been determined unlikely to yield additional useful information through subsequent Phase II or Phase III testing. Therefore, the site does not appear to meet Criterion D/4.

This resource does not appear to meet the criteria for the NRHP or the CRHR and therefore is not considered to be significant for the purposes of CEQA.

4.5.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on cultural resources if it would:

- cause a substantial adverse change in the significance of an historical resource as defined in §15064.5;
- cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5;
- disturb any human remains, including those interred outside of formal cemeteries;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code § 21074.

METHODS AND ASSUMPTIONS

The impact analysis for archaeological and historical resources is based on the findings and recommendations of the report titled Fish Camp Campground Development Project Phase I Cultural Resource Assessment Fish Camp, Mariposa County, California (First Carbon Solutions 2016). The impact analysis considers the known cultural resource environmental setting in project area, the potential for previously undocumented resources, including human remains, and physical effects (i.e., disturbance, material alteration, demolishment) to known and previously undocumented cultural and paleontological resources that could result from implementation of the project. The analysis is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources.
Application of NRHP and CRHR Criteria
As described above in Section 4.5.2, “Existing Environmental Setting,” NRHP and CRHR criteria were used to evaluate the historic significance of the buildings and potential historic and archaeological sites on the project site. The NRHP criteria for eligibility are codified in 36 CFR Part 60 and explained in guidelines published by the Keeper of the NRHP. The NRHP and CRHR are discussed in more detail above under “Regulatory Setting.” Eligibility for listing on the NRHP and the CRHR rests on twin factors of significance and integrity. A resource must have both significance and integrity to be considered eligible. Loss of integrity, if sufficiently great, will become more important than the historical significance a resource may possess and render it ineligible. Likewise, a resource can have complete integrity, but if it lacks significance, it must also be considered ineligible.

The evaluations of P-22-594/CA-MRP-280/H (Keller House) and P-22-594/CA-MRP-280/H (lithic scatter), described above, use the letter/number criterion references from the NRHP and CRHR, respectively. The evaluations are also based on the U.S. Department of the Interior, National Park Service Bulletin 15, How to Apply the National Register Criteria for Evaluation, which is the recognized national standard for evaluation of historic significance (U.S. Department of the Interior 2013).

P-22-594/CA-MRP-280/H (Keller House)
As described above in Section 4.5.2, “Existing Environmental Setting,” the Keller House does not appear to meet the criteria for the NRHP or the CRHR nor is the Keller house on a County list of historical resources. Therefore is not considered to be significant for the purposes of CEQA.

P-22-594/CA-MRP-280/H (lithic scatter)
As described above in Section 4.5.2, “Existing Environmental Setting,” the lithic scatter portion of P-22-594/CA-MRP-280/H is extensive, measuring approximately 170 meters (north to south) by 100 meters (east to west). The prehistoric portion of CA-MRP-000280/H located within the project area was assessed and does not appear to meet the criteria for the NRHP or the CRHR, nor is the lithic scatter on a County list of historical resources. Therefore, it is not considered to be significant for the purposes of CEQA.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Historic Resources
As described above, no historic architectural resources/structures were identified on the project site. The Keller House was evaluated and found not eligible for listing in the CRHR or NRHP, nor is this site on a County list of historical resources. As a result, the Keller House would not be considered significant for the purposes of CEQA and project construction and operation would have no impact on historical resources. This issue is not discussed further in this EIR.

IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.5-1: Disturb unique archaeological resources
Based on the results of the archaeological records search and historic land evaluations conducted for the proposed project, there is one known archaeological site. The site has been evaluated and determined to not to meet the criteria for the NRHP or the CRHR and is not considered significant for the purposes of CEQA. However, ground-disturbing activities could result in discovery or damage of as yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. This is considered a potentially significant impact.

The results of the records search indicated one prehistoric/historic site (P-22-594/CA-MRP-280/H) has been recorded within the project area. The prehistoric component of this site consists of a large lithic scatter, while the historic component is the Keller house foundation. The lithic scatter portion of P-22-594/CA-MRP-280/H is extensive, measuring approximately 170 meters (north to south) by 100 meters (east to west). The full site boundary of the prehistoric component of CA-MRP-000280/H is divided by Highway 41. The lithic...
scatter is composed almost entirely of obsidian debitage with two areas of concentrated material. This resource does not appear to meet the criteria for the NRHP or the CRHR and therefore is not considered to be significant for the purposes of CEQA.

During the archaeological survey for this project, nine hand-excavated STPs were dug to confirm the boundaries of the previously-identified site, P-22-594/CA-MRP-280/H. STPs #2, #3, #4, and #5 were placed in areas located within the previously recorded boundaries of prehistoric lithic scatter component of CA-MRP-280/H. STPs #1, #6, #7, and #8 were placed outside the lithic scatter site boundaries to test for absence/presence of prehistoric materials to better establish the scatter’s boundaries. STP #9 was placed in the southeastern portion of the project area, near a wet meadow.

The four STPs placed outside the P-22-594/CA-MRP-280/H lithic scatter boundaries did not produce more than two flakes per probe, and encountered culturally sterile soils at relatively shallow levels. STP #9, placed near a wet meadow, produced the largest amount of American-period materials; however, none of the materials were temporally diagnostic. Diagnostics are artifacts or some other aspect of a site that is known to be associated with a particular time period, giving context to the cultural materials. STP #9 only yielded two pieces of obsidian debitage, indicating there is lesser probability that the prehistoric site extends into that area.

Because site P-22-594/CA-MRP-280/H has been evaluated and determined to not to meet the criteria for the NRHP or the CRHR and is not considered significant for the purposes of CEQA, the project would have no impact and therefore archaeological monitoring during construction is not warranted. However, given the findings of the pedestrian survey, background research, and records searches, the project area has high sensitivity for prehistoric and historic-era archaeological resources. In areas outside of site P-22-594/CA-MRP-280/H, project construction could encounter previously undiscovered or unrecorded archaeological sites and materials. Project-related preconstruction or construction-related ground disturbing activities could damage or destroy these archaeological resources. This is considered a potentially significant impact.

**Mitigation Measures**

**Mitigation Measure 4.5-1a: Conduct archaeological monitoring outside of P-22-594/CA-MRP-280/H**

Archaeological monitoring will be conducted in areas outside of site P-22-594/CA-MRP-280/H where there is likelihood that archaeological remains may be discovered but where those remains are not visible on the surface (per the confidential Cultural Resources Assessment on file at the county). Where necessary, the project proponent will seek Native American input and consultation.

**Mitigation Measure 4.5-1b: Stop work in the event of an archaeological discovery outside of P-22-594/CA-MRP-280/H**

If potentially significant cultural resources are discovered outside of site P-22-594/CA-MRP-280/H during ground-disturbing activities associated with individual project preparation, construction, or completion, the project proponent will require the construction contractor to stop work in that area until a qualified archaeologist can access the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with appropriate agencies and interested parties. A qualified archaeologist will follow accepted professional standards in recording any find including submittal of the standard California Department of Parks and Recreation (DPR) Primary Record forms (Form DPR 523) and location information to the California Historical Resources Information Center office (Central California Information Center) for California projects. The consulting archaeologist will also evaluate such resources for significance per CRHR eligibility criteria (PRC Section 5024.1; Title 14 CCR Section 4852).

If the archaeologist determines that the find does contain temporally diagnostic materials and does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, the lead agency will be notified and a data recovery plan will be prepared.
Significance after Mitigation
Implementation of Mitigation Measures 4.5-1a and 4.5-1b would reduce potentially significant impacts to archaeological resources because mitigation would be developed in coordination with the appropriate federal, state, and/or local agency(ies) and tribes to avoid, move, record, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. By providing an opportunity to avoid disturbance, disruption, or destruction of archaeological resources, this impact (Impact 4.5-1) would be reduced to a less-than-significant level.

Impact 4.5-2: Accidental discovery of human remains

Although unlikely, construction and excavation activities associated with project development could unearth previously undiscovered or unrecorded human remains, if they are present. This impact would be potentially significant.

Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or unmarked human interments are present within or in the immediate vicinity of the project site. However, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the project site, and could be uncovered by project-related construction activities.

The location of grave sites and Native American remains can occur outside of identified cemeteries or burial sites. Construction activities could uncover previously unknown human remains, which could be archaeologically or culturally significant.

Although there are no known prehistoric or early historic internments on the project site, project-related construction activities could uncover or otherwise disturb previously undiscovered or unrecorded human remains. Because any disturbance of human remains would be a significant impact, this impact would be potentially significant.

Mitigation Measures

Mitigation Measure 4.5-2: Stop work if human remains are discovered

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097.

If human remains are discovered during any demolition/construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the project applicant shall notify the Mariposa County coroner and the NAHC immediately, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project applicant shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD), if any, identified by the NAHC. Following the coroner’s findings, the archaeologist, and the NAHC-designated MLD shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.94.

Significance after Mitigation
Implementation of Mitigation Measure 4.5-2 would reduce potentially significant impacts to human remains because actions would be implemented to avoid, move, record, or otherwise treat the remains appropriately, in accordance with pertinent laws and regulations. By providing an opportunity to avoid or minimize the
disturbance of human remains, and to appropriately treat any remains that are discovered, this impact would be reduced to a **less-than-significant** level.

### Impact 4.5-3: Disturb a unique paleontological resource

The project site is underlain with Mesozoic granite, which has a low paleontological potential. No paleontological resources are known to occur within the project site or a one-mile radius of the site. Therefore, this impact would be **less than significant**.

The Fish Camp area is underlain exclusively with Mesozoic granite. Estimates place the intrusion of this granitic mass from 64 to 135 million years ago. Metamorphic and igneous rocks (such as granite) have a low paleontological potential, either because they formed beneath the surface of the earth, or because they have been altered under high heat and pressures, chaotically mixed or severely fractured. Generally, the processes that form igneous and metamorphic rocks are too destructive to preserve identifiable fossil remains. Therefore, the project area is considered to have a low paleontological sensitivity.

In addition, a search of the University of California Museum of Paleontology database state that there are 15 localities at which fossil remains have been found in Mariposa County. These occur in the Mariposa geologic formations, to the northwest of Fish Camp, near Jerseydale. The database did not list any paleontological resources in or near Fish Camp.

Because the types of soil formations that underlay the project site are not considered sensitive for paleontological resources, project impacts on paleontological resources are considered **less than significant**.

### Mitigation Measures

No mitigation measures are necessary.

### Impact 4.5-4: Change in the significance of a tribal cultural resource

The Picayune Rancheria of the Chukchansi Indians has stated that the Tribe considers the Fish Camp area to be a “tribal cultural resource” (TCR) as described under AB 52. The Picayune Rancheria Tribe is concerned that construction and operation of the Tenaya Cabins Project would cause changes to the tribal cultural value of the project area. The resource does not meet the criteria for a TCR under PRC §21074 and the project impact is therefore **less than significant**. However, the County recognizes the importance of the cultural resource to the Tribe and therefore chooses to require mitigation.

The County consulted with Mary Motola, Tribal Historic Preservation Officer (THPO), for the Picayune Rancheria of the Chukchansi Indians, who has stated that the Tribe considers the Fish Camp area to be a TCR as described under AB 52 and defined in PRC § 21074. In order to be considered a TCR, a resource must be either:

1. listed or determined to be eligible for listing, on the national, state, or local register of historic resources, or
2. a resource that the lead agency determines, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource pursuant to the criteria in PRC §50241(c). PRC §5024.1(c) provides that a resource meets criteria for listing as an historic resource in the California Register if it meets any of the following:
   1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
   2. Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

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

The project area was a shared place of many uses that served many tribes (see Section 4.5.2, “Existing Environmental Setting,” above) and was part of the major trade routes that connected not only local peoples, but was part of a network of trade that stretched from the Pacific Ocean to the Great Basin. Archaeological evidence indicates Native American use of the area. In addition, the Tribe has stated that the area was a significant meeting, trading, gathering (plants for food and medicine), hunting, and fishing place for the Picayune Rancheria. However, while the TCR may have been used as a trade route or meeting area, the TCR does not meet any of the PRC 5024.1(c) criteria listed above. Therefore, the project would have a less-than-significant impact to TRCs as defined in PRC § 21074.

Nonetheless, the Picayune Rancheria Tribe is concerned that construction and operation of the Tenaya Cabins Project would contribute to changes to the value of the cultural landscape in the Fish Camp area. The County recognizes the stated tribal cultural value of the project area to the Picayune Rancheria of the Chukchansi Indians and that the historic use of the region and the value of its resources are important to the Tribe’s ongoing cultural integrity. Therefore, the County chooses to require the following mitigation.

Mitigation Measures

Mitigation Measure 4.5-4: Memorialize the cultural values of the project site through public education

Delaware North, the project applicant, shall further consult with the Picayune Rancheria of the Chukchansi Indians to plan, design, agree on the content, and implement the following:

a. Cultural Resource Interpretative Program (Program) for the Tenaya Cabins Project site, which shall include
   i. cultural resource interpretive display(s) inside the clubhouse,
   ii. cultural resource seminar(s) or workshop(s) for interested groups, and/or
   iii. cultural resource brochures and/or handouts for the patrons and public.

The primary goal of the Program shall be to educate the public on the cultural history of the Fish Camp area, particularly the Chukchansi Indians and their history in the region, as well as the significance of environmental resources to their culture.

The agreement for the Tenaya Cabins Cultural Resource Interpretive Program between the Tribe and Delaware North shall be submitted to, and approved by the County Planning Director prior to the issuance of a grading or building permit for the project. The Program shall define the location, material type(s), and dimensions of any/all displays proposed. The Program shall establish the themes, text, and images for all displays and brochures. The agreement shall define the financial obligation of Delaware North related to the display(s) and brochures/handouts and their maintenance. Delaware North shall make space available for cultural resource seminars/workshops, but shall not be financially responsible for their implementation. The Cultural Resource Interpretive Program agreement shall be submitted to, and approved by, the Planning Director. The County shall be responsible for verification of installation of interpretive display(s) and brochure(s) prior to the certificate of occupancy of project clubhouse or cabins.

Significance after Mitigation

Implementation of Mitigation Measures 4.5-4 would provide for ongoing education regarding the cultural values of the project site, in accordance with the Tribe’s wishes, and would support the ongoing cultural history of the Chukchansi Indians through education and environmental protection. The impact would remain less than significant after mitigation.
4.6 TRANSPORTATION AND CIRCULATION

This section describes the existing roads and circulation patterns in the vicinity of the Tenaya Cabins Project site and evaluates transportation impacts from construction and operation of the proposed project. The analysis in this section is based on the following studies, provided in Appendix E, as well as scoping comments from the California Department of Transportation (Caltrans) as provided in Appendix B.

- Traffic Impact Study by VRPA Technologies (July 2015, as revised in February and June 2016)
- Caltrans Comments on the Traffic Impact Study (September 1, 2015 and March 24, 2016)
- Memo from VRPA Technologies to Caltrans (September 2015)
- Email from VRPA Technologies to Ascent Environmental (January 6, 2016)
- Caltrans Comments on Administrative Draft EIR (May 11, 2016)

4.6.1 Regulatory Background

FEDERAL

There are no federal transportation plans, policies, regulations, or laws applicable to the proposed project.

STATE

California Department of Transportation

Caltrans is responsible for planning, designing, building, operating, and maintaining California’s State highway system, including rail and mass transit. Caltrans District 6 is responsible for State Route 41 (Highway 41), which is a major north-south route located in the eastern portion of Mariposa County that extends from the Madera County line to the Yosemite Valley. Highway 41 connects to State Route 49 in Oakhurst and to State Route 140 in Yosemite Valley. Highway 41 is one of three highways serving Yosemite National Park and also provides access to the Mariposa County communities of Fish Camp, Wawona and Yosemite West.

Transportation Concept Report

Caltrans’ Transportation Concept Report (TCR) for Highway 41 (Caltrans 2013) is a long-range system-planning document that establishes a planning concept for the corridor through year 2035. The TCR provides route data and information, as well as current (based on most recent data, i.e., 2010 data) and projected year (2020 and 2035 respectively) operating characteristics. The TCR identifies the section of Highway 41 through Fish Camp as a 2-lane conventional highway, and the 2035 and ultimate transportation concept for this section is a 2-lane conventional highway, in some cases with additional improvements such as turn-outs for slower traffic and passing lanes. There are no planned or programmed improvements for Highway 41 in the vicinity of Fish Camp.

The Caltrans TCR defines both the existing operational level of service (LOS) for the segment of Highway 41 through Fish Camp as LOS C. The TCR anticipates the average daily traffic on this segment of Highway 41 to be 2,600 in 2035 with truck trips representing 20 percent of the annual average daily traffic (Caltrans 2013), and establishes a Concept Level of Service (Concept LOS) for 2035 as LOS D.
LOCAL

Mariposa County General Plan Circulation Element Goals and Policies
The Transportation and Circulation Element of the Mariposa County General Plan guides the continued development and improvement of the circulation system to support existing and planned development. The Circulation Element addresses the circulation improvements needed to provide adequate capacity for future land uses. The applicable goals and policies include:

A. To provide for the safe, efficient, and economical movement of people and goods within the County through a maintained road system.
   - Roads serving private residential or commercial development shall not be considered appropriate for inclusion in the County maintained road system unless it can be shown that it is in the general public interest to maintain such roads.
   - Support improvement of existing facilities to provide increased mobility for the populace of the County and the general touring public.

B. To improve the economic climate of the County through improved transportation systems where County government has the fiscal capability.
   - Increase the attraction for tourism through adequate access to existing and potential recreation areas.

Mariposa County 2012 Regional Transportation Plan
The Mariposa County Local Transportation Commission (LTC) is required by California law to adopt and submit an approved Regional Transportation Plan (RTP) to the California Transportation Commission (CTC) every five years. The 2012 RTP serves as the current guide to planning transportation investments in Mariposa County involving federal, state and local funding over a 25-year period (2012-2035). The development of the RTP is a cooperative effort between the LTC, County, Caltrans, tribal governments, and residents of Mariposa County. The 2012 RTP is constrained to the projected revenues and costs for all RTP projects.

The following RTP goals are consistent with the Mariposa County General Plan Circulation Element:

Regional Goal 1: Enhance the lifestyle, while maintaining the rural character of Mariposa County through an adequate, safe, efficient, and economically feasible regional transportation system.

Regional Goal 2: Develop a regional transportation system that is consistent and responsive to the social, cultural, economic and environmental needs of the county.

Regional Goal 3: Employ comprehensive planning in developing the county’s regional transportation system, focusing on the circulation impacts associated with development of existing parcels, and interregional trips.

Regional Goal 4: Implement system planning that includes a detailed assessment of inter-regional transit, bicycle, pedestrian, equestrian, parking, aviation, and freight transportation needs.

Mariposa County Bicycle and Pedestrian Transportation Plan
The Bicycle and Pedestrian Transportation Plan (BPTP) (2011) establishes goals, policies, implementation actions, and priorities for the development of bicycle and pedestrian facilities in Mariposa County. The ultimate goal of the BPTP is to increase the number of persons in Mariposa County that bike and walk for both utilitarian and recreational purposes by developing and maintaining an interconnected system of bicycle and pedestrian facilities.
The only existing bike path in the County is on the west side of the Town of Mariposa. Mariposa County does not have any existing Class II or Class III bike routes; however, it is legal to bicycle on all public roads in Mariposa County. The state highways, such as Highway 41, are also popular for bicycling, especially where no alternative roads exist.

The BPTP calls for improvements along Highway 41 to accommodate a Class III bike route (i.e., a shared facility with bike route signs, but without striping) with a multiuse shoulder between Madera County and the south entrance to Yosemite National Park. The desired width of the multi-use shoulder varies between four and five feet (four feet where there is no vertical curb, five feet where there is vertical curb). Signage for all Class III bike routes in the County is listed in the BPTP as a high-priority, short-term project.

**Mariposa County Road Improvement and Circulation Policy**

The Mariposa County Road Improvement and Circulation Policy establishes minimum improvement standards for projects, based on the potential traffic volumes on the roads and the land use density, which is in-turn based on the adopted land use plans (the Fish Camp Town Planning Area Specific Plan and the General Plan). This policy document establishes standards for roads, cul-de-sacs, easements, intersections, driveways, offsite improvements, signs, sidewalks/gutters, paths/trails/bikeways, and maintenance. The County requires new private development to install all improvements required by the policies, and recommends early coordination with Caltrans for projects which access a State Highway.

The selection of improvement standards is based on Chart A of the Road Improvement and Circulation Policy, and is based on:

a. potential average daily traffic (ADT) or traffic volume
b. proposed use (residential, commercial, industrial)
c. density of proposed use (rural, town, parcel size)
d. County road classification, if applicable.

**Fish Camp Town Planning Area Specific Plan**

The Fish Camp Town Planning Area (TPA) Specific Plan includes the following traffic and circulation objectives:

1. All proposed encroachments to Highway 41 should be reviewed and approved by Caltrans. Such review should be conducted early in the project planning process.

2. All development proposals should be reviewed with road capacity, safety, and road maintenance as important considerations.

3. All proposed developments should be reviewed to ensure that adequate off-street parking is provided and that such parking is accessible from the street at all times of the year.

4. All proposed development roads should be paved to facilitate snow removal and winter access. Maximum allowable grades should be 10 percent.

5. Adequate and reliable snow removal is necessary. Such services may be provided for by the County and paid for with benefit assessments or through a community wide community service district established to provide snow removal and other services.

**4.6.2 Existing Environmental Setting**

Regional access to Fish Camp and the Tenaya Cabins Project site is provided by Highway 41, which bisects the community and provides southern access to Yosemite National Park. Highway 41 originates near Morro Bay in San Luis Obispo County, travels through Fresno, Oakhurst, and Fish Camp to its terminus in Yosemite Valley.
(road name is “Wawona Road” within Yosemite National Park). The Fish Camp TPA Specific Plan and EIR describe Highway 41 as having the following three functions: (1) southern tourist arterial to Yosemite; (2) intercommunity travel needs of local permanent and seasonal residents, workers and merchants; and (3) seasonal recreation, logging and woodcutting on Sierra National Forest lands. Highway 41 outside of Yosemite National Park is maintained by Caltrans. Approximately 5 miles of Highway 41 is within Mariposa County (between the Madera County line and the south entrance to Yosemite National Park) (Mariposa County 2001).

Additional roads with through access to the Fish Camp TPA include Yosemite Mountain Ranch Road to the west, and Jackson Road and White Chief Mountain Road to the east. A network of small roads, either privately maintained, maintained by the Mariposa County Public Works Department, or maintained by the Yosemite Alpine Community Service District, provides access to over 140 lots and residences in Fish Camp within Blocks “A,” “B,” “C,” and “D.” Defined by the Mariposa County Road Improvement and Circulation Policy as “local residential roads,” they “...serve as access to single or multiple family residential land uses, and are intended for local residential traffic only. Traffic volumes and design speeds are low” (Mariposa County 2001).

Roads within the Fish Camp TPA are subject to the following influences:

**Logging Activity.** Fish Camp is bordered by a large private timber holding on the west side. Logging is an historic operation in the area, providing lumber to the valley and beyond. Logging operations necessitate the construction of logging roads within the forest for access to and removal of trees. As the primary regional access to these timberlands, road conditions along Highway 41 are negatively impacted by logging activity.

**Slopes and Topography.** As described in the Fish Camp TPA Specific Plan, Fish Camp is located on the western slope of the Central Sierra Nevada Mountain Range, which characteristically has steep slopes caused by granitic uplifts, glacial action and stream downcutting. The TPA has average slopes of approximately 20 to 25 percent. The steepest slopes are located west of Highway 41 in the Mariposa County extreme northeast corner of the TPA. The Fish Camp TPA Specific Plan further states that the granitic masses are subject to weathering through jointing patterns and exfoliation that can result in rock falls, especially on steeper slopes. Rock falls present potential road hazards within the Fish Camp TPA.

**Climate.** Winter months often bring heavy snows throughout the Sierra Nevada and intense winter recreation activity. According to the Fish Camp TPA Specific Plan, snow removal is conducted by Caltrans (Highway 41), Mariposa County, the Yosemite Alpine Community Service District, and private landowners.

**Seasonal Recreation.** Only 1.5 miles south of the southern entrance to Yosemite National Park, Fish Camp experiences seasonal influxes in vehicular traffic. Winter recreation activities at Badger Pass attract large volumes of tourists to the facilities, via Highway 41 through Fish Camp. According to the Fish Camp TPA Specific Plan, winter recreational uses have become increasingly popular in the area, and existing services have expanded to meet the demand of these visitors. The demand for services includes winter maintenance on roadways to ensure safe and passable roads. LOS can also be reduced during peak seasonal use.

However, Fish Camp experiences peak vehicular traffic during the summer months. Yosemite National Park hosts approximately 4 million visitors annually, many of whom visit during the summer months. In addition, the Sierra National Forest draws extensive use during the summer months. According to the Fish Camp TPA Specific Plan, Fish Camp has focused tourist-related facilities toward these summer visitors. Tourist activity during the summer months (especially weekends and holidays) can dramatically reduce LOS.

**STUDY AREA INTERSECTIONS AND ROADWAY SEGMENTS**

Highway 41 is the primary transportation route, and the only winter route, to Fish Camp and the project site. Therefore, the study intersections and roadway segments chosen for this analysis, in coordination with Mariposa County and Caltrans, are related to Highway 41. Exhibit 3-1 in Chapter 3 illustrates the regional location of Fish Camp, while Exhibit 4.6-1 identifies the project location and the following study intersections and roadway segments.
Exhibit 4.6-1

Project Location (Traffic)
Intersections
1. Highway 41 / project entry
2. Highway 41 / Summit Camp Road

Exhibit 4.6-2 illustrates the existing lane geometry of the Highway 41 / Summit Camp Road intersection, which is unsignalized. The project entry is not shown on this exhibit, as it is a gated dirt road that does not currently provide any public access.

Roadway Segments
1. Highway 41 between Jackson Road and the project entry
2. Highway 41 between the project entry and Fish Camp Lane

EXISTING TRAFFIC COUNTS

Weekday Peak Hour
Intersection turning movement counts were conducted for the peak hour periods of 7:00-9:00 a.m. and 4:00-6:00 p.m. for the existing Highway 41 and Summit Camp Road intersection on Tuesday, June 9, 2015 (see Table 4.6-3). Traffic count data worksheets are provided in Appendix B of the Traffic Impact Study (Appendix E of this Draft EIR). The traffic counts were conducted during fair weather conditions. The weekday traffic counts represent typical volumes experienced in the study area and are consistent with the traffic volumes presented in the Mariposa County 2012 Regional Transportation Plan. In addition, the months of June, July, and August generate higher traffic volumes in the study area than other months throughout the year (such as winter). Finally, Caltrans staff indicated that the month of June would be an appropriate month to evaluate the impacts of the proposed project. Exhibit 4.6-3 shows existing traffic volumes for the weekday a.m. and p.m. peak hours on Highway 41 in the study area. The Highway 41 a.m. peak traffic volumes are 191 northbound trips and 54 southbound trips; and the p.m. peak traffic volumes are 107 northbound trips, and 250 southbound trips.

Weekend Peak Hour
As noted above, tourist activity in the project area on Highway 41 during the summer months (especially weekends and holidays) can dramatically reduce LOS. Therefore, Caltrans’ traffic volume data from 2013 was used to determine the weekend peak hour. 2013 counts were conducted on a Saturday/Sunday and reflect typical conditions in the study area during the weekend. A growth rate consistent with the study area (0.7 percent per Caltrans’ Highway 41 TCR) was applied to Caltrans’ traffic volume data from 2013 in order to estimate 2015 traffic volumes. Traffic count data worksheets are provided in Appendix B of the Traffic Impact Study in Appendix E of this Draft EIR). Exhibit 4.6-4 shows the existing traffic volumes for the weekend peak hour on Highway 41 in the study area, which are higher than the weekday peak hours: 344 northbound trips and 360 southbound trips. In addition, weekend intersection turning movement counts were conducted for the existing Highway 41 and Summit Camp Road intersection on Saturday, June 11, 2016 between 11:00 a.m.-3:00 p.m. (see Table 4.6-3). The intersection turning movement counts were found to be similar to the weekday p.m. peak hour. As with the weekday peak hour counts, traffic count data worksheets are provided in Appendix B of the Traffic Impact Study (Appendix E of this Draft EIR). The traffic counts were conducted during fair weather conditions.
Exhibit 4.6-2
Existing Lane Geometry

LEGEND

- Project Site
- Study Area Intersection
- Study Roadway Segment

Source: VRPA Technologies, Inc. 2016
Exhibit 4.6-3

Existing a.m./p.m. Peak Hour Conditions
Exhibit 4.6-4

Existing Weekend Peak Hour Conditions
EXISTING LEVELS OF SERVICE

LOS is a qualitative measure used to describe the operational conditions in a stream of traffic and the perception of conditions by users. LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined, with LOS A representing the best operating conditions (minimal vehicular congestion) and LOS F representing the worst operating conditions (substantial vehicular congestion). LOS E represents “at-capacity” operations. When traffic volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

The LOS methodology described in the Transportation Research Board’s Highway Capacity Manual (HCM) (TRB 2010) was applied in this Draft EIR analysis. The LOS definitions for unsignalized intersections are shown in Table 4.6-1 (there are no signalized intersection in the study area), and the LOS definitions for roadways are shown in Table 4.6-2, below.

Table 4.6-1  Unsignalized Intersections Level of Service Definitions

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Definition</th>
<th>Average Total Delay (seconds/vehicle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>No delay for stop-controlled approaches.</td>
<td>0 - 10.0</td>
</tr>
<tr>
<td>B</td>
<td>Describes operations with minor delay.</td>
<td>&gt; 10.0 - 15.0</td>
</tr>
<tr>
<td>C</td>
<td>Describes operations with moderate delays.</td>
<td>&gt; 15.0 - 25.0</td>
</tr>
<tr>
<td>D</td>
<td>Describes operations with some delays.</td>
<td>&gt; 25.0 - 35.0</td>
</tr>
<tr>
<td>E</td>
<td>Describes operations with high delays and long queues.</td>
<td>&gt; 35.0 - 50.0</td>
</tr>
<tr>
<td>F</td>
<td>Describes operations with extreme congestion, with very high delays, and long queues unacceptable to most drivers.</td>
<td>&gt; 50.0</td>
</tr>
</tbody>
</table>

Source: Highway Capacity Manual TRB 2010

Table 4.6-2  Roadway Segment Level of Service Definitions

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.</td>
</tr>
<tr>
<td>B</td>
<td>Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.</td>
</tr>
<tr>
<td>C</td>
<td>Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with other vehicles in the traffic stream.</td>
</tr>
<tr>
<td>D</td>
<td>Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.</td>
</tr>
<tr>
<td>E</td>
<td>Represents operating conditions at or near the level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.</td>
</tr>
<tr>
<td>F</td>
<td>Is used to define forced or breakdown flow (stop-and-go gridlock). This condition exists when the amount of traffic approaches a point where the amount of traffic exceeds the amount that can travel to a destination. Operations within the queues are characterized by stop and go waves, and they are extremely unstable.</td>
</tr>
</tbody>
</table>

Source: Highway Capacity Manual TRB 2010

Existing Intersection Levels of Service

The existing intersection LOS for the unsignalized Highway 41 / Summit Camp Road intersection was estimated using Synchro 8 Software based on roadway geometrics (see Exhibit 4.6-2), traffic volumes, and properties (peak hour factors, storage pocket length, etc.). The storage length for the existing Highway 41
and Summit Camp Road intersection was obtained from aerial photos and rounded to the nearest 25 feet. The peak hour factor used for existing conditions was determined from the existing counts taken July 9, 2015. In addition, heavy vehicle percentages were applied as follows, based on the HCM default, traffic counts, or Caltrans’ parameters:

- Highway 41: 7 percent (based on Caltrans’ 2013 annual average daily truck traffic)
- All other roadways: 3 percent

The Highway 41 / Summit Camp Road intersection is currently operating at an acceptable levels of service (LOS A in a.m. peak hour, LOS B in p.m. peak hour, and LOS B in the weekend peak hour), as shown in Table 4.6-3.

Table 4.6-3  Existing Intersection Operations

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>Target LOS</th>
<th>Peak Hour</th>
<th>Existing Delay</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway 41 / Summit Camp Road</td>
<td>One-way Stop Sign</td>
<td>C</td>
<td>a.m.</td>
<td>9.4</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>p.m.</td>
<td>10.3</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weekend</td>
<td>10.3</td>
<td>B</td>
</tr>
</tbody>
</table>

Notes: Delay is measured in seconds. LOS = Level of Service (Bold denotes LOS standard has been exceeded)
For one-way and two-way stop controlled intersections, delay results show the delay for the worst movement.

Existing Roadway Segments Levels of Service

Roadway segment analysis was based on the Florida Department of Transportation, Generalized Peak Hour Directional Volumes for Florida’s Rural Areas, which are commonly utilized in the California’s Central Valley region and approved for use by Caltrans because they are based on planning-level applications of the 2010 Highway Capacity Manual (HCM). The 2010 HCM methodologies are acceptable for use in evaluating impacts to Caltrans facilities. As shown in Table 4.6-4, Highway 41 segments in the study area are currently operating at an acceptable levels of service, LOS C.

Table 4.6-4  Existing Segment Operations

<table>
<thead>
<tr>
<th>Segment of Highway 41</th>
<th>Segment Description</th>
<th>Direction</th>
<th>Target LOS</th>
<th>Peak Hour</th>
<th>Existing Volume</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackson Road to Project Entry</td>
<td>1 lane</td>
<td>Northbound</td>
<td>C</td>
<td>a.m.</td>
<td>192</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p.m.</td>
<td>109</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Southbound</td>
<td></td>
<td>a.m.</td>
<td>57</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p.m.</td>
<td>250</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northbound</td>
<td></td>
<td>Weekend Peak Hour</td>
<td>344</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Southbound</td>
<td></td>
<td>Weekend Peak Hour</td>
<td>360</td>
<td>C</td>
</tr>
<tr>
<td>Project Entry to Fish Camp Lane</td>
<td>1 lane</td>
<td>Northbound</td>
<td>C</td>
<td>a.m.</td>
<td>191</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p.m.</td>
<td>107</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Southbound</td>
<td></td>
<td>a.m.</td>
<td>54</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p.m.</td>
<td>250</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northbound</td>
<td></td>
<td>Weekend Peak Hour</td>
<td>344</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Southbound</td>
<td></td>
<td>Weekend Peak Hour</td>
<td>360</td>
<td>C</td>
</tr>
</tbody>
</table>

LOS = Level of Service (Bold denotes LOS standard has been exceeded)
EXISTING QUEUING

The queuing analysis was completed using information found in the Synchro outputs for the study intersections contained in Appendix C of the Traffic Impact Study in Appendix E of this Draft EIR. Synchro provides the 95th percentile maximum vehicular queue for unsignalized intersections. The vehicular queue presented in the Synchro outputs was then multiplied by 25 feet to estimate the total length of the queue in feet. As shown in Table 4.6-5, under existing conditions there is no queuing in the a.m., p.m., or weekend peak hours for the northbound left turn movement from Highway 41 to Summit Camp Road.

<table>
<thead>
<tr>
<th>Table 4.6-5</th>
<th>Existing Queuing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection</td>
<td>Existing Queue Storage Length</td>
</tr>
<tr>
<td>Highway 41/Summit Camp Road</td>
<td>Northbound Left</td>
</tr>
</tbody>
</table>

SAFETY

The Mariposa County 2012 RTP provides a summary of collisions in Mariposa County from 2008 to 2010. Over this three year period, there were 49 recorded collisions on Highway 41. Over half the collisions throughout the entire County resulted in injuries, and 35 percent involved turning movement vehicle code violations. This type of accident is typical of two lane facilities with significant mainline traffic flows and numerous access points along the facility (Mariposa County LTC 2012).

PUBLIC TRANSPORTATION

The Yosemite Area Regional Transportation System (YARTS) provides regularly scheduled public transit service (bus service) in the Yosemite region, including gateway communities along its routes such as Fish Camp. YARTS has a year-round bus route along Highway 41 connecting Fresno, Coarsegold, Oakhurst, Fish Camp, Wawona, and Yosemite Valley. There are regularly-scheduled stops at the Tenaya Lodge for both directions (to Yosemite and to Fresno) (YARTS 2016a and b).

BICYCLE AND PEDESTRIAN FACILITIES

There are no existing bike paths, bike routes, or pedestrian facilities in Fish Camp. However, it is legal to bicycle on all public roads in Mariposa County including Highway 41.

4.6.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA

Based on Appendix G of the CEQA Guidelines, the project would result in a significant adverse effect related to transportation and circulation if it would:

- conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

- conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways;
result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;

- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

- result in inadequate emergency access; or

- conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Based on the Caltrans TCR for Highway 41 (Caltrans 2013), which establishes a Concept LOS of LOS D for Highway 41, an increase in traffic will be considered significant if the addition of project traffic causes the intersection LOS to decrease to worse than LOS D during the peak hour. Furthermore, development which is inconsistent with adopted General Plan, the Fish Camp TPA Specific Plan, or the Mariposa County Road Improvement and Circulation Policy would be considered potentially significant.

METHODS AND ASSUMPTIONS

Study Period
This Draft EIR analyzes project impacts during the peak summer conditions. Several issues are considered, and one is a focus on congestion (LOS). As a general note, congestion addresses traveler convenience; how long should a motorist sit in their automobile when traveling from one point to another. When traffic volumes are large relative to roadway’s capacity, congestion occurs, slowing traffic and requiring greater travel time.

For this Draft EIR, the analysis is based on the summer condition, represented by peak a.m./p.m. weekday and peak weekend conditions, which was supported by Caltrans and Mariposa County (Appendix B [scoping comments] and Appendix E [Traffic Impact Study]) as being representative of the peak conditions resulting from various recreational activities, travelers to Yosemite National Park, and overnight visitor travel to seasonal residences or other local lodging. The winter condition is not utilized in this EIR because traffic volumes through Fish Camp in the winter are consistently lower than the traffic volumes that occur during the summer months.

Project Trip Generation
To assess the impacts that the project may have on the Highway 41 segments and intersections, the first step was to determine project trip generation. Cabin and clubhouse trips were determined using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition) and the existing a.m. peak and p.m. peak traffic counts taken June 9, 2015. Because weekend tourism traffic, particularly to Yosemite National Park, can reduce LOS on Highway 41, the weekend peak hour (Saturday) was also evaluated based on Caltrans’ 2013 Saturday/Sunday traffic volume data and applying the same ITE trip generation rates. The ITE land use code “330” is for “Resort Hotel Land Use,” which is the most fitting ITE Category for the proposed Tenaya Cabins Project, as it captures trips generated by not only the cabins, but also the trips generated by the clubhouse. In addition, trips associated with a future single-family residence were evaluated, utilizing ITE land use code 210 for a single-family residential land use. The project’s estimated daily, a.m. peak hour, p.m. peak hour, and Saturday peak hour trips are shown in Table 4.6-6.
### Table 4.6-6 \ Tenaya Cabins Project Trip Generation

<table>
<thead>
<tr>
<th>Units</th>
<th>Trip Rate Source</th>
<th>Daily Trip Ends</th>
<th>a.m. Peak Hour</th>
<th>p.m. Peak Hour</th>
<th>Saturday Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Rate</td>
<td>Volume</td>
<td>In:Out</td>
<td>Volume</td>
</tr>
<tr>
<td>54 cabins and clubhouse</td>
<td>ITE (330)</td>
<td>8.17</td>
<td>441</td>
<td>0.31</td>
<td>72:28</td>
</tr>
<tr>
<td>1 single-family residence</td>
<td>ITE (210)</td>
<td>9.52</td>
<td>10</td>
<td>0.75</td>
<td>25:75</td>
</tr>
<tr>
<td>Total Project Trips</td>
<td></td>
<td>451</td>
<td></td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Trip ends are on-way traffic movements, entering or leaving. The numbers in parenthesis are ITE land use codes.

1 The Resort Hotel Land Use is the most fitting ITE Category for the proposed Tenaya Cabins Project. Daily rate comes from ITE Code 310.


### Project Trip Distribution

The project-related trips were distributed to Highway 41 based on trip distribution data obtained for the Tenaya Lodge Main Entrance road, located approximately 1,000 feet south of the proposed project entry, which is similar in nature to the proposed project (resort commercial lodging). Project-related trips (Table 4.6-7) were distributed to Highway 41 using the trip distribution percentages shown in Exhibit 4.6-5. In the a.m. peak hour, the majority of inbound trips (96 percent) would be coming from Highway 41 northbound and turning right into the project site, while outbound trips from the site (70 percent) would be making a right-turn movement onto Highway 41 northbound towards Yosemite. In the p.m. peak hour, the majority of inbound trips (65 percent) would be returning to the project site from Yosemite, coming southbound and turning left off of Highway 41 into the project site, while the majority of outbound trips (85 percent) would be turning left from the project site onto Highway 41 south toward Oakhurst. A graphical representation of the resulting weekday a.m. and p.m. peak hour project trip distribution is shown in Exhibit 4.6-6 and the resulting weekend peak hour project trip distribution is shown in Exhibit 4.6-7.

### Table 4.6-7 \ Intersection Operations

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>Caltrans Concept LOS</th>
<th>Peak Hour</th>
<th>Existing Plus Project</th>
<th>Near-Term (Year 2016) No Project</th>
<th>Near Term (Year 2016) Plus Project</th>
<th>Cumulative Year 2040 No Project</th>
<th>Cumulative Year 2040 Plus Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Near Term (Year 2016) Plus Project</td>
<td>Cumulative Year 2040 No Project</td>
<td>Cumulative Year 2040 Plus Project</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td>Highway 41 / Summit Camp Road</td>
<td>One-way Stop Sign</td>
<td>D</td>
<td>a.m.</td>
<td>9.4</td>
<td>A</td>
<td>9.6</td>
<td>A</td>
<td>9.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.4</td>
<td>A</td>
<td>9.6</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p.m.</td>
<td>10.4</td>
<td>B</td>
<td>10.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Weekend</td>
<td>10.6</td>
<td>B</td>
<td>10.7</td>
</tr>
<tr>
<td>Highway 41 / Project Entry</td>
<td>One-way Stop Sign</td>
<td>D</td>
<td>a.m.</td>
<td>10.0</td>
<td>A</td>
<td>10.2</td>
<td>B</td>
<td>10.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.0</td>
<td>A</td>
<td>10.2</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p.m.</td>
<td>11.2</td>
<td>B</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Weekend</td>
<td>16.0</td>
<td>C</td>
<td>19.2</td>
</tr>
</tbody>
</table>

Notes: Delay is measured in seconds. LOS = Level of Service (Bold denotes LOS standard has been exceeded)

For one-way and two-way stop controlled intersections, delay results show the delay for the worst movement.
Exhibit 4.6-6

Project a.m./p.m. Peak Hour Trips
Existing Plus Project Traffic Conditions

To obtain the existing plus project conditions, the project-related trips, distributed to the local roadways as described above, were added to existing traffic conditions. The resulting existing plus project traffic conditions are shown in Exhibit 4.6-8 (weekday a.m./p.m. peak hour conditions) and Exhibit 4.6-9 (weekend peak hour conditions). The weekend peak would increase the traffic volume from 344 to 350 northbound trips and 360 to 379 southbound trips between the project entry and Fish Camp Lane, and from 344 to 354 northbound trips and 360 to 392 southbound trips between Jackson Road and the project entry. As shown in Table 4.6-7, under the existing plus project conditions, both the Highway 41 / Summit Camp Road intersection and the Highway 41 / project entry intersection would operate at acceptable levels of service during the a.m. peak hour (LOS A), the p.m. peak hour (LOS B), and the weekend peak (LOS B for Highway 41 / Summit Camp Road, LOS C for Highway 41 / project entry intersection). In addition, as shown in Table 4.6-8, both northbound and southbound traffic on the segments of Highway 41 from Jackson Road to the project entry, and from the project entry to Fish Camp Lane, would operate at acceptable levels of service (LOS C) under existing plus project conditions.

<table>
<thead>
<tr>
<th>Segment of Highway 41</th>
<th>Segment Description</th>
<th>Direction</th>
<th>Target LOS</th>
<th>Peak Hour</th>
<th>Existing Plus Project</th>
<th>Near-Term (Year 2016) No Project</th>
<th>Near-Term (Year 2016) Plus Project</th>
<th>Cumulative Year 2040 No Project</th>
<th>Cumulative Year 2040 Plus Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackson Road to Project Entry</td>
<td>1 lane</td>
<td>Northbound</td>
<td>D</td>
<td>a.m.</td>
<td>203</td>
<td>C</td>
<td>216</td>
<td>C</td>
<td>227</td>
</tr>
<tr>
<td></td>
<td>1 lane</td>
<td>Southbound</td>
<td></td>
<td>p.m.</td>
<td>113</td>
<td>C</td>
<td>140</td>
<td>C</td>
<td>144</td>
</tr>
<tr>
<td></td>
<td>1 lane</td>
<td>Northbound</td>
<td>D</td>
<td>Weekend Peak Hour</td>
<td>354</td>
<td>C</td>
<td>414</td>
<td>C</td>
<td>424</td>
</tr>
<tr>
<td></td>
<td>1 lane</td>
<td>Southbound</td>
<td></td>
<td>Weekend Peak Hour</td>
<td>392</td>
<td>C</td>
<td>446</td>
<td>C</td>
<td>478</td>
</tr>
<tr>
<td>Project Entry to Fish Camp Lane</td>
<td>1 lane</td>
<td>Northbound</td>
<td>D</td>
<td>a.m.</td>
<td>195</td>
<td>C</td>
<td>215</td>
<td>C</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>1 lane</td>
<td>Southbound</td>
<td></td>
<td>p.m.</td>
<td>109</td>
<td>C</td>
<td>138</td>
<td>C</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>1 lane</td>
<td>Northbound</td>
<td>D</td>
<td>Weekend Peak Hour</td>
<td>350</td>
<td>C</td>
<td>414</td>
<td>C</td>
<td>420</td>
</tr>
<tr>
<td></td>
<td>1 lane</td>
<td>Southbound</td>
<td></td>
<td>Weekend Peak Hour</td>
<td>379</td>
<td>C</td>
<td>446</td>
<td>C</td>
<td>465</td>
</tr>
</tbody>
</table>

LOS = Level of Service (Bold denotes LOS standard has been exceeded)

Approved/Pending Project Traffic

The approved SilverTip Village Resort is planned to be located at Highway 41 and Fish Camp Lane. It is anticipated that this development will add new trips to the same intersections and roadway segments as the Tenaya Cabins Project. Trip generation and distribution information for the approved SilverTip Village Resort development was based on the approved project description and prevailing traffic patterns in the study area. The estimated daily and a.m., p.m., and weekend (Saturday) peak hour trips for the SilverTip Village Resort are shown in Table 4.6-9. Exhibit 4.6-10 and Exhibit 4.6-11 show the a.m., p.m., and weekend peak hour trips for approved and pending project traffic. Although there are other ongoing activities in the surrounding Sierra National Forest, there are no other approved or proposed cumulative projects in the study area that are expected add traffic to the project study area.
Exhibit 4.6-8  Existing Plus Project a.m./p.m. Peak Hour Conditions
Exhibit 4.6-9
Existing Plus Project Weekend Peak Hour Conditions

Source: VRPA Technologies, Inc. 2016
Exhibit 4.6-10 Approved/Pending Project a.m./p.m. Peak Hour Conditions
Exhibit 4.6-11
Approved/Pending Project Weekend Peak Hour Trips
Table 4.6-9  

<table>
<thead>
<tr>
<th>Units</th>
<th>SilverTip Village Resort Trip Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Daily Trip Ends</td>
</tr>
<tr>
<td></td>
<td>Rate</td>
</tr>
<tr>
<td>30 cabins</td>
<td>ITE</td>
</tr>
<tr>
<td>137 guest rooms</td>
<td>ITE</td>
</tr>
<tr>
<td>14,000 sq ft commercial</td>
<td>ITE</td>
</tr>
<tr>
<td>Total Project Trips</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Trip ends are on-way traffic movements, entering or leaving. The numbers in parenthesis are ITE land use codes.

1 The Resort Hotel Land Use is the most fitting ITE Category for the proposed Tenaya Cabins Project. Daily rate comes from ITE Code 310.

2 Daily Rate comes from ITE Code 310.


Near-Term (Year 2016) No Project Traffic Conditions

Traffic conditions without the Tenaya Cabins Project in the year 2016 were estimated by interpolating between the existing traffic volumes and the cumulative year 2040 no project traffic volumes developed for this analysis. (The methodology used for determining the Cumulative Year 2040 volumes is described below.) The resulting a.m./p.m. peak hour traffic volumes under near-term no-project conditions are shown in Exhibit 4.6-12. The resulting weekend peak hour traffic volumes under near-term no-project conditions are shown in Exhibit 4.6-13. As shown in Table 4.6-7, under the near-term conditions without the proposed project, the Highway 41 / Summit Camp Road intersection would operate at acceptable levels of service during the a.m. peak hour (LOS A), p.m. peak hour (LOS B), and weekend peak hour (LOS B). No near-term condition is shown for the project entry intersection, as it is a gated dirt road that does not currently provide any public access. In addition, as shown in Table 4.6-8, both northbound and southbound traffic on the segments of Highway 41 from Jackson Road to the project entry, and from the project entry to Fish Camp Lane, would operate at acceptable levels of service (LOS C) under near-term conditions.

Near-Term (Year 2016) Plus Project Traffic Conditions

The project-related trips were added to the near-term year 2016 no project traffic volumes to obtain the year 2016 plus project conditions. The resulting near-term traffic plus project a.m./p.m. peak hour traffic volumes are shown in Exhibit 4.6-14 and the near-term plus project weekend peak hour traffic volumes are shown in Exhibit 4.6-15. As shown in Table 4.6-7, under the year 2016 plus project conditions, both the Highway 41 / Summit Camp Road intersection and the Highway 41 / project entry intersection would operate at acceptable levels of service during the a.m. peak hour (LOS B), p.m. peak hour (LOS B), and weekend peak hour (LOS B for Highway 41 / Summit Camp Road and LOS C for Highway 41 / project entry intersection). In addition, as shown in Table 4.6-8, both northbound and southbound traffic on the segments of Highway 41 from Jackson Road to the project entry, and from the project entry to Fish Camp Lane, would operate at acceptable levels of service (LOS C) under near-term plus project conditions.
Exhibit 4.6-14 Near-Term Year 2016 Plus Project a.m./p.m. Peak Hour Conditions
Exhibit 4.6-15  Near-Term Year 2016 Plus Project Weekend Peak Hour Conditions
Cumulative Year 2040 No Project Traffic Conditions

The levels of traffic expected approximately twenty five years (25) after the approximate time of opening of the project would be directly related to the traffic growth in the study area, including the approved SilverTip Village Resort Development, described above.

To determine the cumulative year 2040 no project traffic conditions, the traffic growth rate utilized in the Mariposa County 2012 RTP was used to obtain the background growth. Based on the traffic volumes on Highway 41 through Fish Camp for the year 2011 (1,650 ADT) and the year 2035 (1,850 ADT), the traffic growth from 2011 to 2035 is estimated to be 0.5 percent per year. The process for determining future year volumes from this methodology can be summarized as follows:

- A growth rate of 0.5 percent per year was applied to existing segment counts (derived from a.m. and p.m. peak hour turning movement counts) gathered for the study area. Existing a.m. and p.m. peak hour turning movements and the roadway segment traffic forecasts (from the application of the 0.5 percent per year growth rate) were input in the TurnsW32 (Traffic Impact Study) program, which calculated the a.m. and p.m. peak hour turning movements.

- Trips generated from the SilverTip Village Resort Development were added to the results to generate Cumulative Year 2040 (No Project) a.m. and p.m. peak hour turning movement volumes.

- The Cumulative Year 2040 (No Project) volumes were evaluated for consistency with the study area and were manually adjusted as necessary.

The cumulative 2040 no project traffic conditions resulting from this scenario for the weekday a.m./p.m. peak hour are shown in Exhibit 4.6-16. The cumulative 2040 no project weekend peak hour traffic volumes are shown in Exhibit 4.6-17. As shown in Table 4.6-7, under the cumulative 2040 no project traffic conditions, the Highway 41/Summit Camp Road intersection would operate at acceptable levels of service during the a.m. peak hour (LOS A), p.m. peak hour (LOS B), and weekend peak hour (LOS B). In addition, as shown in Table 4.6-8, both northbound and southbound traffic on the segments of Highway 41 from Jackson Road to the project entry, and from the project entry to Fish Camp Lane, would operate at acceptable levels of service (LOS C) under Cumulative 2040 No Project traffic conditions.

Cumulative Year 2040 Plus Project Traffic Conditions

The addition of project trips, distributed to the roadway system using the trip distribution percentages shown in Exhibit 4.6-5, were added to cumulative year 2040 no project traffic volumes. The cumulative year 2040 plus project a.m./p.m. peak hour volumes are shown in Exhibit 4.6-18 and the cumulative plus weekend peak hour volumes are shown in Exhibit 4.6-19. As shown in Table 4.6-7, under the year cumulative 2040 plus project traffic conditions, both the Highway 41 / Summit Camp Road intersection and the Highway 41 / project entry intersection would operate at acceptable levels of service during the a.m. peak hour (LOS A for Highway 41 / Summit Camp Road and LOS B for Highway 41 / project entry intersection), the p.m. peak hour (LOS B for both), and the weekend peak (LOS B for Highway 41 / Summit Camp Road and LOS C for Highway 41 / project entry intersection). In addition, as shown in Table 4.6-8, both northbound and southbound traffic on the segments of Highway 41 from Jackson Road to the project entry, and from the project entry to Fish Camp Lane, would operate at acceptable levels of service (LOS C) under cumulative 2040 plus project conditions.
Exhibit 4.6-16  Cumulative Year 2040 No Project a.m./p.m. Peak Hour Conditions
Exhibit 4.6-17  Cumulative Year 2040 No Project Weekend Peak Hour Conditions
Exhibit 4.6-18  Cumulative Year 2040 Plus Project a.m./p.m. Peak Hour Conditions
ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Parking
Effects associated with parking are not considered a significant criterion under CEQA. As described in Chapter 3, “Project Description,” the proposed site plan provides 1.5 parking stalls for each cabin plus seven additional parking stalls to account for retail, office, and associated parking in accordance with the Fish Camp TPA Specific Plan, which results in 88 parking stalls. Per the California Accessible Code (2013 California Building Code Chapter 11B), seven cabins would be designed to conform to the requirements of the Americans with Disabilities Act (ADA) Standards for Accessible Design. Therefore, these seven cabins would have an ADA-compliant parking space. There would also be an ADA-compliant parking stall at the clubhouse for registration. Parking would be clustered, as shown on the circulation plan (Exhibit 3-9), to maintain visual separation between parked vehicles and the cabins. Based on parking ratios in the Fish Camp TPA Specific Plan, 0.333 parking stalls are required per employee, resulting in 6 parking stalls needed for the 18 new Tenaya Cabins employees. Sufficient employee parking would be provided through four parking stalls for employees at the Tenaya Cabins and an additional five parking stalls available at the Tenaya Lodge (359 available stalls with 354 of those stalls required for the Lodge).

No bicycle parking is required, as the proposed land use is resort commercial, and no bicycle racks are proposed for the project. The current Tenaya Lodge and Cottages do not provide bicycle parking other than the racks utilized for the onsite bike rentals. Guests that bring their bicycles tend to store them in their rooms or with their vehicles. Otherwise the existing Lodge has not had employees cycling to work nor guests cycling to the Lodge.

Air Traffic
The nearest airport to the project site is the Mariposa-Yosemite Airport, located approximately 22 miles to the west. The Tenaya Cabins Project does not involve any potential activities that would affect air traffic patterns, either directly or indirectly. Therefore, the project would have no impact on air traffic patterns and this topic is not addressed further in this EIR.

Transit
The Tenaya Cabins Project would utilize the existing YARTS stop at the Tenaya Lodge (YARTS 2016a and b). Delaware North would provide shuttle service from the Tenaya Cabins to the Lodge for both employees and visitors to connect to the YARTS bus service along the Highway 41 corridor, which provides service to/from Yosemite National Park and Oakhurst. The project would support use of the existing YARTS system and would not alter its service. As it does for other employees at the Tenaya Lodge and Cottages, DN would offer an incentive mileage program for anyone living over 50 miles from the project site, YARTS monthly passes, and would encourage and coordinate carpooling among employees. The project would have no impact on transit services and this topic is not addressed further in this EIR.

Pedestrian/Bicycle
A pedestrian path connecting the Tenaya Cabins to the Lodge would be constructed as shown on the site plans (Exhibits 3-4 and 3-9). The boardwalk, located at the southwest corner of the project site, would follow an existing dirt road and would be approximately 185-feet long, approximately 12-feet wide, and would be constructed of wood or composites, connecting to the existing roadway leading to the Tenaya Lodge. The boardwalk would be raised off the ground, placed on 5-foot footings (to be verified by geotechnical borings and design). The pedestrian path and boardwalk would be maintained for year-round access between the two sites. Furthermore, the path would be constructed in compliance with Americans with Disabilities Act (ADA) requirements. The site plan also maintains a Caltrans easement of 100-feet, including an 80-foot right of way and 10-feet on either side of Highway 41, allowing for sufficient space for a Class III bicycle route with a multiuse shoulder on Highway 41, as called for in the Mariposa County BPOTP. Therefore, the project would not interfere with existing or planned bicycle or pedestrian facilities, nor would it result in unsafe conditions for bicyclists or pedestrians. Furthermore, the project would not create an inconsistency with adopted policies related to bicycle or pedestrian systems. Therefore, the project would have no impact on bicycle and pedestrian facilities and this issue is not discussed further.
IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.6-1: Construction-related traffic impacts

Project construction would generate temporary employee and truck trips, which would use Highway 41 and could result in increased congestion. However, the project would include a traffic control plan that would be implemented during construction operations. Additionally, the traffic generated during project construction is anticipated to be less than the traffic generated by project day-to-day operations which was determined to be a less-than-significant impact. Thus, the construction-related traffic impacts would be a less-than-significant impact.

Tenaya Cabins Project construction is estimated to begin in 2017 and to be completed by 2018. The cabins and clubhouse are estimated to be fully operational by January 2018. Construction would be phased as follows: site preparation (5 days), grading (5 days), building construction (100 days), paving (5 days), and architectural coating (5 days).

A summary of the estimated construction-related trips is shown in Table 4.6-10. The total number of offsite construction trips would not necessarily occur on the same day, since construction activities would vary daily. One hundred and eight (108) hauling trips were added to the building construction phase to represent the amount of trips needed to transport the 54 pre-fabricated cabins. In addition, forty (40) haul trips were added to represent trips needed to import materials (drain rock and pipes) for the leach field expansion. Construction staging would occur on the project site and it is assumed that soil (cuts and fills) would be balanced onsite.

<table>
<thead>
<tr>
<th>Table 4.6-10</th>
<th>Estimated Construction Offsite Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Construction Trips per Day</td>
</tr>
<tr>
<td></td>
<td>Worker</td>
</tr>
<tr>
<td>Site Preparation</td>
<td>8</td>
</tr>
<tr>
<td>Grading</td>
<td>8</td>
</tr>
<tr>
<td>Building Construction (including utilities)</td>
<td>12</td>
</tr>
<tr>
<td>Paving</td>
<td>13</td>
</tr>
<tr>
<td>Architectural Coating</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: FirstCarbon Solutions 2015 – Appendix E

During the peak building construction phase, there could be up to approximately 20 trips on a peak day (the 162 haul trips would be spread out over the approximately 100 day building construction phase). It is assumed that all construction employees would arrive during the a.m. peak hour, between 6:30 a.m. and 7:30 a.m. and that 75 percent of construction employees would depart during the p.m. peak hour, between 3:00 p.m. and 4:00 p.m.

The temporary worker, vendor, and truck trips associated with construction of the Tenaya Cabins Project could result in increased congestion on Highway 41. Furthermore, construction of the project entry and improvements to Highway 41 at the project entry (see Exhibit 3-9) could also result in temporary lane closures and increased congestion. However, in accordance with County and Caltrans requirements, the construction phase of the project would include a traffic control plan that would be implemented during construction. Additionally, the traffic generated by the project’s construction phase is anticipated to be less than the traffic generated by project day-to-day operations, which would be less than significant (see Impact 4.6-2, below). Therefore, construction traffic would not create significant level of service impacts to the study area. Project construction would result in a less-than-significant traffic impact.
Mitigation Measures
No mitigation is required.

Impact 4.6-2: Operational impacts to intersections

The proposed project would result in operations of LOS C or better at the Highway 41 / Summit Camp Road and Highway 41 / project entry intersections. Therefore, LOS at these intersections would not exceed the significance criteria of LOS D. In addition, no queuing would occur under existing plus project conditions. Thus, this is a less-than-significant impact.

As shown in Table 4.6-7, under the existing plus project conditions, both the Highway 41 / Summit Camp Road intersection and the Highway 41 / project entry intersection would operate at acceptable levels of service during the weekday a.m., p.m., and weekend peak hours. In addition to the operational LOS analysis performed for study intersections, a queuing analysis was completed using the same methodology detailed above in the Existing Queuing sub-section. As shown in Table 4.6-11, under existing plus project conditions there is no queuing in the a.m., p.m., or weekend peak hours for the northbound left turn movement from Highway 41 to Summit Camp Road.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Existing Plus Project</th>
<th>Near-Term (Year 2016) No Project</th>
<th>Near Term (year 2016) Plus Project</th>
<th>Cumulative Year 2040 No Project</th>
<th>Cumulative Year 2040 Plus Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a.m. Queue</td>
<td>p.m. Queue</td>
<td>Weekend Queue</td>
<td>a.m. Queue</td>
<td>p.m. Queue</td>
</tr>
<tr>
<td>Highway 41/Summit Camp Road</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Therefore, based on the significance criteria and the existing plus project operational conditions, all study intersections would continue to operate at an acceptable level of service. Thus, this would result in a less-than-significant impact.

Mitigation Measures
No mitigation is required.

Impact 4.6-3: Operational impacts to roadway segments

The proposed project would result in operations remaining at LOS C along Highway 41 between Jackson Road and the project entry, and from the project entry to Fish Camp Lane. Therefore, LOS along these roadway segments would not exceed the significance criteria of LOS D. Thus, would result in a less-than-significant impact.

As shown in Table 4.6-8, under the existing plus project conditions, both northbound and southbound traffic on the segments of Highway 41 from Jackson Road to the project entry, and from the project entry to Fish Camp Lane, would operate at acceptable levels of service (LOS C) during the weekday a.m., p.m., and weekend peak hours. Therefore, based on the significance criteria and the existing plus project operational conditions, all study roadway segments would continue to operate at an acceptable level of service. Thus, this would result in a less-than-significant impact.

Mitigation Measures
No mitigation is required.
**Impact 4.6-4: Safety-related impacts**

The Highway 41 and project entry intersection is located in a section of the highway with S-curves and limited site distance, and locating the project entrance off of Highway 41 could result in a hazard due to a design feature. However, in consultation with Caltrans, the proposed intersection design would conform to Caltrans’ *Highway Design Manual* and the American Association of State Highway and Transportation Officials’ (AASHTO) *A Policy on Geometric Design of Highways and Streets* (2001) standards. Construction of the project entry driveway in accordance with applicable design standards for adequate lines of sight would ensure the entrance to the project would not substantially increase hazards due to a design feature. Thus, this impact would be less than significant.

Because the Tenaya Cabins Project ingress/egress is directly to/from Highway 41, a state encroachment permit would be necessary and the project must meet the state construction requirements and standards. In addition, a turning lane on Highway 41 at the project entry would be required because the entry intersects at a point of restricted sight distance that requires a reduction in the normal driving speed on the highway to maintain present traffic safety. Therefore, in coordination with Caltrans, the site entry has been configured to meet Caltrans requirements for acceleration and deceleration distances, sight distance, and turning lane requirements, as follows (Exhibit 3-10):

- Highway 41 12-foot travel lane north;
- Highway 41 8-foot shoulder along the north-bound lane from the project entrance to the north end of the project site near the emergency access road entrance;
- Highway 41 12-foot travel lane with 4-foot shoulder south;
- Highway 41 12-foot left turn lane (south), with 275-foot deceleration lane (including the bay taper length);
- Highway 41 Caltrans Easement of 100-feet, including the 80-foot right-of-way and 10-feet on either side;
- Signage to meet Caltrans requirements (onsite stop sign);
- Highway 41 sight distance from north approximately 300 feet; and
- Highway 41 sight distance from south approximately 360 feet.

Chapter 400 of Caltrans’ *Highway Design Manual* (2015) provides design criteria for at grade intersections along state highway facilities. The *Highway Design Manual* along with the AASHTO *A Policy on Geometric Design of Highways and Streets* (2001) should be used for the design of the project driveway, which driveway, which will take place during the design phase of the project. Section 405 of the *Highway Design Manual* provides corner sight distance requirements for various design speeds. The roadway design speed in the vicinity of the proposed location of the project driveway is 35 miles per hour (mph). Therefore, the corner site distance standard for the Cabins at Tenaya Lodge driveway is 385 feet. A preliminary review of the anticipated driveway location indicates that the sight distance from the north is approximately 300 feet and approximately 360 feet from the south. Given that SR 41 is a winding roadway in the study area of the project, achieving a corner sight distance of 385 feet is problematic given the existing terrain. Where restrictive conditions exist, the *Highway Design Manual* indicates that the minimum value for corner sight distance at unsignalized intersections shall be equal to the stopping sight distance given in Chapter 200. Section 201 of the *Highway Design Manual* indicates that the site distance requirement for the proposed project driveway is 250 feet. As stated previously, the sight distance from the north is approximately 300 feet and approximately 360 feet from the south. As a result, it is anticipated that the proposed location of the project driveway would meet sight distance requirements as recommended in Caltrans’ *Highway Design Manual*. Thus, this impact is less than significant.
Mitigation Measures

No mitigation is required.

Impact 4.6-5: Emergency access

Year-round emergency access would be provided through two onsite access points to the project site, which have been designed in compliance with emergency access requirements and in coordination with the County and Fire Protection District. Thus, this impact would be less than significant.

Year-round emergency access would be provided to both Parcel 1 and Parcel 2 through the construction of the onsite access roads (see Exhibits 3-9 and 3-10). The circulation plan includes two points of access to the project site: one from the project entry and a second emergency access road at northern end of the site near Rainbow Lake. The emergency access road would be paved with asphalt, 20-feet wide, gated, and maintained year-round. The turning radius of the onsite roads is shown on Exhibit 3-9. The emergency access points have been designed in compliance with emergency access requirements and Mariposa County’s Road Policies, and in coordination with Mariposa County Fire and CAL FIRE. Thus, this impact would be less than significant.

Mitigation Measures

No mitigation is required.
4.7 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential air quality impacts caused by the project. The methods of analysis for construction, regional (operational), local mobile-source, and toxic air emissions are consistent with the recommendations of the Mariposa County Air Pollution Control District (MCAPCD), the California Air Resources Board (ARB), and the U.S. Environmental Protection Agency (EPA). The emissions estimates in this section were reported in the Air Quality and Greenhouse Gas Analysis Report: Tenaya Lodge Explorer Cabins, prepared for Blair, Church, and Flynn Consulting Engineers by FirstCarbon Solutions, found in Appendix F of this Draft EIR.

4.7.1 Regulatory Background

The project site is located in the Mountain Counties Air Basin (MCAB). Air quality at the project site is regulated by EPA, ARB, and MCAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, state and local regulations may be more stringent.

FEDERAL

EPA has been charged with implementing national air quality programs. EPA air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments to the CAA were made by Congress in 1990.

Criteria Air Pollutants

The CAA required EPA to establish national ambient air quality standards (NAAQS). As shown in Table 4.7-3, EPA has established primary and secondary NAAQS for the following criteria air pollutants (CAPs): ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable and fine particulate matter (PM₁₀ and PM₂.₅), and lead. The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation would achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Hazardous Air Pollutants

EPA and ARB regulate hazardous air pollutants (HAPs) and toxic air contaminants (TACs), respectively, through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for TACs to limit emissions. These, in conjunction with additional rules set forth by MCAPCD, described further below, establish the regulatory framework for TACs.

EPA has programs for identifying and regulating HAPs. Title III of the CAA directed EPA to promulgate national emissions standards for HAPs (NESHAP). The national emissions standards for HAPs may differ for major sources and for area sources of HAPs. Major sources are defined as stationary sources with potential to emit more than 10 tons per year (TPY) of any HAP or more than 25 TPY of any combination of HAPs; all other...
sources are considered area sources. The emissions standards are to be promulgated in two ways. First, EPA has technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum available control technology for toxics. For area sources, the standards may be different, based on generally available control technology. Second, EPA also has health risk–based emissions standards, where deemed necessary, to address risks remaining after implementation of the technology-based NESHAP standards.

The CAA also required EPA to issue vehicle or fuel standards containing reasonable requirements that control toxic emissions of, at a minimum, benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, the CAA required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

STATE
ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). California law authorizes ARB to set ambient (outdoor) air pollution standards (California Health and Safety Code Section 39606) in consideration of public health, safety, and welfare (California Ambient Air Quality Standards [CAAQS] [Table 4.7–3]).

Criteria Air Pollutants
ARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned CAPs. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest date practical. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

Among ARB’s other responsibilities are overseeing local air district compliance with federal and state laws, approving local air quality plans, submitting SIPs to EPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

Toxic Air Contaminants
TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for ARB to designate substances as TACs. Research, public participation, and scientific peer review are required before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs, including diesel particulate matter (diesel PM), and adopted EPA’s list of HAPs as TACs.

Once a TAC is identified, ARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Recent milestones included the low-sulfur diesel fuel requirement and tighter emissions
standards for heavy-duty diesel trucks (effective in 2007 and subsequent model years) and off-road diesel equipment (2011). Over time, replacing older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) in California have been reduced substantially over the last decade; such emissions will be reduced further through a progression of regulatory measures (e.g., low emission vehicle/clean fuels and Phase II reformulated-gasoline regulations) and control technologies.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

**LOCAL**

**Criteria Air Pollutants**

**Mariposa County Air Pollution Control District**

The MCAPCD rules and regulations that may apply to buildout of the project include but are not limited to the following:

- **Rule 2201 - Nuisance** – A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons, or to the public, or which endanger the comfort, repose, health or safety of any such persons, or the public, or which cause to have a natural tendency to cause injury or damage to business or property.

- **Rule 207 – Particulate Matter** – A person shall not release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants only, particulate matter emissions in excess of 0.1 grain per cubic foot of dry exhaust gas at standard conditions.

- **Rule 424 – Authority to Construct Decision** – The County Air Pollution Control Officer may exempt from public notice and comment any source with the potential to emit less than 100 tons per year of each criteria air pollutant or precursor.

**Air Quality Plans**

The CCAA requires that all local air districts in the State endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources. Although the project is in a nonattainment area for ozone for the CAAQS, there is currently no attainment plan established by MCAPCD to meet the State standard.

**Mariposa County General Plan**

Mariposa County adopted its Updated General Plan in 2006, which had been periodically amended from 1981 through 2005. The County’s applicable air quality goals and policies from the Air Quality Element and Circulation Element are listed below.

**Mariposa County Air Quality Goals and Policies**

**Conservation and Open Space Element**

**Goal 1:** Conserve the natural and scenic resources, and open space lands to protect and enhance the County’s quality of life and character ensuring a viable economy.

- **Policy 11.1c:** Implement standards that minimize impacts on and/or improve air quality.
Measure 11-1c(1): The County will implement Federal and State air quality regulations.

Measure 11-1c(2): Establish land use patterns that minimize impacts to air quality.

Measure 11-1c(3): Implement a program that minimizes impacts on and/or improves air quality that may include but are not limited to:

- Encourage maximized solar access where feasible and consistent with the maintenance of scenic values, in new subdivision designs to optimize energy efficiency; and
- Road improvement projects such as paving unpaved roads which improve air quality.

Measure 11-1c(4): The County shall cooperate with the Air Pollution Control District (APCD), or successor agency, to:

- Review development proposals to address cumulative and long-term air quality impacts.
- Work with local public utility providers and the private sector to encourage the development and implementation of educational and incentive programs to encourage energy conservation, house weatherization, and solar energy use;
- Work with the Mariposa County Department of Public Works and homeowner associations to encourage the development and implementation of educational and incentive programs for composting, mulching, grinding, cogeneration, feedstocks, and chipping in lieu of outdoor burning;
- Work with appropriate agencies to develop programs to maximize the participation of employers in employer-operated van pool and/or ride sharing for employees and mass transit service for both employers and customers/visitors; and
- Work with the school districts to replace existing buses with less polluting models.

4.7.2 Existing Environmental Setting

The project site is located in Mariposa County, California, which is within the MCAB. The MCAB includes Plumas, Sierra, Nevada, portions of Placer and El Dorado, Amador, Calaveras, Tuolumne, and Mariposa County. The ambient concentrations of air pollutants are determined by the amount of emissions released by the sources of air pollutants and the atmosphere’s ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

TOPOGRAPHY, METEOROLOGY, AND CLIMATE

Atmospheric conditions such as wind speed, wind direction and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The MCAB 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. The population of the entire MCAB is less than 500,000. Elevations range from over 10,000 feet at the Sierra crest down to several hundred feet above sea level in the lower foothills. Throughout the MCAB, 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 pattern of mountains and hills causes a wide variation in rainfall, temperature, and localized winds throughout the basin. Temperature variations have an important influence on MCAB wind flow, dispersion along mountain ridges, vertical mixing, and photochemistry. The Sierra Nevada receives large amounts of precipitation from storms moving in from the Pacific in the winter, with lighter amounts from intermittent “Monsoonal” moisture flows from the south and cumulus buildup 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 degrees Fahrenheit, but the western end of the county can routinely exceed 100 degrees Fahrenheit.

From an air quality perspective, the topography and meteorology of the MCAB combine such that local conditions predominate in determining the effect of emissions in the basin. Regional airflows are affected by the mountains and hills, which direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion. Inversion layers, where warm air overlays cooler air, frequently occur and trap pollutants close to the ground. In the winter, these conditions can lead to CO “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic compounds (ROG) and oxides of nitrogen (NO\textsubscript{X}) that results in the formation of ozone. Because of its long formation time, ozone is a regional pollutant rather than a local hotspot problem.

In the summer, the strong upwind valley air flowing into the basin from the Central Valley to the west is an effective transport medium for ozone precursors and ozone generated in the Bay Area and the Sacramento and San Joaquin Valleys. These transported pollutants predominate as the cause of ozone in the MCAB and are largely responsible for the exceedances of the state and federal ozone ambient air quality standards in the MCAB (Mariposa County 2015).

**CRITERIA AIR POLLUTANTS**

Observed concentrations of CAPs are used to indicate the quality of the ambient air. A brief description of key CAPs in the MCAB is provided below. Emission source types and health effects are summarized in Table 4.7-1. Monitoring data representative of air quality conditions at the project site is provided in Table 4.7-2.

<table>
<thead>
<tr>
<th>Table 4.7-1</th>
<th>Sources and Health Effects of Criteria Air Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pollutant</strong></td>
<td><strong>Sources</strong></td>
</tr>
<tr>
<td>Ozone</td>
<td>secondary pollutant resulting from reaction of ROG and NO\textsubscript{X} in presence of sunlight; ROG results from incomplete combustion and evaporation of chemical solvents and fuels; NO\textsubscript{X} results from the combustion of fuels</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>incomplete combustion of fuels; motor vehicle exhaust</td>
</tr>
<tr>
<td>Nitrogen dioxide (NO\textsubscript{2})</td>
<td>combustion devices; e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines</td>
</tr>
</tbody>
</table>
Table 4.7-1 Sources and Health Effects of Criteria Air Pollutants

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Sources</th>
<th>Acute Health Effects</th>
<th>Chronic Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur dioxide (SO₂)</td>
<td>coal and oil combustion, steel mills, refineries, and pulp and paper mills</td>
<td>irritation of upper respiratory tract, increased asthma symptoms</td>
<td>insufficient evidence linking SO₂ exposure to chronic health impacts</td>
</tr>
<tr>
<td>Respirable particulate matter (PM₁₀), Fine particulate matter (PM₂.₅)</td>
<td>fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO₂ and ROG</td>
<td>breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death</td>
<td>alterations to the immune system, carcinogenesis</td>
</tr>
<tr>
<td>Lead</td>
<td>metal processing</td>
<td>reproductive/developmental effects (fetuses and children)</td>
<td>numerous effects including neurological, endocrine, and cardiovascular effects</td>
</tr>
</tbody>
</table>

Notes: NOₓ = oxides of nitrogen; ROG = reactive organic gases; SO₂ = sulfur dioxide

1 Acute refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

2 Chronic refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

Sources: EPA 2014

Ozone

Ozone is a photochemical oxidant (a substance whose oxygen combines chemically with another substance in the presence of sunlight) and the primary component of smog. Ozone is not directly emitted into the air in large amounts, but is formed through complex chemical reactions between precursor emissions of ROG and NOₓ in the presence of sunlight (EPA 2014). ROG are volatile organic compounds (VOCs) that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents used primarily in coating and adhesive processes, as well as evaporation of fuels. NOₓ are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels. Emissions of the ozone precursors ROG and NOₓ have decreased in the state over the past two decades because of more stringent motor vehicle standards and cleaner burning fuels (ARB 2014: 3-4 and 4-46).

Nitrogen Dioxide

NO₂ is a brownish, highly reactive gas that is most present in urban environments. The major human-made sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO₂. The combined emissions of NO and NO₂ are referred to as NOₓ and are reported as equivalent NO₂. Because NO₂ is formed and depleted by reactions associated with photochemical smog (ozone), the NO₂ concentration in a particular geographical area may not be representative of the local sources of NOₓ emissions (EPA 2014).

Particulate Matter

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM₁₀. PM₁₀ consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by reaction of gaseous precursors (ARB 2014:1-13 and 3-6; EPA 2014). Fine particulate matter (PM₂.₅) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less. PM₁₀ emissions are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, construction and demolition, and particles from residential fuel combustion. Direct emissions of PM₁₀ have increased slightly over the last 20 years in the state, and are projected to continue to increase slightly through 2035 (ARB 2014:3-7). Ambient PM₂.₅ emissions have remained relatively steady over the last 20 years and are projected to decrease slightly through 2035 in the state (ARB 2014:3-6).
MONITORING STATION DATA AND ATTAINMENT AREA DESIGNATIONS

MCAPCD and ARB operate a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants within the district. Existing and probable future levels of air quality in Mariposa County can generally be inferred from ambient air quality measurements conducted by MCAPCD at its nearby monitoring stations. The Jerseydale Monitoring Station, located approximately 12 miles northwest of the project site, measures concentrations of ozone. The Yosemite Village Visitor center, located about 10 miles north of the project site, measures concentrations of PM$_{2.5}$ and PM$_{10}$. No data was available for concentrations of CO, SO$_2$, and NO$_2$. Table 4.7-2 shows a three-year summary of monitoring data for the main pollutants of concern, from the two stations located in the vicinity of the project area. The table also compares these measured concentrations of the pollutants (which differs from emissions, which are calculations of the amount of a pollutant being emitted over a specified time-period) with state and federal ambient air quality standards. The data shows that during the past few years, the project area has exceeded the state ozone and PM$_{10}$ standards and the federal ozone standards.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Averaging Time</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ozone</strong></td>
<td>1 Hour</td>
<td>Maximum 1 Hour (ppm)</td>
<td>0.084</td>
<td>0.091</td>
</tr>
<tr>
<td></td>
<td>Days &gt; State Standard (0.09 ppm)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>8 Hour</td>
<td>Maximum 8 Hour (ppm)</td>
<td>0.082</td>
<td>0.085</td>
</tr>
<tr>
<td></td>
<td>Days &gt; State Standard (0.07 ppm)</td>
<td>19</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Days &gt; National Standard (0.075 ppm)</td>
<td>5</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td><strong>Respirable particulate matter (PM$_{10}$)</strong></td>
<td>Annual</td>
<td>Annual Average (µg/m$^3$)</td>
<td>23.2</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td>24 hour</td>
<td>24 Hour (µg/m$^3$)</td>
<td>95.4</td>
<td>56.8</td>
</tr>
<tr>
<td></td>
<td>Days &gt; State Standard (50 µg/m$^3$)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Days &gt; National Standard (150 µg/m$^3$)</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Fine particulate matter (PM$_{2.5}$)</strong></td>
<td>Annual</td>
<td>Annual Average (µg/m$^3$)</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>24 Hour</td>
<td>24 Hour (µg/m$^3$)</td>
<td>179.5</td>
<td>58.9</td>
</tr>
<tr>
<td></td>
<td>Days &gt; National Standard (35 µg/m$^3$)</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

Notes: > = exceed; ppm = parts per million; µg/m$^3$ = micrograms per cubic meter; * = insufficient data; State Standard = California Ambient Air Quality Standard; National Standard = National Ambient Air Quality Standard

Both ARB and EPA use this type of monitoring data to designate areas according to their attainment status for CAPs. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are “nonattainment,” “attainment,” and “unclassified.” “Unclassified” is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation, called “nonattainment-transitional.” The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment. Attainment designations for Mariposa County are shown in Table 4.7-3 for each CAP.
TOXIC AIR CONTAMINANTS

Concentrations of TACs are also used to indicate the quality of ambient air. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in relatively minute quantities in the ambient air; however, their high toxicity and associated health effects may pose a threat to public health even at low concentrations.

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being exhaust emissions of

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1 Although a more recent version of the almanac was available in 2013, this 2009 version of the almanac is the latest version that contains TAC information.
particulate matter from diesel-fueled engines (diesel PM) (ARB 2010). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM. However, ARB has made preliminary concentration estimates based on a PM exposure method. This method uses the ARB emissions inventory’s PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs that pose the greatest level of risk in California include benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Sources of these TACs vary considerably and include (but are not limited to) consumer products, gasoline dispensing stations, auto repair and auto body coating shops, dry cleaning establishments, chrome plating and anodizing shops, welding operations, and other stationary sources.

Limited data on levels and health risks attributable to the top 10 TACs listed above is available from ARB as part of its California Almanac of Emissions and Air Quality - 2009 Edition. As shown therein for data collected at the 6440 Jerseydale monitoring station in Mariposa, cancer risks attributable to all of the listed TACs above with the exception of diesel PM have declined about 70 percent from the mid-1990s to 2007. Risks associated with diesel PM emissions are only provided for the year 2000 and have not been updated in the current version of the Almanac. However, ARB’s Diesel Risk Reduction Plan is expected to provide similar reductions in diesel PM during that same period (ARB 2009).

Existing sources of TACs in the project vicinity include diesel-fueled vehicles traveling on nearby State Route (Highway) 41, which borders the western side of the project site. Other sources of TACs include seasonal operation of diesel-powered agricultural equipment, such as harvesters, at adjacent vineyards and cropland.

**NATURALLY OCCURRING ASBESTOS**

Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Naturally occurring asbestos (NOA), which was identified as a TAC by ARB in 1986, is located in many parts of California and is commonly associated with serpentine soils and rocks. According to *A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos* (California Department of Conservation [DOC] 2000), the project site is not likely to contain NOA.

**ODORS**

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).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in
the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Existing odor sources in the project vicinity consist of the Tenaya Lodge wastewater treatment plant (WWTP), located southwest of the Lodge, seasonal odors related to smoke from wood burning and potential aromatic odors from commercial kitchen operations at the Tenaya Lodge. Other minor sources of odors include waste receptacles near the project site.

SENSITIVE LAND USES

Sensitive land uses are generally considered to include those uses where exposure to pollutants could result in health-related risks to individuals. Residential dwellings and places where people recreate or congregate for extended periods of time, such as schools and hospitals, are of primary concern because of the potential for increased and prolonged exposure of individuals to pollutants.

Existing residents and other sensitive land uses located within a quarter mile of the project site include: the White Chief Mountain Lodge, Bear Cub Den, Camp Green Meadows, Jack L. Boyd Outdoor School, Yosemite Forest Lodge, and Yosemite Lodging at Big Creek Inn Bed and Breakfast. The White Chief Mountain Lodge (Lodge) and a residence are the closest sensitive land uses to the project. Refer to Exhibit 4.7-1 for specific locations.

4.7.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA

Based on Appendix G of the CEQA Guidelines, the project would have a significant adverse effect related to air quality if it would:

- conflict with or obstruct implementation of the applicable air quality plan,
- violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable NAAQS or CAAQS (including releasing emissions which exceed quantitative thresholds for ozone precursors),
- expose sensitive receptors to substantial pollutant concentrations, or
- create objectionable odors affecting a substantial number or people.

As discussed in Section 4.7.1, “Regulatory Background,” MCAPCD Rule 424 contains the following operational threshold whereby a project may be denied approval by the County Air Pollution Control Officer:

- 100 TPY for CO, ROG, NOx, PM10, and PM2.5

MCAPCD Rule 424 is intended to apply to facilities known to produce large quantities of CAPs and ozone precursors; because the project is not a major producer of these emissions, for the purposes of this analysis, the San Joaquin Valley Air Pollution Control District’s (SJVAPCD) Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) for quantification of emissions and evaluation of potential impacts to air resources will be applied to the project. SJVAPCD has established the following project-level thresholds to define
substantial contribution for both operational and construction emissions. For the purposes of this project, the following thresholds of significance for construction and operational emissions of CAPs and precursors are used to determine if an air quality impact would be significant.

- 100 TPY for CO,
- 10 TPY for ROG and NO\textsubscript{x}, or
- 15 TPY for PM\textsubscript{10} and PM\textsubscript{2.5}.

MCAPCD has not adopted thresholds of significance for emissions of TACs; therefore, the SJVAPCD adopted threshold will be applied to the project. The following thresholds of significance from construction and/or operational sources of TAC emissions are used to determine if an air quality impact would be significant.

- Maximally Exposed Individual risk equals or exceeds 20 in one million for carcinogens, or
- Hazard Index equals or exceeds one for the Maximally Exposed Individual for acute and chronic exposure to non-carcinogens.

MCAPCD has not adopted screening criteria for CO concentrations at congested roadways; therefore, the following SJVACPD recommended screening criteria will be applied to the project to determine if a significant impact would occur.

- A traffic study for the project indicated that Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or LOS F, or
- A traffic study indicated that the project will substantially worsen an already existing LOS F on one or more streets or at more intersections in the project vicinity.

Additionally, ARB’s Air Quality and Land Use Handbook provides recommendations concerning placement of sensitive land uses. The following recommendations are used as general guidelines to assess operational TAC impacts:

- Sensitive land uses should be avoided within 500 feet of a rural road supporting 50,000 vehicles per day.

MCAPCD has not adopted screening levels for potential odor sources; therefore, the screening levels adopted by SJVAPCD will be applied to the project (Table 4.7-4). The following distances will be used to determine if an odor impact would be significant.

<table>
<thead>
<tr>
<th>Table 4.7-4</th>
<th>SJVAPCD Screening Levels for Potential Odor Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Treatment Facilities</td>
<td>2 miles</td>
</tr>
<tr>
<td>Sanitary Landfill</td>
<td>1 mile</td>
</tr>
<tr>
<td>Transfer Station</td>
<td>1 mile</td>
</tr>
<tr>
<td>Composting Facility</td>
<td>1 mile</td>
</tr>
<tr>
<td>Petroleum Refinery</td>
<td>2 miles</td>
</tr>
<tr>
<td>Asphalt Batch Plant</td>
<td>1 mile</td>
</tr>
<tr>
<td>Chemical Manufacturing</td>
<td>1 mile</td>
</tr>
<tr>
<td>Fiberglass Manufacturing</td>
<td>1 mile</td>
</tr>
<tr>
<td>Painting/Coating Operations (e.g., auto body shop)</td>
<td>1 mile</td>
</tr>
<tr>
<td>Food Processing Facility</td>
<td>1 mile</td>
</tr>
<tr>
<td>Feed Lot/Dairy</td>
<td>1 mile</td>
</tr>
<tr>
<td>Rendering Plant</td>
<td>1 mile</td>
</tr>
</tbody>
</table>

Sources: SJVAPCD 2002
METHODS AND ASSUMPTIONS

Construction
Short-term construction-related emissions of criteria air pollutants and ozone precursors were calculated using the California Emissions Estimator Model (CalEEMod) Version 2013.2.2 (South Coast Air Quality Management District [SCAQMD] 2013) and Sacramento Metropolitan Air Quality Management District’s (SMAQMD’s) Road Construction Emissions Model (RECM) Version 7.1.5.1. CalEEMod was used to calculate emissions from construction worker trips, site preparation, grading, and construction of utilities, buildings, recreational and open space areas, and parking. RECM was used to calculate emissions from construction of on-site roads. Modeling was based on project-specific information (e.g., schedule, building types, amounts of demolition, area to be graded, area to be paved), where available, and default values in CalEEMod and RECM that are based on the project’s location, land use type, or type of construction. The largest potential source construction workers is the community of Oakhurst, which is approximately 13.7 miles from the project site. Therefore, a 13.7 mile employee trip length was used for mobile-source emissions from construction worker trips. In addition, the CalEEMod default construction equipment fleet mix was used in the analysis. The analysis assumes that construction of the project would occur over a six month period from May to late October 2016. These dates provide a “worse-case” analysis scenario as emissions associated with construction equipment are expected to decrease in the future due to improvements in technology and more stringent regulatory requirements. See Appendix F for additional details related to methodology and assumptions used to estimate construction emissions.

Operations
Long-term operational emissions were also calculated using CalEEMod Version 2013.2.2 using project-specific data where available. Operational mobile-source emissions were modeled based on trip generation rates from the Institute of Transportation Engineers Manual, 9th Edition for hotel land uses and the CalEEMod default trip length for rural areas of 14.7 miles for employee trips, which encompasses the distance to the community of Oakhurst. Approximately eight trips per cabin per weekday and Saturday, and six trips per cabin per Sunday were assumed. The CalEEMod default fleet mix for Mariposa County was assumed to apply to the project. The CalEEMod default emission factor was also applied to architectural coating, consumer products, landscape equipment, electricity, and natural gas. The project would also include the operation of a back-up emergency generator with a 200 kilowatt capacity during power outages. It is been conservatively estimated that the generator would operate approximately 100 hours per year. The project would also include the operation of several fire pits throughout the project site; however, following the calculations of operational emissions using CalEEMod, emissions associated with wood burning from these fire pits would not considered substantial and therefore not quantified. Refer to Appendix F for more details.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER
The project is located in the MCAB, which is composed of seven air districts. Air quality for the County is regulated by MCAPCD. The County is designated nonattainment for the NAAQS and CAAQS for ozone (EPA 2016); however, at the time of writing this Draft EIR, MCAPCD does not have an adopted federal or state air quality plan to apply to the project. Thus, this impact is not addressed further.
IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.7-1: Violate any air quality standard or contribute substantially to an existing or projected air quality violation

Construction- and operational-related activities associated with the project would not result in mass emissions of CAPs or precursors in the MCAB. Levels of emissions would be not be substantial such that the applicable SJVAPCD and MCAPCD thresholds of significance would be exceeded. This impact would be less than significant.

Construction-related activities would result in project-generated emissions of ROG, NOx, CO, and PM_{10} from employee trips, site preparation (e.g., grading), off-road equipment, and material delivery. Construction of the project would result in minor increases in traffic for the surrounding road network during the 6 months of construction. Using a 13.7-mile employee trip length and the CalEEMOD default fleet mix for construction equipment over a six month period, emissions of ROG, PM_{10}, and PM_{2.5} were estimated to be less than 1 TPY. Emissions of NOx and CO were estimated to be slightly greater than 1 TPY. Road construction emissions using RCEM estimated approximately 0.4, 2.3, 4.4, 0.8, and 0.3 TPY for ROG, CO, NOx, PM_{10}, and PM_{2.5}, respectively. The combined emissions from these modeling tools are displayed in Table 4.7-5.

<table>
<thead>
<tr>
<th>Year</th>
<th>ROG (TPY)</th>
<th>CO (TPY)</th>
<th>NOx (TPY)</th>
<th>PM_{10} (TPY)</th>
<th>PM_{2.5} (TPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>0.63</td>
<td>3.37</td>
<td>5.68</td>
<td>0.91</td>
<td>0.39</td>
</tr>
<tr>
<td>SJVAPCD Threshold of Significance</td>
<td>10</td>
<td>100</td>
<td>10</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>MCAPCD Threshold of Significance</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Exceeds Thresholds?</td>
<td>No</td>
<td>no</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Notes: ROG = reactive organic gases, CO = carbon monoxide, NOx = oxides of nitrogen, PM_{10} = respirable particulate matter, PM_{2.5} = fine particulate matter, TPY = tons per year
Sources: FirstCarbon Solutions 2015

As shown in Table 4.7-5, using the SJVAPCD and MCAPCD thresholds of significance for construction-related emissions of CAPs and precursors, these combined emissions would not be considered substantial such that an air quality standard would be violated.

Operation
Regional area- and mobile-source emissions of non-attainment pollutants and precursors (i.e., ROG, NOx, and PM_{10}) generated by operation of the project were also modeled using CalEEMod, described earlier under “Methods and Assumptions.” Additional model results and detailed assumptions used in the model calculations are available in Appendix F.

Table 4.7-6 summarizes the modeled operational-related emissions of CAPs and ozone precursors under build-out conditions in 2016 after the construction of the project has been completed. Operational emissions in 2016 represent the full build-out scenario.
Table 4.7-6  Summary of Annual Operational Criteria Air Pollutant and Precursor Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>ROG (TPY)</th>
<th>CO (TPY)</th>
<th>NO (_X) (TPY)</th>
<th>PM(_{10}) (TPY)</th>
<th>PM(_{2.5}) (TPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>0.15</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Energy</td>
<td>0.00</td>
<td>0.03</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Backup Emergency Generator</td>
<td>0.00</td>
<td>4.50</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Mobile</td>
<td>0.53</td>
<td>0.00</td>
<td>0.81</td>
<td>0.33</td>
<td>0.09</td>
</tr>
<tr>
<td>Total</td>
<td>0.68</td>
<td>4.53</td>
<td>0.92</td>
<td>0.33</td>
<td>0.09</td>
</tr>
<tr>
<td>SJVAPCD Threshold of Significance</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>MCAPCD Threshold of Significance</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Exceeds Thresholds?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Notes: ROG = reactive organic gases, CO=carbon monoxide, NO\(_X\) = oxides of nitrogen, PM = particulate matter, TPY = tons per year

Sources: First Carbon Solutions 2015

As shown in Table 4.7-6, at full buildout, the operational emissions of CAPs and ozone precursors associated with the project would not exceed SJVAPCD or MCAPCD thresholds. Furthermore, project construction and operation would be subject to MCAPCD Rules 2201 (Nuisance) and 207 (Particulate Matter), described above, which require that the project control discharge of air contaminants and particulate matter (PM\(_{10}\), and PM\(_{2.5}\)). As such, the project would be required to implement dust control measures to minimize particulate matter emissions.

As discussed in Appendix F, modeling for the project assumed a conservative sum of vehicle miles traveled (VMT) of approximately 852,000 associated with the project. Table 4.7-6 presents the anticipated emissions of CAPs and ozone precursors from this level of VMT. As shown in Table 4.7-6, mobile source emissions of ROG, NO\(_X\), PM\(_{10}\), and PM\(_{2.5}\) would be 0.53, 0.81, 0.33, and 0.09 TPY, respectively. Given that the project would provide temporary housing for visitors to the Fish Camp area, it would be anticipated that a typical visitor to the project site would originate from a destination outside of Fish Camp or Mariposa County; therefore, average visitor’s trip length could likely extend beyond the county border. However, an additional level of VMT associated with extended trip length would not produce levels of CAPs or precursors such that the applicable SJVAPCD or MCAPCD thresholds would be exceeded. It should be noted that using an even more conservative estimate of project-related VMT (i.e., multiplying the modeled assumption by a factor of five) would not produce emissions of air pollutants that would result in an exceedance of an air quality threshold or a violation of an air quality standard. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Impact 4.7-2: Expose sensitive receptors to substantial pollutant concentrations

Construction activities would produce temporary, short-term emissions of diesel PM. Because of the relatively low mass of diesel PM, the short duration in which construction would occur, and the proximity of sensitive receptors to the project site, TACs emitted during construction would expose sensitive receptors to an incremental increase in cancer risk that does not exceed the SJVAPCD thresholds of 20 in one million or a hazard index greater than 1.0. Operational activities could include emissions of TACs from infrequent applications of architectural coatings for maintenance purposes. This would happen on an as-needed basis and would be expected to occur over short periods. ROG, NO\(_X\), and CO would be emitted from motor vehicles accessing and operating near the project site. These emissions would disperse regionally and would not be a substantial localized source such that sensitive receptors would experience health effects according to ARB recommendations. Diesel PM could be emitted from the use of the diesel-powered back-up generator; however, as use of this generator would only occur in the case of emergency loss of electricity, emissions would not be anticipated to occur over extended periods of time. This impact would be less than significant.
Sensitive receptors include children, the elderly, and persons with preexisting respiratory or cardiovascular disease. Because MCAPCD does not have a set of guidelines to determine a project’s significance on sensitive receptors for pollutants, SJVAPCD guidelines were applied. The SJVAPCD definition of a sensitive receptor includes locations that house or attract children, the elderly, people with illness, or others who are especially sensitive to the effects of air pollution (e.g., hospitals, residences, convalescent facilities, schools). The closest sensitive receptors are residences 50 feet from the project boundary on the west side of Highway 41 as well as several lodging facilities interspersed throughout Fish Camp. See Exhibit 4.7-1 for exact locations.

**Construction**

During the application of architectural coatings (e.g., painting), ROG is emitted. The amount is dependent on the amount of ROG (or VOC) in the paint. As the cabins associated with the project would be pre-fabricated, the construction-related architectural coatings would only be applied to the clubhouse. Coatings would occur over an abbreviated time period and in a localized location, and, given that the nearest sensitive receptor to the project site is 50 feet, construction emissions of ROG from architectural coatings would not expose receptors to harmful levels of ROG. Further, as discussed in “Methods and Assumptions,” default CalEEMod values for architectural coatings were applied to the analysis to produce a more conservative estimate than would be expected to occur during project implementation.

The acute health effects from direct exposure to asphalt fumes include irritation of the eyes, nose, and throat. Other effects include respiratory tract symptoms and pulmonary function changes. Sensitive receptors (i.e., residents located west of Highway 41 and lodging facilities surrounding project site) are not in the immediate vicinity of the fumes, and, therefore, would not be subjected to concentrations of ROG high enough to evoke an adverse response.

Operation of off-road construction equipment (e.g., dozers, graders) produces emissions of NOₓ. Short-term health effects of NOₓ exposure include coughing, difficulty breathing, vomiting, eye irritation, pulmonary edema, and aggravation of existing heart disease. As discussed above, the closest sensitive receptors to the project site are not within a considerable distance such that a negative response would occur.

Construction-related activities would result in temporary, short-term project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used during site preparation (e.g., clearing, grading), paving, and on-road truck travel and other miscellaneous activities. For construction activity, diesel PM is the primary TAC of concern. Emissions from on-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment would be dispersed over a larger area because they would not stay on the site for long durations.

Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a TAC by the ARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (OEHHA 2015), so diesel PM is the focus of this discussion. Based on the emission modeling conducted and presented in Table 4.7-5, above, maximum exhaust emissions of PM₁₀, considered a surrogate for diesel PM, would not exceed 1 TPY. Furthermore, diesel PM would be generated from different portions of the project area rather than a single location, and different types of construction activities (e.g., site preparation, paving, building construction) would not occur at the same place at the same time.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time; however, the updated Guidance Manual for Preparation of Health Risk Assessments release in 2015 designates parameters for construction-related TAC emissions. With respect to diesel PM, projects with a construction period lasting longer than six months, a minimal of 1lb/day would result in an exceedance of 10 parts per one million (OEHHA 2015:18-3).
With respect to the project, construction-related emissions of diesel PM as modeled using CalEEMod over a six month period would exceed 1lb/day of exhaust PM; however, for the purposes of this analysis, a conservative construction period was assumed. As described in Chapter 3, “Project Description,” project implementation would occur over a year long period with operation commencing in November 2017. Given that construction activities would be extended past 6 months and, consequently, average daily emissions would be less substantial, emissions of diesel PM would not be expected to exceed 1lb/day. Further, as discussed in “Thresholds of Significance,” the SJVAPCD threshold provided for carcinogenic exposure is 20 parts per one million. Given that, according to OEHHA, a 1lb/day contribution of diesel PM would result in approximately 10 parts per one million, it would not be expected that an exceedance of 20 parts per one million would occur from such emissions levels.

Also important to consider is the proximity of nearby sensitive receptors. Studies show that diesel PM is highly dispersive (e.g., diesel PM concentrations decrease by 70 percent at 500 feet from the source) (Zhu et al. 2002:1032), and receptors must be in close proximity to emission sources to result in the possibility of exposure to concentrations of concern. The closest sensitive receptors, some residences, are located approximately 50 feet from the project site. Other nearby land uses include lodges where occupants generally do not reside longer than a typical weekend or week-long vacation stay. Given the locations of potential receptors relative to potential diesel PM emission sources coupled with the highly dispersive nature of diesel PM, the concentrations and durations of any diesel PM exposure that might occur would be limited.

**Operation**

The project entails the construction of 54 pre-fabricated cabins and a clubhouse, and, as shown in Table 4.7-6, would not produce sufficient operational-related emissions of CO, NOx, PM10, and PM2.5 to exceed SJVAPCD thresholds. While the project would include the use of several fire pits that would emit PM10, and PM2.5 in the form of wood smoke, the analysis prepared for operational emissions is low enough that these additional sources of PM10, and PM2.5 would not be substantial such that emissions would exceed the applicable SJVAPCD thresholds of significance. Operational emissions of ROG and NOx would be emitted primarily from motor vehicles. Direct exposure from project motor vehicles would not result in health effects because ROG and NOx would be distributed across many miles of roadway and in the air. Concentrations would not be great enough to result in direct health effects.

Operational sources of CO are associated with traffic congestion and idling or slow-moving vehicles. Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly within distance from the source under normal metrological conditions; however, under certain specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels at nearby sensitive land uses, such as residential units, hospitals, schools, and childcare facilities. Thus, high local CO concentrations are considered to have a direct influence on the receptors they affect. Because CO concentrations vary in toxicity according to specific conditions, the U.S. Department of Transportation (DOT) recommends that CO not be analyzed at the regional level, but at the local level (DOT 2010).

As discussed in Chapter 4.6, “Traffic,” motor vehicles accessing the site during project operation would result in a minor increase in daily trips and would not reduce the LOS on Highway 41 to unacceptable levels. As described in “Thresholds of Significance,” the SJVAPCD screening criteria for a localized CO effect on receptors would occur if the LOS of roadway within the proximity of a project would be degraded to LOS F or LOS E following project implementation. Operation of the project would not introduce substantial traffic such that LOS F or LOS E of nearby roadways (e.g., Highway 41) would occur; rather LOS would remain at LOS C or better. Additionally, local roadways in Fish Camp are not identified as roads currently operating or expected to operate over acceptable conditions under existing and future buildout according to the 2012 Regional Transportation Plan (Mariposa County 2013). Furthermore, Mariposa County is considered Unclassified/Attainment under the NAAQS for CO.

The ARB Air Quality and Land Use Handbook establishes recommendations to reduce exposure of vulnerable populations (e.g. children) to nearby sources of air pollution. The recommendations address distance...
between new land uses and sources of air pollution and provide suggested guidelines for the minimum distance to avoid exposure to pollutants.

The most relevant recommendation concerns proximity to major roadways. ARB recommends that new sensitive land uses should be avoided within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from these roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. According to the Mariposa County Regional Transportation Plan (RTP), Highway 41, which borders the project site, supports approximately 1,650 vehicles per day (Mariposa County 2013). No other factors in ARB’s handbook are relevant to the project.

Because of the low risk of exposure, proximity to sensitive receptors, and short-term nature of the construction period, construction-related activities would not produce substantial emissions of pollutants such sensitive receptors would be exposed to an incremental increase in cancer risk that exceeds 20 in a one million or a hazard index greater than 1.0. Further, because of infrequent operation of the diesel generator, infrequent application of architectural coatings, and the LOS associated with Highway 41, operational-related activities would not expose a sensitive receptor to an incremental increase in cancer risk that exceeds 20 in one million of a hazard index greater than 1.0. This impact is less than significant.

**Mitigation Measures**
No mitigation is required.

**Impact 4.7-3: Exposure of sensitive receptors to emissions of odors**

Construction and operation of the proposed project would not result in the frequent exposure of receptors to substantial objectionable odor emissions. As a result, this impact would be less than significant.

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Two situations create a potential for an odor impact: when a new odor source is located near an existing sensitive receptor and when a new sensitive receptor is located near an existing source of odor. SJVAPCD has determined the common land use types known to produce odors (Table 4.7-4).

MCAPCD does not have a set of guidelines to determine the significance of whether a project would expose sensitive receptors to objectionable odors; therefore, for the purposes of this analysis, the SJVAPCD guidelines presented in “Methods and Assumptions” were used to determine project significance.

Project implementation would not result in any major sources of odor, as it is not proposed to include any features or facilities known to produce objectionable odors (e.g., landfill, wastewater treatment plant, compost facility). The nearest potential source of odor would be the existing Tenaya Lodge WWTP, located less than a mile south of the project site. According to the Tenaya Wastewater Treatment Plant Initial Study Mitigation Negative Declaration (Mariposa County 2011), odors from this WWTP are less than significant due to aeration techniques and the enclosed design of the WWTP.

Diesel exhaust from the use of onsite construction equipment would be intermittent and temporary, and would dissipate rapidly from the source with an increase in distance and ongoing operations of the WWTP would not generate odors that affect nearby receptors. Thus, neither construction nor operation of the project would create objectionable odors affecting a substantial number of people. This impact would be less than significant.

**Mitigation Measures**
No mitigation is required.
4.8 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section presents a brief summary of the current state of climate change science and greenhouse gas (GHG) emissions sources in California, a summary of applicable regulations, quantification of project-generated GHG emissions and discussion about their potential contribution to global climate change, and analysis of the project’s consistency with applicable plans that target GHG reductions.

4.8.1 Regulatory Background

GHG emissions and responses to global climate change are regulated by a variety of federal, state, and local laws and policies. Key regulatory and conservation planning issues applicable to the proposed project are discussed below.

FEDERAL

Supreme Court Ruling of Carbon Dioxide as a Pollutant
The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the federal Clean Air Act (CAA) and its amendments. The Supreme Court of the United States ruled on April 2, 2007 that carbon dioxide (CO₂) is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. The ruling in this case resulted in EPA taking steps to regulate GHG emissions and lent support for state and local agencies’ efforts to reduce GHG emissions.

National Program to Cut Greenhouse Gas Emissions and Improve Fuel Economy for Cars and Trucks
On August 28, 2014, EPA and the Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) finalized a new national program that would reduce GHG emissions and improve fuel economy for all new cars and trucks sold in the United States (NHTSA 2012). EPA proposed the first-ever national GHG emissions standards under the CAA, and NHTSA proposed Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. This proposed national program allows automobile manufacturers to build a single light-duty national fleet that satisfies all requirements under both federal programs and the standards of California and other states. This program will increase fuel economy to the equivalent of 54.5 miles per gallon (mpg) for cars and light-duty trucks by Model Year 2025, and additional phases are being developed by NHTSA and EPA that address GHG emission standards for new medium- and heavy-duty trucks (NHTSA 2015).

STATE

Executive Order S-3-05
Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

As described below, legislation was passed in 2006 to limit GHG emissions to 1990 levels by 2020, but no additional reductions were specifically enumerated in the legislation.
Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, Governor Schwarzenegger signed the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that these reductions “…shall remain in effect unless otherwise amended or repealed. (b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020. (c) The [Air Resources Board] shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.” [California Health and Safety Code, Division 25.5, Part 3, Section 38551]

Assembly Bill 32 Climate Change Scoping Plan and Update

In December 2008, the California Air Resources Board (ARB) adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) of CO₂-equivalent (CO₂e) emissions, or approximately 21.7 percent from the state’s projected 2020 emission level of 509 MMT of CO₂e under a business-as-usual (BAU) scenario (this is a reduction of 87 MMT CO₂e, or almost 15 percent, from 2008 emissions). ARB’s original 2020 projection was 596 MMT CO₂e, but this revised 2020 projection takes into account the economic downturn that occurred in 2008, and includes reductions anticipated from the Renewable Electricity Standard and Advanced Clean Cars (ARB 2015a). In May 2014, ARB 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 the progress that has been made between 2000 and 2012 (ARB 2014:4 and 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 (ARB 2014:ES-2). The update also reports the trends in GHG emissions from various emission sectors.

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. The EO’s new statewide 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 below 2 °C, the warming threshold at which there will likely be major climate disruptions such as super droughts and rising sea levels. As of April 2016, the EO is not included in an approved legislative target.

Advanced Clean Cars Program

In January 2012, ARB approved the Advanced Clean Cars (ACC) program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles (ZEVs), 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 ZEV 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 by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. Through investments in ZEV infrastructure, the ACC program increases the demand for and manufacturing of ZEVs, which will result in reductions in vehicle-related emissions of GHGs. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. Currently, manufacturers project a cumulative deployment of 53,000 hydrogen fuel cell vehicles in the State by 2017; however, a successful launch of these volumes of vehicles will require fueling stations. 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 (ARB 2015b).
Senate Bill X1-2, the California Renewable Energy Resources Act of 2011
SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets 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. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond. Most recently, Governor Edmund G. Brown signed into legislation SB 250 in October 2015, which requires retail seller and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030.

California Building Efficiency Standards of 2013 (Title 24, Part 6)
Buildings in California are required to comply with California’s Energy Efficiency Standards for Residential and Nonresidential Buildings established by the California Energy Commission (CEC) regarding energy conservation standards and found in Title 24, Part 6 of the California Code of Regulations. California’s Energy Efficiency Standards for Residential and Nonresidential Buildings was first adopted in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards (CEC 2012). 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 multi-family residential construction and 21.8 percent more efficient for non-residential construction (CEC 2013:3).

LOCAL
Mariposa County does not currently have formal GHG emissions reduction plans or recommended emissions thresholds for determining significance associated with GHG emissions from development projects. However, certain components of the County’s General Plan can result in co-benefits related to GHG emissions and climate change.

Mariposa County General Plan
Mariposa County adopted its General Plan in 2006. The prior General Plan, adopted in 1981, had been periodically amended from 1981 through 2005. The 2006 General Plan includes the applicable goals and policies related to improving air quality that may also result in abating climate change (see Section 4.7, “Air Quality”). However, the County has not adopted policies specific to climate change or reduction of GHGs.

4.8.2 Existing Environmental Setting

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

The Physical Scientific Basis
Certain gases in the earth’s atmosphere, classified as GHGs, play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. A portion of the radiation is absorbed by the earth’s surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have
escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are CO$_2$, methane (CH$_4$), nitrous oxide (N$_2$O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human activities in the past 100 years have caused substantial quantities of these GHGs to be released into the atmosphere, thereby enhancing the natural greenhouse effect, 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 forces together (Intergovernmental Panel on Climate Change [IPCC] 2014:3, 5). These gases can vary drastically in terms of their global warming potential (GWP). GWP is defined as the relative measure of how much heat a GHG traps in the atmosphere. GWP is measured over a specific time interval that represents the lifetime of a GHG in the atmosphere (e.g., 20, 50, 200 years). The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO$_2$ equivalent (CO$_2$e), which compares the gas in question to that of the same mass of CO$_2$ (CO$_2$ has a GWP of one by definition). Therefore, a high GWP presents high infrared absorption and long atmospheric lifetime when compared to CO$_2$.

Table 4.8-1 provides a brief summary of the six primary GHGs, as well as their GWP.

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Source: IPCC 2014

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO$_2$ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO$_2$ emissions, approximately 55 percent is sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO$_2$ emissions remains stored in the atmosphere (IPCC 2013:467).
The quantity of GHGs in the atmosphere that ultimately result in climate change is not precisely known, but is enormous; no single project alone would measurably contribute to an incremental change in the global average temperature, or to global, local, or micro climates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

**EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT**

The IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to provide the world with a scientific view on climate change and its potential effects. According to the IPCC global average temperature is expected to increase relative to the 1986-2005 period by 0.3–4.8 degrees Celsius (°C) (0.5-8.6 degrees Fahrenheit [°F]) by the end of the 21st century (2081-2100), depending on future GHG emission scenarios (IPCC 2014:SPM-8). The California CNRA estimates that temperatures in California are projected to increase 2.7 °F above 2000 averages by 2050 and, depending on emission levels, 4.1–8.6 °F by 2100 (CNRA 2012:2).

Physical conditions beyond average temperatures could be affected by the accumulation of GHG emissions. For example, changes in weather patterns resulting from increases in global average temperature are expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Based upon historical data and modeling, the California Department of Water Resources (DWR) projects that the Sierra snowpack will decrease by 25 to 40 percent from its historic average by 2050 (DWR 2008:4). An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events (CNRA 2012:5). This scenario would place more pressure on California’s levee/flood control system.

Another outcome of global climate change is sea level rise. Sea level rose approximately seven inches during the last century and, assuming that sea-level changes along the California coast continue to reflect global trends, sea level along the state’s coastline in 2050 could be 10-18 inches higher than in 2000, and 31-55 inches higher by the end of this century (CNRA 2012:9).

As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available (CNRA 2012:11 and 12).

Changes in precipitation patterns and increased temperatures are expected to alter the distribution and character of natural vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes are expected to lead to increased frequency and intensity of large wildfires (CNRA 2012:11).

Cal-Adapt is a climate change scenario planning tool developed by CEC that downscales global climate model data to local and regional resolution under two emissions scenarios: the A-2 scenario represents a business-as-usual future emissions scenario, and the B-1 scenario represents a lower GHG emissions future. According to Cal-Adapt, annual average temperatures in the Fish Camp Area are projected to rise by 3.8-6.7 °F by 2100, with the range based on low and high emissions scenarios (Cal-Adapt 2015a). Further, Cal-Adapt predicts a 71.5-84.3 percent reduction in snow pack under the A-2 and B-1 scenarios, respectively (Cal-Adapt 2015b).
4.8.3 Environmental Impacts and Recommended Mitigation Measures

CEQA DIRECTION

Establishment of a GHG significance threshold for a single project is problematic. No single project is large enough to meaningfully affect climate change (caused by many years of cumulative global emissions of GHG). For example, although EOs B-30-15 and S-3-05 establish 2030 and 2050 statewide goals, respectively, for reducing GHG emissions, agencies are not required to use those goals to evaluate GHG emissions. In 2008, the Schwarzenegger administration issued guidance that, among other things, states that definition of appropriate significance thresholds is a matter of discretion for the lead agency. The guidance states (California Governor’s Office of Planning and Research 2008: pp. 4-6):

“[T]he global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions. To this end, OPR has asked ARB technical staff to recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. Until such time as state guidance is available on thresholds of significance for GHG emissions, we recommend the following approach to your CEQA analysis.”

Determine Significance

- When assessing a project’s GHG emissions, lead agencies must describe the existing environmental conditions or setting, without the project, which normally constitutes the baseline physical conditions for determining whether a project’s impacts are significant.

- As with any environmental impact, lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a “significant impact,” individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.

- The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project’s direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Documentation of available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).

- Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project.

OPR’s Guidance did not require EO S-3-05 to be used as a significance threshold under CEQA. Rather, OPR recognized that, until ARB establishes a state-wide standard, selecting an appropriate threshold is within the discretion of the lead agency.

CEQA Guidelines Section 15064.4 was later added, in 2010, to address GHGs. The Guidelines state:

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.
(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project’s incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Thus, one threshold that may be used to analyze the project’s GHG emissions is whether the project would conflict with or obstruct the goals or strategies of the California Global Warming Solutions Act of 2006 (AB 32) or its governing regulation. (Health and Safety Code, §§ 38500-38599.)

Until this past year (2015), several types of thresholds were utilized, with a predominance of EIRs using a threshold that was based on the GHG efficiency of projects. This approach, commonly known as a comparison to “business as usual” (BAU), compares a project’s GHG emissions to those emissions that would have occurred had AB 32 (and other GHG emissions reduction legislation)-related GHG emissions reduction policies, programs and regulations not been implemented, based on projections in the state Scoping Plan (see page 4.8-2). The Scoping Plan establishes a target for GHG emissions reduction throughout the state in order to meet AB 32 goals. As discussed above, statewide GHG emissions would need to be reduced by 21.7 percent (based on 2012 emissions) compared to what they otherwise would have been without AB 32 (and other related) programs, in order to meet AB 32 goals for 2020. Many EIRs concluded that, if a project achieved the same (or better) GHG reduction than this 21.7 percent, compared to BAU, its impact would not be significant.

This approach was reviewed by the California Supreme Court, in the decision Center for Biological Diversity v. California Department of Fish and Wildlife (also known as “Newhall Ranch”). This case is briefly summarized here because the Court reviewed the BAU approach and provided direction for consideration of methods to establish significance thresholds. In the Newhall decision, the Court found that the EIR lacked substantial evidence to support the conclusion that GHG impacts would be less than significant, based on the BAU methodology. The EIR had concluded that the Newhall Ranch project would reduce GHG emissions below the BAU scenario by 2020, the project would not impede achievement of state goals and, therefore, the GHG emissions impact would be less than significant. The Court concluded that “the Scoping Plan nowhere related the statewide level of reduction effort to the percentage of reduction that would or should be required from an individual project” and that nothing in the “...record indicates that required percentage reduction from BAU is the same for an individual project as for the entire state population and economy.” The Court went on to suggest several methods, including (among others) linking BAU from an individual project to the Scoping Plan, tiering from a qualified GHG reduction plan, per CEQA Guidelines Section 15183.5 (if available), or using a substantiated numeric threshold.

SIGNIFICANCE CRITERIA

The Mariposa County Air Pollution Control District (MCAPCD) has not adopted thresholds for CEQA analysis of GHGs, nor has Mariposa County prepared a qualified GHG reduction plan. The nearest air district that has adopted GHG significance thresholds, the San Joaquin Valley APCD, uses the BAU approach that was invalidated by the California Supreme Court in the Newhall Ranch case described above.
CEQA allows lead agencies the discretion to determine whether a particular environmental impact would be considered significant based on scientific or factual evidence. Air districts throughout the state have developed numerical thresholds to determine a project’s significance that can be applied to the proposed project. The Bay Area Air Quality Management District (BAAQMD) has determined that a project can be considered to have a less-than-significant contribution to emissions of GHGs if annual emissions do not exceed 1,100 metric tons of CO₂ equivalent (MTCO₂e). This is based on an analysis that concludes that the majority of GHG emissions would be addressed by considering projects emitting above this level. The California Supreme Court (in the case above) found this approach (and this specific threshold) acceptable. The applicability of this threshold is further supported by the Sacramento Metropolitan Air Quality Management District (SMAQMD), another northern California air district, which adopted thresholds of 1,100 MTCO₂e for both construction and operational phases for a project. For the purposes of this analysis, the SMAQMD numerical threshold of 1,100 MTCO₂e per year will be applied to the project.

Thus, based on Appendix G of the CEQA Guidelines and the information discussed above, impacts related to emissions of GHGs would be considered significant if implementation of the project would do any of the following:

- generate GHGs, either directly or indirectly, that may have a significant impact on the environment (i.e., result in GHG emissions that exceed 1,100 MTCO₂e/year); or
- conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.

METHODS AND ASSUMPTIONS

Emissions estimates were reported in the Air Quality and Greenhouse Gas Analysis Report: Tenaya Lodge Explorer Cabins, prepared for Blair, Church, and Flynn Consulting Engineers by FirstCarbon Solutions. The following summarizes the methodology used in this study. Additional detail can be found in the study located in Appendix F.

Construction

Short-term construction-related emissions of GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2013.2.2 (SCAQMD 2013) and SMAQMD’s Road Construction Emissions Model (RCEM) Version 7.1.5.1. CalEEMod was used to calculate GHG emissions from construction of utilities, buildings, recreational areas, and parking. RCEM was used to calculate GHG emissions from construction of onsite roads. Modeling was based on project-specific information (e.g., schedule, building types, amounts of demolition, area to be graded, area to be paved), where available, and default values in CalEEMod and RCEM that are based on the project’s location, land use type, or type of construction.

The CalEEMod default construction equipment fleet mix was assumed for the analysis. The project was assumed to start construction in mid-2016 and be completed by late 2016. The construction schedule used in the analysis represents a “worse-case” analysis scenario as emission factors for construction equipment decrease as the analysis year increase, due to improvements in technology and more stringent regulatory requirements. Therefore, construction emissions would be expected to decrease if construction were pushed to later years. Worker trips were assumed to be 1.25 trips per equipment (the CalEEMod default). A trip length of 13.7 miles was used for construction worker trips and the CalEEMod default vehicle flee (LD Mix) was used for employee trips. This is roughly the trip length associated with the distance to parts of Oakhurst, the nearest larger community to the project.

Loss in sequestered carbon can be modeled in CalEEMod using the vegetation module. As described in Section 4.4, “Biological Resources,” project implementation would result in the removal of some trees, including trees 20 inches in diameter or greater. Based on a conservative assumption that 25 percent of the trees in the construction area are removed, the CalEEMod vegetation component was utilized to estimate loss of carbon sequestration.
See Appendix F for additional details related to methodology and assumptions used to estimate construction emissions.

**Operations**

Long-term operational emissions were also calculated using CalEEMod Version 2013.2.2 using project specific data where available. Operational mobile-source emissions were modeled based on trip generation rates from the Institute of Transportation Engineers Manual, 9th Edition for hotel land uses and the CalEEMod default trip length for rural areas of 14.7 miles for employee trips (roughly the trip length associated with the distance to parts of Oakhurst, the nearest larger community to the project). Approximately eight trips per cabin per weekday and Saturday and six trips per cabin per Sunday were assumed. CalEEMod default fleet mix for Mariposa County was assumed to apply to the project resulting an annual average project-related vehicle miles traveled (VMT) of approximately 850,000. The actual VMT associated with the project may vary from this estimate, based on the visitor’s starting point, duration of stay, and number of vehicle trips to local attractions (e.g., Yosemite National Park) during their stay.

Indirect emissions associated with electricity consumption were calculated using GHG emission factors forecasted for the Pacific Gas and Electric Company for 2020 based on the utility’s progress toward achieving the State’s Renewable Portfolio Standard goal of attaining 33 percent of electricity from renewable sources. The project’s level of electricity usage were based on default consumption rates provided by CalEEMod for similar types of land uses. CalEEMod estimates electricity consumption based on implementation of the Title 24 regulations. GHG emissions from electricity can be modeled to provide a scenario for reductions achieved through Title 24 as well as a scenario wherein reductions are not applied. CalEEMod was also used to provide estimates of indirect and direct GHG emissions from water use, wastewater treatment, and solid waste generation.

The project site is currently not serviced by a natural gas public utilities company. The operational modeling to calculate the project’s GHG emissions for the project used the CalEEMod default assumptions for the hotel land use for electricity and natural gas. However, the project is considering using propane for the water heaters, furnaces, and fireplaces as an alternative to reduce use of electrical power. Therefore, an additional analysis of the project’s potential propane use was completed based on the assumption that propane would be used in the 54 cabins and the clubhouse for heating uses. It was then assumed that each building would use an average of 288.58 gallons of propane per year, based on the residential use of propane derived from the California Air Resources Board Emission Inventory Methodology.

Although it would be expected that modeling performed for propane use could exceed the default values for natural gas in CalEEMod, it would not be anticipated that propane generated emissions would be substantial enough such that a threshold would be exceeded, based on the overall calculations included in the analysis. Therefore, the CalEEMod default values for natural gas consumption were assumed. Specific model assumptions and inputs for all of these calculations can be found in Appendix F.

**ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER**

All potential topics of relevance to climate change are assessed in the following impact discussions.

**IMPACT ANALYSIS AND MITIGATION MEASURES**

**Impact 4.8-1: Generation of direct and indirect emissions of GHGs that would result in a significant impact on the environment**

The project would generate emissions of GHGs during construction and operation; however, emissions would not exceed the 1,100 MTCO2e per year threshold applied to the project. The amount of GHG emissions would not result in a substantial contribution of GHGs such that a cumulatively considerable effect would occur. Therefore, this impact is **less than significant**.
Both project construction and operation would generate GHG emissions. GHG-producing construction activities would include the operation of heavy-duty equipment (e.g., scrapers, dozers), movement of haul trucks carrying supplies and materials to and from the project site, and construction worker commute trips. Construction emissions of GHG associated with project implementation were estimated using CalEEMod version 2013.2.2, as described above.

Operational or long-term GHG emissions would occur over the life of the project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities. Operational GHG emissions associated with the project were estimated using CalEEMod Version 2013.2.2, as described above. In addition, because the project may utilize propane for the water heaters, furnaces, and fireplaces, emissions due to propane use were estimated, assuming that each cabin and the clubhouse would use an average of 288.58 gallons of propane per year. The use of propane would result in emissions of 92 MTCO\textsubscript{2}e/year. This emissions estimate is conservative, as it does not take into account any associated reductions in electricity use.

As shown in Table 4.8-2, project implementation would result in emissions of 122.61 MTCO\textsubscript{2}e/year during construction and 587 MTCO\textsubscript{2}e/year during project operations, which is lower than the 1,100 MTCO\textsubscript{2}e/year threshold.

<table>
<thead>
<tr>
<th>Table 4.8-2</th>
<th>Summary of Greenhouse Gas Emissions Associated with the Project(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Year</td>
<td>MT CO\textsubscript{2}e/year</td>
</tr>
<tr>
<td>2016</td>
<td>122.61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Operational Emissions</th>
<th>MT CO\textsubscript{2}e/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>0.00</td>
</tr>
<tr>
<td>Energy</td>
<td>107</td>
</tr>
<tr>
<td>Mobile</td>
<td>371</td>
</tr>
<tr>
<td>Waste</td>
<td>13</td>
</tr>
<tr>
<td>Water</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Operational Emissions Without Propane Use</strong></td>
<td>495</td>
</tr>
<tr>
<td><strong>Propane</strong></td>
<td>92</td>
</tr>
<tr>
<td><strong>Total Operational Emissions with Propane Use</strong></td>
<td>587</td>
</tr>
<tr>
<td>Loss of Carbon Sequestration</td>
<td>39.4</td>
</tr>
<tr>
<td><strong>Total Operational Emissions</strong></td>
<td>626.4</td>
</tr>
<tr>
<td>Threshold of Significance</td>
<td>1,100</td>
</tr>
<tr>
<td>Exceed Threshold?</td>
<td>No</td>
</tr>
</tbody>
</table>

Notes: MT CO\textsubscript{2}e/year = metric tons of carbon dioxide-equivalent per year

\(^1\) **Levels** of CO\textsubscript{2}e are calculated using IPCC Fifth Assessment 100 year lifetime global warming potential factors (IPCC 2013).

Source: FirstCarbon Solutions 2016 based on modeling with CalEEMod v. 2013.2.2

In addition, loss in sequestered carbon was modeled based on a conservative assumption that 25 percent of the trees in the construction area would be removed. Based on use of the CalEEMod vegetation component, the loss of carbon sequestration due to the project was estimated to be 39.4 MTCO\textsubscript{2}e. These would be one-time losses that could be recouped over time if additional tree planting was conducted to replace the trees that are removed. However, not accounting for tree planting, adding the project-related 39.4 MTCO\textsubscript{2}e sequestration loss to the project’s operational GHG emissions of 587 MTCO\textsubscript{2}e would result in a total of 626.4 MTCO\textsubscript{2}e, which would not exceed the 1,100 MTCO\textsubscript{2}e GHG threshold. Adding the sequestration losses,
the project would still result in CO\(_2\)e emissions well below the threshold. Therefore, this would be a less-than-significant impact.

**Mitigation Measures**

No mitigation is required.

**Impact 4.8-2: Conflict with applicable plan, policy, or regulation of an agency adopted to reduce the emissions of greenhouse gases**

Because Mariposa County does not have an adopted GHG reduction plan or a CAP, and has not conducted a GHG inventory, the GHG reduction targets identified in the Scoping Plan are applied to the project. Through a qualitative comparison of the project to measures within the Scoping Plan, the project is consistent with or not applicable to most of the measures; however, the project does not support certain policies that are applicable to projects of this type, particularly related to low emission vehicles and the use of solar technology. Therefore, the project would not be fully consistent with the policies of the Scoping Plan and this is considered a potentially significant impact.

Pursuant to AB 32, ARB adopted the Scoping Plan in 2008, which outlines actions recommended to achieve the goals of reducing GHG emissions to 1990 percent by 2020. The Scoping Plan contains a variety of strategies to reduce the State’s emissions. As shown in Table 4.8-3, the project is consistent with most of the strategies; however, others are not applicable to the project and some are not supported by the project.

<table>
<thead>
<tr>
<th>Scoping Plan Reduction Measure¹</th>
<th>Consistency/Applicability Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based state cap-and-trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for the state. Ensure the state’s program meets all applicable AB 32 requirements for market-based mechanisms.</td>
<td>Not Applicable. Project is not considered a cap-and-trade program.</td>
</tr>
<tr>
<td>3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policies, and implementation mechanisms; and pursue comparable investment of energy efficiency from all retail providers of electricity in the state.</td>
<td>Consistent. Project would comply with Title 24 building requirements.</td>
</tr>
<tr>
<td>4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestions, and landfill gas.</td>
<td>Consistent. Project would be serviced by PG&amp;E which would be required to comply with 33 percent renewable portfolio standard by 2020.</td>
</tr>
<tr>
<td>6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional GHG emissions reduction targets for passenger vehicles. This measure refers to SB 375.</td>
<td>Not Directly Applicable. Mariposa County is not within the jurisdiction of an MPO and is, therefore, not subject to the goals or emissions reductions associated with SB 375.</td>
</tr>
</tbody>
</table>
As shown in Table 4.8-3, the project is consistent with many of the measures contained in the Scoping Plan. Others (e.g., Cap-and-Trade Program, High Speed Rail) do not apply to the project. The project does not, however, support the goals of the California Light-Duty Vehicle Greenhouse Gas Standards or the Million Solar Roofs Program, which are measures that can be furthered at the project level. Project design does not include charging stations for zero-emission vehicles, thereby the project would not be supportive of zero-emission vehicles accessing the project site. Further, project design would not include the use of solar technology, which would not support the statewide goal of deploying 3,000 megawatts of solar-electric power. However, the characteristics of the project site would limit the feasibility of onsite solar use. Following project implementation, the project site would continue to maintain tree coverage, which would provide the site with natural shading and impede the use of solar technology. These characteristics make the project site unsuitable for onsite solar. Given the limiting features of the project site, use of solar associated with the Million Solar Roofs Program would not pertain to the project; therefore, this measure of the Scoping Plan would not apply to the project.
It should also be noted that in an effort to increase energy efficiency, the Tenaya Lodge is replacing two 200-ton refrigeration (TR) cooling units with two 500TR units in summer of 2016. In association with new cooling towers, the system pumps will be replaced and associated pipes will be resized to maximize energy savings. This cooling system serves approximately 85 percent of the main Tenaya Lodge complex, including all the guest rooms. Replacing the existing units with new cooling towers will decrease energy consumption for the lodge. It is estimated that the new cooling system will result in 760,000 kWh/yr of energy savings (Fulce pers. comm., 2016).

While the Tenaya Cabins Project would not directly conflict with the implementation of the Scoping Plan and energy efficient cooling towers are being installed at the Tenaya Lodge, for the reasons discussed above, project implementation would not be fully supportive of the goals and measures included in the Scoping Plan. Thus, this is a potentially significant impact.

**Mitigation Measure 4.8-1: Incorporate design features into project to be consistent with the Scoping Plan**

To achieve consistency with the California Light-Duty Vehicle Greenhouse Gas Standards, the applicant shall:

- Install, at a minimum, two onsite electric charging stations for use by guests and employees to encourage use of plug-in electric and hybrid vehicles.

**Significance after Mitigation**

As stated above, the project would be consistent with or not applicable to many the goals and measures contained in the Scoping Plan and energy efficient cooling towers are being installed at the main lodge to decrease overall energy use at the Tenaya Lodge. However, as project design does not include use of electric charging stations for zero-emission vehicles, the project is not fully supportive of the policies of the Scoping Plan. Implementation of Mitigation Measure 4.8-1 would incorporate infrastructure that would support the programs included in the Scoping Plan, specifically the Light-Duty Vehicle Greenhouse Gas Standards. Inclusion of onsite electric charging stations for guest and employee use would further the statewide goal of reducing GHG emissions from the light-duty vehicle sector. For this reason, implementation of Mitigation Measure 4.8-1 would ensure that the project is consistent with the policies of the Scoping Plan, and would reduce the impact to a less than significant level.

**Impact 4.8-3: Impacts of climate change on the project**

Climate change is expected to result in a variety of effects that would influence conditions on the project site. These effects include increased temperatures, increased wildfire risk and sea level rise; and changes to timing and intensity of precipitation, resulting in increased stormwater runoff and flood risk. However, numerous State and County programs and policies are in place to protect the project against and respond to wildland fire, sea level rise, and flooding. Therefore, this impact would be less than significant.

Human-induced increases in GHG concentrations in the atmosphere have led to increased global average temperatures (climate change) through the intensification of the greenhouse effect, and associated changes in local, regional, and global average climatic conditions.

Although there is strong scientific consensus that global climate change is occurring and is influenced by human activity, there is less certainty as to the timing, severity, and potential consequences of the climate phenomena. Scientists have identified several ways in which global climate change could alter the physical environment in California (CNRA 2012, DWR 2008, IPCC 2007). These include:

- increased average temperatures;
- modifications to the timing, amount, and form (rain vs. snow) of precipitation;
- changes in the timing and amount of runoff;
- reduced water supply;
deterioration of water quality; and
- elevated sea level.

These changes may translate into a variety of issues and concerns that may affect the project area, including but not limited to:

- increased frequency and intensity of wildfire as a result of changing precipitation patterns and temperatures,
- reduced levels of precipitation falling as snow and subsequent decrease in snow pack, and
- increased risk of flooding associated with changes to precipitation patterns.

Although uncertainty exists to the precise levels of these impacts, there is consensus regarding the range, frequency, or intensity of these impacts that can be expected. The project could be subject to potential hazards that could be exacerbated by climate change, such as changes in the timing and amount of runoff and the increased risk of flooding associated with changes to precipitation. According to CAL FIRE, the project is located in a very high severity area for fire hazards due to its location in coniferous forest of moderate to severe slopes. Thus, the area could be affected by increased frequency or intensity of wildfire.

As discussed in the setting, the County has adopted policies to improve air quality that could have indirect effects on climate change-related impacts, including Measure 11-1c(4), which addresses alternatives to outdoor wood burning. As stated above, the project site is located within a very high severity areas for wildfire hazard. Implementation of Measure 11-1c(4) would reduce the frequency of human-caused wildland fire in the project area and County.

Structural fire protection in the plan area would be provided by the Mariposa County Fire Department, which has a Fish Camp-based fire station (Company 33) located within a half mile of the project site. Further, as described in Section 4.13, “Hazards,” the project would adhere to the state law requiring 100 feet of defensible space around structures. CAL FIRE plans for the County include continued provisions of wildland fire protection and prevention services for areas surrounding the plan area, and USFS provides fire response in the Sierra National Forest. See Section 4.12, “Utilities and Public Services,” and Section 4.13, “Hazards,” for additional information on plans and policies related to wildfire. Implementation of these plans would reduce the likelihood of wildland fire through management of fuels and implementation of best practices, and would ensure that resources to reduce the occurrence of wildland fire would be available.

With regard to flood risk associated with increased stormwater runoff and changes to precipitation and snowmelt patterns, the project area would be at risk of localized flooding due to the steepness of its slopes and potential for Big Creek to exceed its capacity; however, the project area is not located in a 100-year flood plain. The County does not participate in the National Flood Insurance Program due its historically low flood potential; therefore, flooding is primarily mitigated and managed by private property owners or the County during review of discretionary projects by the Mariposa County Public Works Department and would continue to do so following project implementation. As the County does not belong to the National Flood Insurance Program, flood associated risk is evaluated on a project-by-project basis. Following project approval, the Mariposa County Public Works Department would provide flood management to the project site and area. Further, the strategies contained in the Mariposa County Local Hazard Mitigation Plan would be applied to the project to further reduce the effects of future flooding (see Section 4.13, “Hazards,” of this Draft EIR).

Due to the location of the project and the existing programs in place to abate anticipated effects due to climate change, this impact would be less than significant.

Mitigation Measure
No mitigation is required.
4.9 NOISE

This section presents definitions of common noise descriptors; descriptions of applicable noise regulations, acoustic fundamentals, and existing ambient noise conditions; and an analysis of potential short- and long-term noise impacts associated with implementation of the project. The analysis in this section is based on the Acoustical Analysis prepared by WJV Acoustics, Inc. (February 2016), provided in Appendix G of this Draft EIR.

4.9.1 Acoustic Fundamentals

Acoustics is the scientific study that evaluates perception and properties of sound waves. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise. The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels are used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used to characterize environmental noise are defined below (California Department of Transportation [Caltrans] 2013a).

- Maximum Noise Level ($L_{max}$): The highest instantaneous noise level during a specified time period.
- Minimum Noise Level ($L_{min}$): The lowest instantaneous noise level during a specified time period.
- Day-Night Noise Level ($L_{dn}$): The 24-hour $L_{eq}$ with a 10-dB penalty applied during the noise-sensitive hours from 10 p.m. to 7 a.m., which are typically reserved for sleeping.
- Community Noise Equivalent Level (CNEL): Similar to the $L_{dn}$ described above with an additional 5-dB penalty applied during the noise-sensitive hours from 7 p.m. to 10 p.m., which are typically reserved for evening relaxation activities. Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment.
- Equivalent Noise Level ($L_{eq}$): The average noise level during a specified time period; that is, the equivalent steady-state noise level in a stated period of time that would contain the same acoustic energy as the time-varying noise level during the same period (i.e., average noise level). The $L_{eq}$ or average noise level over a given period of time, is the foundation of composite noise descriptors such as $L_{dn}$ and CNEL, which effectively indicate community response to ambient noise levels.
- Single Event Noise Levels (SEL): A receiver’s cumulative noise exposure from a single impulsive-noise event, which is defined as an acoustical event of short duration and which involves a change in sound pressure above some reference value.
- Decibel (dB): fundamental unit of sound used to measure the general degree loudness
- A-Weighted Decibel (dBA): A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response. All sound levels discussed in this section are A-weighted decibels unless otherwise noted.
4.9.2 Regulatory Background

FEDERAL
The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate Federal noise control activities. After its inception, EPA’s Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982, responsibilities for regulating noise control policies were transferred to state and local governments; however, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies where relevant.

Federal Highway Administration
The Federal Highway Administration (FHWA) has developed methods for evaluating construction noise. FHWA methods are discussed in the document entitled “Roadway Noise Construction Model User’s Guide” (FHWA 2006.) FHWA does not recommend specific noise level criteria for construction-type activities.

U.S. Department of Transportation
To address the human response to ground vibration (from non-blasting sources), the Federal Transit Administration (FTA) of the U.S. Department of Transportation has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. Among these guidelines are the following:

- 65 vibration-decibels (VdB), referenced to 1 micro-inch per second (μin/sec) and based on the root mean square (RMS) velocity amplitude, for land uses where low ambient vibration is essential for interior operations (e.g., hospitals, high-tech manufacturing, laboratory facilities);
- 80 VdB for residential uses and buildings where people normally sleep; and
- 83 VdB for institutional land uses with primarily daytime operations (e.g., schools, churches, clinics, offices) (FTA 2006).

STATE
The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation.

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor’s Office of Planning and Research (OPR) (2003), provide guidance for the compatibility of projects within areas of specific noise exposure. Acceptable and unacceptable community noise exposure limits for various land use categories have been determined to help guide new land use decisions in California communities. In many local jurisdictions, these guidelines are used to derive local noise standards and guidance. Citing EPA’s “Levels Document” and the State Sound Transmissions Control Standards, the state’s general plan guidelines recommend an interior and exterior noise standards of 45 and 60 dB CNEL for residential units, respectively (OPR 2003: 253-254).

California Department of Transportation
In 2013, Caltrans published the Transportation and Construction Vibration Manual, which provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 4.9-1 below presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.
Table 4.9-1  Caltrans Recommendations Regarding Vibration Levels

<table>
<thead>
<tr>
<th>PPV (in/sec)</th>
<th>Effect on Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4-0.6</td>
<td>Architectural damage and possible minor structural damage</td>
</tr>
<tr>
<td>0.2</td>
<td>Risk of architectural damage to normal dwelling houses</td>
</tr>
<tr>
<td>0.1</td>
<td>Virtually no risk of architectural damage to normal buildings</td>
</tr>
<tr>
<td>0.08</td>
<td>Recommended upper limit of vibration to which ruins and ancient monuments should be subjected</td>
</tr>
<tr>
<td>0.006-0.019</td>
<td>Vibration unlikely to cause damage of any type</td>
</tr>
</tbody>
</table>

Notes: PPV= Peak Particle Velocity; in/sec=inches per second
Source: Caltrans 2013a

LOCAL

Mariposa County General Plan
The Noise Element of the County’s 2013 General Plan contains the following applicable strategies, policies, and implementation measures (Mariposa County 2013:15-1 to 15-4):

Goal 15-1: Preserve the quality of life in Mariposa County by controlling noise at its source.

- **Policy 15.1a:** Control noise at its source.
  - **Implementation Measures**
    - **15.1a(1):** A noise ordinance should be considered to define the standards for the County.
    - **15.1a(2):** County development standards shall require means of controlling noise at its source as opposed to imposing mitigation as the means of offsetting noise impacts.
    - **15.1a(3):** The County shall develop and implement standards that will reduce vibration from construction activities to a level that is less than perceptible at adjacent property lines.

Goal 15-2: Protect County residents from the harmful and annoying effects of exposure to excessive noise.

- **Policy 15-2a:** Siting and construction of facilities intended for noise sensitive uses shall comply with the noise reduction standards of applicable State building codes.
  - **Implementation Measure**
    - **15-2a(1):** The State building standards for the proper insulation of new dwellings for noise reduction shall be enforced.

- **Policy 15-2b:** New projects with extensive noise potential shall incorporate mitigation measures.
  - **Implementation Measures**
    - **15-2b(1):** Where proposed non-residential land uses are likely to produce excessive noise levels at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the project review process. An acoustical analysis should
      - be prepared by a person qualified in environmental noise assessment and architectural acoustics,
The Tenaya Cabins Project Draft EIR should:
- include representative noise level measurements to adequately describe local conditions,
- recommend appropriate mitigation to achieve compliance with the adopted policies and standards,
- estimate noise exposure after the prescribed mitigation measures have been implemented, and
- describe a post-project mitigation measure effectiveness assessment program.

**15-2b(2):** Noise created by new transportation noise sources shall be mitigated.

**15-2b(3):** The County shall require appropriate noise reduction measures for outdoor public events. Such measures may include:
- preparation of a noise impact analysis by an appropriate licensed professional;
- identification of best sound management practices for avoiding impacts;
- restrictions on the level of amplification of sound systems;
- conditions on the start, finish, and duration of the event; limitations on the number of participants; and
- a requirement to install temporary noise reduction devices or barriers.

**Policy 15-2c:** Ensure that new development does not produce noise levels that create an unacceptable noise environment in those existing areas of the County where the noise environment is deemed acceptable, and also in those locations deemed noise sensitive.

**Implementation Measures**

**15-2c(1):** The County shall assess development activities and determine whether the Noise Element shall be updated or whether to undertake studies to create noise contours and noise exposure indices.

### Mariposa County Short-Term Noise Ordinance and Permanent Noise Standards

Mariposa County currently does not have an adopted noise ordinance; however, pursuant to the General Plan implementation measures **15.1a(1) and 15.1a(3)**, the County released a 2014 Annual Report of the General Plan that proposed minimum noise standards to be in effect during the short-term planning period (between 2014 and 2018) alongside permanent noise standards. Applicable implementation measures from the Annual Report are presented below (Mariposa County 2014:31-33).

**Short-Term Noise Ordinance**

During the short-term planning period, the County shall enact a Noise Ordinance to be enforced by the Health Department. At a minimum, the ordinance shall include:

- prohibition on the non-emergency use of truck “Jake Brakes” on roadways adjacent to residential uses and in planning areas;
- noise control within new residential developments through project design;
- prohibition on the use of noise barriers as mitigation when other alternatives are feasible;
- requirements for a qualified acoustical consultant who shall conduct an acoustical analysis;
- a menu of appropriate requirements for reduction of noise exposure or standards for assessing noise impacts; and

- a menu that may include one or more of the following techniques for noise control through site design:
  - Increasing the distance between the noise source and receiving use (setbacks).
  - Placing structures on a project site to shield other structures or areas, to remove them from noise-impacted areas, and to prevent an increase in noise levels caused by reflections.
  - Placement of outdoor activity areas on the opposite side of building facades from the noise source, or within the shielded portion of a building complex.
  - Placement of walls, berms or other barriers between the noise source and the receiver.
  - Locating bedrooms and other noise-sensitive rooms opposite from the noise source where interior noise levels are a primary concern.
  - Patios or balconies of apartment complexes or multifamily dwellings shall be placed on the side of a building opposite the noise source. “Wing walls” can also be added to buildings or patios. When such noise reduction measures are impractical or infeasible, the County may decide not to apply the exterior noise level requirements at some or all of the patio or balcony areas if a central courtyard is provided as a primary outdoor activity area.

**Non-Transportation Noise Source Standards**

With respect to non-transportation noise sources, the noise ordinance recommendations include:

The County should implement noise performance standards [Table 4.9-2] to ensure that new noise-sensitive land uses are not exposed to excessive noise from nearby non-transportation noise sources, and to ensure that new noise-generating land uses do not create noise levels exceeding adopted standards as measured from nearby noise sensitive land uses.

<table>
<thead>
<tr>
<th>Noise Level Descriptor</th>
<th>Daytime (7 a.m. to 10 p.m.)</th>
<th>Nighttime (10 p.m. to 7 a.m.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly $L_{eq}$, dB</td>
<td>55</td>
<td>45</td>
</tr>
</tbody>
</table>

Notes: $L_{eq}$=noise equivalent level, dB=decibel

A. Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises (e.g., humming sounds, outdoor speaker systems). These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). The County can impose noise level standards that are more restrictive than those specified above based upon determination of existing low ambient noise levels. In rural areas where large lots exist, the exterior noise level standard may be applied at a point 100 feet away from the residence. Industrial, light industrial, commercial, and public service facilities which have the potential for producing objectionable noise levels at nearby noise-sensitive uses are dispersed throughout the County. Fixed noise sources that are typically of concern include, but are not limited to the following: HVAC System, Cooling, Towers/Evaporative Condensers, Pump Stations, Lift Stations, Emergency Generators, Boilers, Steam Valves, Steam Turbines, Generators, Fans, Air Compressors, Heavy Equipment, Conveyor Systems, Transformers, Pile Drivers, Grinders, Drill Rigs, Gas or Diesel Motors, Welders, Cutting Equipment, Outdoor Speakers, Blowers.

B. The types of uses which may typically produce the noise sources described above include but are not limited to: industrial facilities including lumber mills, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields.

Source: Mariposa County 2014: Table C-1

The standards in Table 4.9-2 are to be adjusted by -5 dB if the noise source of concern consists primarily of speech and music. The ordinance is to be applied during any one-hour time period of the day or night and the standards are 10 dB more restrictive during the nighttime hours of 10:00 p.m. to 7:00 a.m. For the purposes
of this analysis, all proposed stationary (non-transportation) noise sources are evaluated against the following County noise limits for noise exposure to sensitive receptors:

- **Daytime** (i.e., 7:00 a.m. to 10:00 p.m.) noise standards of 50 dB L_{eq}.
- **Nighttime** (i.e., 10:00 p.m. to 7:00 a.m.) noise standards of 40 dB L_{eq}.

**Transportation Noise Source Standards**

With respect to transportation noise sources, the recommendations include:

New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 4.9-3 unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified Table [4.9-3].

### Table 4.9-3 Maximum Allowable Noise Exposure – Transportation Noise Sources

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Outdoor Activity Areas, L_{dn}/CNEL, dB</th>
<th>Indoor Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L_{dn}/CNEL, dB</td>
<td>L_{eq}, dB</td>
</tr>
<tr>
<td>Residential</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>Transient Lodging</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>Hospitals, Nursing Homes</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>Theaters, Auditoriums, Music Halls</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Churches, Meeting Halls</td>
<td>60</td>
<td>–</td>
</tr>
<tr>
<td>Office Buildings</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Schools, Libraries, Museums</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Playgrounds, Neighborhood Parks</td>
<td>65</td>
<td>–</td>
</tr>
</tbody>
</table>

Notes: L_{dn}=day-night noise level, CNEL=community noise equivalent level, dB=decibel

A. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

B. As determined for a typical worst-case hour during periods of use.

C. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table. In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

Source: Mariposa County 2014: Table C-2

### 4.9.3 Existing Environmental Setting

**CHARACTERISTICS OF ENVIRONMENTAL NOISE**

Prior to discussing the noise setting for the project, background information on sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms and regulations referenced throughout this section.

**Sound, Noise, and Acoustics**

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.
In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

### Frequency
Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

### Sound Pressure Levels and Decibels
The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels.

### Addition of Decibels
Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

### A-Weighted Decibels
The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels or dBA. Table 4.9-4 describes typical A-weighted noise levels for various noise sources.

<table>
<thead>
<tr>
<th>Table 4.9-4</th>
<th>Typical A-Weighted Noise Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Common Outdoor Activities</strong></td>
<td><strong>Noise Level (dBA)</strong></td>
</tr>
<tr>
<td>Jet fly-over at 1,000 feet</td>
<td>100</td>
</tr>
<tr>
<td>Gas lawn mower at 3 feet</td>
<td>90</td>
</tr>
<tr>
<td>Diesel truck at 50 feet at 50 miles per hour</td>
<td>80</td>
</tr>
<tr>
<td>Noisy urban area, daytime, Gas lawn mower at 100 feet</td>
<td>70</td>
</tr>
</tbody>
</table>
Human Response to Changes in Noise Levels
As discussed above, the doubling of sound energy results in a 3-dB increase in sound; however, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 Hz) range. In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

Vibration
Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2006:7-5, Caltrans 2013a:6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as VdB, which serves to compress the range of numbers required to describe vibration (FTA 2006:7-5). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75
VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2006:7-7).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2006:7-5).

Construction vibrations can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations result from vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment. Table 4.9-5 describes the general human response to different ground vibration-velocity levels.

<table>
<thead>
<tr>
<th>Vibration-Velocity Level</th>
<th>Human Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 VdB</td>
<td>Approximate threshold of perception.</td>
</tr>
<tr>
<td>75 VdB</td>
<td>Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.</td>
</tr>
<tr>
<td>85 VdB</td>
<td>Vibration acceptable only if there are an infrequent number of events per day.</td>
</tr>
</tbody>
</table>

Notes: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.  
Source: FTA 2006:7-8

**Sound Propagation**

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

**Geometric Spreading**

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

**Ground Absorption**

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.
**Atmospheric Effects**

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Sound levels can be increased at large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

**Shielding by Natural or Human-Made Features**

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier.

**SENSITIVE LAND USES**

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, schools, historic sites, cemeteries, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Places of worship and transient lodging, and other places where low interior noise levels are essential, are also considered noise-sensitive. Those noted above are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance. In addition, buildings of older age are more prone to vibration-induced damage.

Existing residents and other sensitive land uses located within a quarter mile of the project site of the project include: the White Chief Mountain Lodge, Bear Cub Den, Camp Green Meadows, Jack L. Boyd Outdoor School, Yosemite Forest Lodge, and Yosemite Lodging at Big Creek Inn Bed and Breakfast. The White Chief Mountain Lodge (Lodge) and a residence are the closest sensitive land uses to the project. Refer to Exhibit 4.9-1 for specific locations.

**REGIONAL SETTING**

The rural lifestyle characteristic of the County results in a noise environment that is typically well below 55 dB CNEL. The type of large lot development that predominates in the County provides for adequate site flexibility to located residences away from a potential noise generator. Given the predominant rural lifestyle, common noises heard in the region include chainsaws, barking dogs, tractors, and similar sounds that are associating with rural living. While these sounds may momentarily detract from the quiet aspects of rural life, they are short-term in nature and not considered substantial sources.

Motor vehicle noise occurs in the County; however, as none of the highways in the County serve as interstate truck transportation routes, traffic-related noise remains relatively low as compared to noise from major truck routes on freeways. Off-road vehicles create potential noise problems in the County. During summer months, motorcycles use mountain roads and trails for recreational use. Noise from these vehicles can extend for miles in quieter mountain areas.

Sources of environmental noise such as passenger and freight line railroad operation and ground rapid transit systems, scheduled airport operation, large local industrial plans, and other stationary noise sources do not occur in the County (Mariposa County 2012, pp. 15-1).
LOCAL SETTING

The only significant source of noise in Fish Camp is traffic along State Route (Highway) 41. There are no stationary sources of noise in Fish Camp other than occasional events at the Tenaya Lodge. Fish Camp supports a rural community and experiences short-term rural-related sources of noise (e.g., dogs barking, chainsaws, and snow plows). These noises are intermittent; however, and are not considered adverse (Mariposa County 2013). Fish Camp is located approximately 22 miles from the Mariposa-Yosemite Airport and does not experience any airport noise related impacts.

The project site is located along Highway 41, which comprises the dominant source of noise affecting the project site. The topography of the site in relation to the roadway elevation varies widely through the project site. The closest proposed cabins to Highway 41 are generally approximately 15 to 20 feet below the elevation of Highway 41. The closest proposed cabins are approximately 70 to 200 feet east of Highway 41. The elevation difference between the roadway and the closest cabins provides acoustic shielding to the project site.

4.9.4 Construction and Vibration Criteria

There are no State or federal standards that specifically address construction noise. Additionally, the Mariposa County General Plan does not specifically limit hours during which construction may occur; however, it is common practice to limit hours of construction activity to minimize construction noise impacts in residential areas during the early morning and late evening hours, and on weekends and holidays. Although not specifically stated in the Noise Element, it is also a standard requirement of many jurisdictions that all construction equipment by properly maintained and muffled to minimize noise generation at the source. Additional guidance is provided by Section 14-8.02 of the Caltrans Standard Specifications document which suggests that construction equipment not exceed 86 dB L$_{max}$ at a distance of 50 feet from job site activities from 9 p.m. and 6 a.m. Criteria for long-term (operational) noise is discussed below in Section 4.9.5, “Environmental Impacts and Recommended Mitigation Measures.”

CEQA states that the potential for any excessive ground noise and vibration levels must be analyzed; however, it does not define the term “excessive.” Numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of ground noise and vibration; however, the federal, State, and local governments have yet to establish specific ground noise and vibration requirements. Some guidance is provided by the Caltrans Transportation and Construction Vibration Guidance Manual. The Manual provides guidance for determining annoyance potential criteria and damage potential threshold criteria. These criteria are provided below in Table 4.9-6 and Table 4.9-7, and are presented in terms of PPV and in/sec.

<table>
<thead>
<tr>
<th>Table 4.9-6 Guideline Vibration Annoyance Potential Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human Response</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Barely Perceptible</td>
</tr>
<tr>
<td>Distinctly Perceptible</td>
</tr>
<tr>
<td>Strongly Perceptible</td>
</tr>
<tr>
<td>Severe</td>
</tr>
</tbody>
</table>

Notes: PPV=peak particle velocity, in/sec=inches per second
Source: WJV Acoustics 2016 (see Appendix G of this Draft EIR)
Table 4.9-7  Guideline Vibration Damage Potential Threshold Criteria

<table>
<thead>
<tr>
<th>Structure and Condition</th>
<th>Maximum PPV (in/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transient Sources</td>
</tr>
<tr>
<td>Extremely fragile, historical buildings, ancient monuments</td>
<td>0.12</td>
</tr>
<tr>
<td>Fragile buildings</td>
<td>0.2</td>
</tr>
<tr>
<td>Historic and some old buildings</td>
<td>0.5</td>
</tr>
<tr>
<td>Older residential structures</td>
<td>0.5</td>
</tr>
<tr>
<td>New residential structures</td>
<td>1.0</td>
</tr>
<tr>
<td>Modern industrial/commercial buildings</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Notes: PPV=peak particle velocity, in/sec=inches per second
Source: WJV Acoustics 2016 (see Appendix G of this Draft EIR)

4.9.5  Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA
Based on the Appendix G of the State CEQA Guidelines, noise policies and standards in the Mariposa County General Plan, Mariposa County Short-Term Noise Ordinance and Permanent Noise Standards, and Caltrans and FTA vibration standards, the project would result in a significant impact related to noise or vibration if it would:

- exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without project;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels;
- for a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels; or
- conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects related to noise and vibration.

METHODS AND ASSUMPTIONS
This evaluation takes into consideration impacts of the project on noise levels at off-site receptors. CEQA does not define what constitutes a substantial increase in noise levels. Some guidance is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed changes in ambient noise levels resulting from aircraft operations. The FICON recommendations were developed based on studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the associated noise. The
FICON recommendations assume that annoyance due to transportation can be consistently described in terms of $L_{dn}$ (or CENL). Annoyance is a summary measure of the general adverse reaction of people to noise that results in speech interference, sleep disturbance, or interference with other daily activities.

Although the FICON recommendations were specifically developed to address aircraft noise impacts, for the purposes of this Draft EIR, they are used for analysis of all transportation noise sources that are described in terms of cumulative noise exposure metrics such as $L_{dn}$ or CENL.

To assess potential long-term (operational-related) noise impacts due to project-generated increases in traffic, the FHWA Highway Traffic Noise Prediction Model, the findings of onsite noise level measurements, and traffic data from the traffic study found in Appendix E. The FHWA model is standard analytical method used by State and local agencies for roadway noise prediction. The model is based upon reference energy emission levels for automobiles, and medium- and heavy-duty trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to receiver, and the acoustical characteristics of the site. The model was developed to predict hourly $L_{eq}$ values for free-flowing traffic conditions, and is generally considered to be accurate within ±1.5 dB. To predict $L_{dn}$ values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Noise effects related to airports
The project site is not located within two miles of an active private airstrip or heliport. The closest airport, Mariposa-Yosemite Airport, is located approximately 22 miles west of the project site. The project would not include a heliport as part of the planned development. Further, the project would not be anticipated to increase air traffic and, based on noise monitoring conducted at the site, would not expose onsite receptors to excessive noise levels related to airport operations associated with the Mariposa-Yosemite Airport. No noise impacts due to airport operations would occur and this issue is not discussed further.

IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.9-1: Project traffic noise impacts on existing noise-sensitive land uses outside project site

Implementation of the project would result in a maximum traffic noise increase of 0.3 dB on Highway 41 through Fish Camp. Noise increases of less than 1 dB would not be perceptible. No sensitive receptors would be exposed to substantial increases in traffic noise. Further, the topography of the project site provides natural shielding from traffic-related noise from Highway 41. This impact would be less than significant.

Project implementation would result in an increase in average daily traffic volumes on Highway 41 and subsequently an increase in traffic noise levels. Generally, a doubling of a noise source (such as twice as much traffic) is required to result in an increase of 3 dB, which is perceived as barely noticeable by people. To assess traffic-related sources of noise, the Mariposa County Noise Element land use compatibility criterion of 60 dB $L_{dn}$ for exterior noise levels in outdoor activity areas of residential and transient lodging developments was applied. Additionally, the interior noise level thresholds of 45 dB $L_{dn}$ attributable to external transportation noise sources provides what is considered acceptable noise environment for indoor communication and sleep.

Traffic noise exposure for existing (2016) and Future (2040) traffic conditions were calculated based upon the FHWA Model and the traffic study found in Appendix E. Noise exposure was calculated for both no project and plus project conditions. Table 4.9-8 provides these noise exposure levels at a reference distance of 75 feet from the center of Highway 41. From Table 4.9-8 it can be determined that traffic noise exposure at existing residential land uses in the project vicinity would be expected to increase by approximately 0.3 dB as a result of project implementation, and is not considered to be a significant increase. It should be noted that although traffic noise levels described in Table 4.9-8 exceed the County’s applicable exterior noise level standard of 60 dB $L_{dn}$ (at a reference setback of 75 feet from the roadway), this exceedance is not a result of
the project and therefore does not indicate a project-related impact. Most residential setbacks in the project vicinity are greater than 75 feet from the center of Highway 41. Further, noise levels described in Table 4.9-8 do not take into consideration any topographic shielding that would occur, and are considered to be a worst-case assessment of traffic noise levels in the project area. This impact would be less than significant.

<table>
<thead>
<tr>
<th>Table 4.9-8 Existing (2016) and Future (2040) Traffic Noise Levels, dB $L_{dn}$ at Vicinity of Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Name</td>
</tr>
<tr>
<td>State Route 41</td>
</tr>
</tbody>
</table>

Significant Impact? | No | No |

Notes: dB = decibels, $L_{dn}$=day-night noise levels
A. At a typical residential setback (assumed to be 75 feet from the center of the roadway).
Source: WJV Acoustics 2016 (see Appendix G of this Draft EIR)

Mitigation Measures
No mitigation is required.

Impact 4.9-2: Noise impacts from onsite noise sources

The Tenaya Cabins Project would include operation of new stationary sources: a speaker system and diesel powered generator, both associated with the clubhouse. Noise generated from newly introduced stationary sources would produce noise levels that would exceed the applicable County noise standards of 50 dB $L_{eq}$ for daytime hours and 40 dB $L_{eq}$ for nighttime house. This would be a significant impact.

This impact assesses the long-term exposure of sensitive receptors to increased operational-source noise levels from the project. This analysis evaluates non-transportation noise sources that would occur as a result of project operation. As discussed in Section 4.9.2, “Regulatory Setting,” Table C-1 of Appendix C of the Mariposa County Noise Element establishes hourly performance standards in terms of $L_{eq}$ (see Table 4.9-2). However, the standards are to be adjusted by -5 dB if the noise source of concern consists primarily of speech and music. The ordinance is to be applied during any one-hour time period of the day or night and the standards are 10 dB more restrictive during the nighttime hours of 10:00 p.m. to 7:00 a.m. For the purposes of this analysis, all noise sources considered below are evaluated against the following County noise limits for noise exposure to sensitive receptors:

- Daytime (i.e., 7:00 a.m. to 10:00 p.m.) noise standards of 50 dB $L_{eq}$.
- Nighttime (i.e., 10:00 p.m. to 7:00 a.m.) noise standards of 40 dB $L_{eq}$.

Amplified Speech and Music
The project would include a 2,700 square-foot multi-use clubhouse that would be utilized for guest registration, administrative office, and recreational activities. Clubhouse activities could include breakfast, happy hour, and gatherings such as weddings and banquets. The building would also include laundry facilities, vending machines, a small retail grocery facility, and a residential style kitchen. Amplified sound for events at the clubhouse would conclude at 10:00 p.m.; however, events could continue past that time.

As discussed in Appendix G, to assess potential noise levels produced by amplified speech and music at the clubhouse, reference noise measurements in the vicinity of the clubhouse on November 1, 2015 were conducted. The volume of the speaker was set as to approach maximum levels of approximately 80 dB at a distance of 75 feet, which would be typical of an outdoor event. One sound level meter was placed at the 75-foot reference location and two sound level meters were placed in the vicinity of the nearby noise sensitive land uses (residence and lodge) to the north of the project site. Exhibit 4.9-2 provides the locations of the speaker system and the two monitoring meters. The meters were time synced to each other and programmed to measure one minute intervals. See Appendix G for more details.
Exhibit 4.9-2

Noise Monitoring Locations

Source: WJN Acoustics, Inc. 2016, adapted by Ascent Environmental in 2016
Table 4.9-9 shows that clubhouse noise levels with amplified music slightly exceeded the County’s applicable 50 dB L_{eq} daytime noise level standard during one of the four intervals at the residential site. As indicated in Table 4.9-9 (see footnotes), the first two measurement intervals were conducted while the speaker system faced south, away from the noise sensitive uses and noise monitoring site. The second two intervals were conducted while the speaker system face north, toward the noise sensitive uses. Noise levels measured while the speaker system faced south were similar to those observed while the speaker system was not operational. Further, noise levels measured while the speaker system faced north were lower at the lodge than the residence due to variations in topographic shielding.

<table>
<thead>
<tr>
<th>Time</th>
<th>dB, L_{eq} at 75 feet</th>
<th>dB, L_{eq} Residence at 750 feet</th>
<th>dB, L_{eq} Lodge at 700 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:26 p.m.</td>
<td>60.6</td>
<td>38.6</td>
<td>40.1</td>
</tr>
<tr>
<td>3:27 p.m.</td>
<td>60.2</td>
<td>40.0</td>
<td>42.0</td>
</tr>
<tr>
<td>3:28 p.m.</td>
<td>76.0</td>
<td>50.9</td>
<td>44.7</td>
</tr>
<tr>
<td>3:20 p.m.</td>
<td>71.2</td>
<td>46.3</td>
<td>42.0</td>
</tr>
</tbody>
</table>

Notes: dB= decibels, L_{eq}=noise equivalency level
1 Speakers facing south (away from residences)
2 Speakers facing north (toward residences)
Source: WJV Acoustics 2016 (see Appendix G of this Draft EIR)

The project would also entail a General Plan/Specific Plan amendment to rezone a portion of the project site to a 0.5-acre residential parcel. Although no development is currently planned for the parcel, it would be expected that a future residence would be constructed on the parcel, which is located approximately 200 feet south of the proposed clubhouse location.

As discussed in Appendix G, noise measurements were taken in the vicinity of the 0.5-acre parcel (potential future residence) while amplified music was played by the speaker system. When the speaker system faced south, noise levels were measured to be 64.5 dB Leq; when the system faced north, noise levels were measured to be 51.9 dB Leq. Such levels would exceed the County’s applicable daytime noise level standard (50 dB L_{eq}) if/when the parcel is developed.

**Emergency Generator**

The project would include an emergency generator to be located in the vicinity of the clubhouse. The generator would be operated during power outages, on an as-needed basis. Additionally, the generator could be operated for maintenance and testing; however, the frequency of this activity is unknown at the time of writing this Draft EIR. The exact make and model of the emergency generator is also unknown, but is expected to be a 200 kilowatt (kW) diesel powered generator.

As explained in Appendix G, the manufacturer-supplied specifications sheets for multiple 200 kW diesel powered generators were reviewed to estimate potential noise levels at the project site. The sheets indicated that 200 kW diesel powered generators produce noise levels in the range of approximately 75 to 85 dB at a reference distance of 23 feet (7 meters). For the purposes of this Draft EIR, the conservative parameter of 85 dB was applied for a distance of 23 feet.

The topographic shielding between the clubhouse location and the nearby lodge (approximately 700 feet from the clubhouse) and closest residence (approximately 750 feet from the clubhouse) provides about 10 to 5 dB of acoustical shielding, respectively. Using the assumed generator noise level of 85 dB at a distance of 23 feet, the typical attenuation of noise from a distance from a point source (approximately 6 dB per doubling of distance) and the topographic shielding found in the project site, estimated generator-related noise levels at the lodge and residence would be approximately 45 and 50 dB, respectively.
The noise levels described indicated that generator-related noise would not exceed the County threshold for daytime hours (50 dB L_{dn}); however, generator-related noise levels could exceed the 40 dB L_{eq} standard during nighttime hours for the nearby lodge if continuously operated during a one-hour period.

Summary
Development of the project would result in the operation of new stationary noise sources, a speaker system and 200 kW diesel powered generator (when needed). Operation of these sources could produce noise levels that exceed the County hourly daytime and nighttime allowable noise levels (i.e., 50 dB L_{eq} and 40 dB L_{dn}) for nearby receptors, including the Lodge, nearby residence, and potential future development on the 0.5-acre parcel. This would be a significant impact.

Mitigation Measures

Mitigation Measure 4.9-2: Reduce noise exposure to sensitive receptors from new stationary noise sources
The project applicant shall implement the following measures to reduce the effect of noise levels generated by onsite stationary noise sources.

- The applicant shall assess the level of noise generated by the clubhouse speaker system depending on what model of speaker is chosen to determine the locations and settings for the speakers so that they operate at noise levels that do not exceed County standards (i.e., 50 dB L_{eq} during daytime hours and 40 dB L_{dn} during nighttime hours) at any existing or planned sensitive receptor. The speaker locations and settings shall be reviewed and approved by the County. The clubhouse speaker system shall be recalibrated once a year to ensure that it continues to operate in compliance with the County noise standards. The results of the calibration, including monitored noise levels, shall be provided to the County. If an exceedance of County standards occurs, the speaker system shall be recalibrated, volumes shall be lowered if necessary, and the system shall be re-reviewed by the County to demonstrate compliance with the County standards.

- Routine testing and preventive maintenance of the emergency diesel generator shall be conducted during the less sensitive daytime-business hours (i.e., 7:00 a.m. to 5:00 p.m.). The generator shall be equipped with noise control (e.g., muffler) devices in accordance with manufacturers’ specifications.

Significance after Mitigation
Implementation of Mitigation Measure 4.9-2 would require that the project’s stationary noise sources are oriented, located, and designed in such a way that reduces noise exposure. Therefore, the project’s stationary noise sources would comply with the County noise standards for sensitive receptors, reducing this impact to a less than significant level.

Impact 4.9-3: Transportation noise impacts to onsite proposed noise-sensitive uses
The County has adopted policies that recommend exterior and interior noise criterion of 60 dB L_{dn} and 45 dB L_{dn}, respectively. Noise analysis conducted from the cabins located nearest Highway 41 conclude an exterior noise level of 57 dB L_{dn}. Further, it would be expected that compliance with standard construction practices would lower interior noise levels by up to 25 dB, which would result in an interior noise level of approximately 32 dB L_{dn}. These values demonstrate compliance with County standards. This impact would be less than significant.

The Mariposa County Noise Element land use compatibility criterion of 60 dB L_{dn} for exterior noise levels in outdoor activity areas of residential and transient lodging developments was applied to the project (Table 4.9-3, above). This criterion would apply to project-related private decks, seating areas, and common use areas (e.g., fire pits). The project would also have to comply with the County interior noise criterion of 45 dB L_{dn}. The FHWA model and noise modeling assumptions performed for the project concluded that the worst-
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Mariposa County

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case traffic noise exposure to the proposed cabins to Highway 41 was at or below approximately 57 dB L_{dn}. These levels are below the County’s land use compatibility criterion of 60 dB L_{dn} for exterior noise levels and would, therefore, be less than significant.

With respect to interior noise levels for the cabins located closest to Highway 41, the project would be expected to comply with standard construction methods to produce at least a 12 dB outdoor-to-indoor noise level reduction in order to achieve the County’s recommended maximum interior noise level of 45 dB L_{dn} (Table 4.9-3). Normal construction practices would entail installation of walls and windows with sufficient noise insulation such that a 25 dB reduction could occur. Assuming a 25 dB reduction could be achieved, interior noise levels would be substantially lower than the County criterion. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Impact 4.9-4: Short-term construction-related noise

Project construction activities would involve the use of heavy-duty construction equipment. Construction noise impacts would occur over approximately 6 months for off-site receptors. Construction activities could result in a substantial increase in ambient noise levels. This impact would be potentially significant.

Project implementation would result in construction noise at various locations within and near the project site through build-out period. During the construction phase of the project, noise from construction activities would potentially affect noise-sensitive land uses in the immediate area. The distance from the closest residence to the project site is approximately 70 feet. Construction activities could, at times, occur closer than 70 feet from the closest existing residential land use. Table 4.9-10 provides typical construction-related noise levels at a distance of 50 feet. Construction activities would be inherently short-term and would most likely occur only during daytime hours. Construction noise effects could result in annoyable or sleep disruption for nearby residents if nighttime operations were to occur if equipment is not properly muffled or maintained.

<table>
<thead>
<tr>
<th>Table 4.9-10</th>
<th>Typical Equipment Noise Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Activity and Equipment</td>
<td>Noise Level (L_{eq}) at 50 feet</td>
</tr>
<tr>
<td>Excavation/Stockpile (Backhoe)</td>
<td>80</td>
</tr>
<tr>
<td>Excavation/Stockpile (Loader)</td>
<td>85</td>
</tr>
<tr>
<td>Scraper/Excavator (used to represent a box scraper)</td>
<td>85</td>
</tr>
<tr>
<td>Paving (Concrete Mixer Truck)</td>
<td>85</td>
</tr>
<tr>
<td>Paving (Concrete Pump)</td>
<td>82</td>
</tr>
<tr>
<td>Paving (Paver)</td>
<td>89</td>
</tr>
<tr>
<td>Construction (Fork Lift)</td>
<td>85</td>
</tr>
<tr>
<td>Construction (Trucks)</td>
<td>84</td>
</tr>
</tbody>
</table>

Notes: Assumes all equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer-specified noise levels for each piece of heavy construction equipment. L_{eq}=Maximum noise levels

Source: FTA 2006

Temporary increases in traffic noise levels as a result of construction crews and equipment entering and exiting the project site could occur. Although construction-related traffic noise is transient in nature, construction activities performed during nighttime hours could have an adverse effect on nearby noise-sensitive land uses. This would be a potentially significant impact.
Mitigation Measures

Mitigation Measure 4.9-4: Restrict construction hours and apply noise-reducing mufflers to construction equipment

The County shall require the applicant to implement the following noise reduction measures during construction activities:

- All construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. for Monday through Friday and 9:00 a.m. to 8:00 p.m. on weekends and legal holidays.

- All construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Equipment engine shrouds shall be closed during equipment operation.

Significance after Mitigation

Implementation of Mitigation Measure 4.9-4 would ensure that noise-inducing construction equipment would be operated during daytime hours and that all available noise-reducing technology would be installed on equipment. This impact would be reduced to a less-than-significant level.

Impact 4.9-5: Vibration-related impacts

Project implementation would require the use of construction equipment that may generate limited vibration; however, construction activities are not anticipated to result in substantial vibration such that nearby sensitive receptors would be affected. This would be a less-than-significant impact.

The dominant sources of man-made vibration are sonic booms, blasting, pile driving, pavement breaking, demolition, diesel locomotives, and rail-car coupling. None of these sources would occur as a result of project implementation. Vibration from construction activities could be detected at the closest sensitive land uses, especially during movements by heavy equipment or loaded trucks and during some paving activities (if they were to occur). Typical vibration levels at distances of 25 feet and 100 feet are summarized in table 4.9-11.

<table>
<thead>
<tr>
<th>Table 4.9-11 Typical Vibration Levels During Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Activity and Equipment</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Bulldozer (Large)</td>
</tr>
<tr>
<td>Bulldozer (Small)</td>
</tr>
<tr>
<td>Loaded Truck</td>
</tr>
<tr>
<td>Jackhammer</td>
</tr>
<tr>
<td>Vibratory Roller</td>
</tr>
</tbody>
</table>

Notes: PPV=Peak Particle Velocity, in/sec=inches per second
Source: WJV Acoustics 2016 (see Appendix G of this Draft EIR)

After full project build out, operational activities would not result in any vibration impacts to nearby sensitive uses. Activities involved in trash bin collection could result in minor onsite vibrations as the bin is placed back onto the ground. Such vibrations would not be expected to be felt at the closest off-site sensitive uses. This impact would be less than significant.

Mitigation Measures

No mitigation is required.
4.10  GEOLOGY, SOILS, AND SEISMICITY

This chapter describes the physiography of the Tenaya Cabins (project) area, including geology, soils, seismic setting, and seismic hazards, and presents and analysis of the potential geologic hazards and soils impacts associated with implementation of the project. Regulations and guidelines established by local jurisdictions, along with the California Environmental Quality Act (CEQA) statute and guidelines, provide the regulatory background that guides the assessment of potential environmental effects to these resources. The potential environmental effects of soil erosion on water quality and other stormwater issues are addressed in Section 4.11, “Hydrology and Water Quality.” Cumulative impacts to geology, soils, and seismicity are addressed in Chapter 5, “Cumulative Impacts.”

4.10.1  Regulatory Background

FEDERAL

National Earthquake Hazards Reduction Act
In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and, accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRP agencies include the National Institute of Standards and Technology, National Science Foundation, and U.S. Geological Survey.

STATE

Surface Mining and Reclamation Act of 1975
The Surface Mining and Reclamation Act of 1975 (California Public Resources Code [PRC] Section 2710 et seq.) (SMARA) provides for the classification of non-fuel mineral resources in the state to show where economically significant mineral resources occur or are likely to occur. Classification is carried out under the Mineral Land Classification Project under the direction of the State Geologist. Once lands have been classified, they may be designated by the State Mining and Geology Board (SMGB) as mineral-bearing areas of statewide or regional significance if they are located in areas where urban expansion or other irreversible land uses may occur that could restrict or preclude future mineral extraction. Designation is intended to prevent future land use conflicts, and occurs only after consultation with lead agencies and other stakeholders.

The California Department of Conservation (DOC) Division of Mines and Geology (DMG) has developed guidelines for the classification and designation of mineral lands, known as Mineral Resource Zones (MRZs) and retains a list of publications of the SMARA Mineral Land Classification Project dealing with mineral resources in California. The project site is not located within a mapped MRZ (Mariposa County 2015a).

Alquist-Priolo Earthquake Fault Zoning Act
The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (Public Resources Code [PRC] Section 2621-2630) intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors and prohibiting the location of most types of structures intended for
human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as active and inactive and establishes a process for reviewing building proposals in Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across these zones is strictly regulated if they are “sufficiently active” and “well-defined.” A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as within the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Hart and Bryant 2007). Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act
The intention of the Seismic Hazards Mapping Act of 1990 (PRC Section 2690–2699.6) is to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The act’s provisions are similar in concept to those of the Alquist-Priolo Act: The State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for projects in Seismic Hazard Zones until appropriate site-specific geologic or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

California Building Code
The California Building Code (CBC) (California Code of Regulations, Title 24) is based on the International Building Code (IBC). The IBC Seismic Zone Map of the United States places Fish Camp (project area), within Seismic Hazard Zone III, which corresponds to an area that may experience damage due to earthquakes having moderate intensities of V or more on Modified Mercalli Scale, which corresponds to maximum momentum magnitudes of 4.9 or greater. The CBC has been modified from the IBC for California conditions with more detailed and/or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. 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 contains a provision that provides for a preliminary soil 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 §1803.1.1.1)

LOCAL

Mariposa County General Plan
The relevant policies of the Mariposa County General Plan (2015a) Safety Element with respect to seismic and geologic hazards are listed below:

Goal 16-7: Protect life and property endangered by landslides and rockfalls.

- Policy 16-7a: Reduce risk of injury or property damage by landslides and rockfalls.
- Policy 16-7b: Avoid development in geologic hazard areas.
Goal 16-8: Protect life and property endangered by seismic activity.

- Policy 16-8a: Develop and enforce standards to reduce risk of injury or property damage by seismic activity.

Goal 16-9: Engineer and locate development in areas not endangered by secondary seismic effect to protect life and property.

- Policy 16-9a: Develop and enforce standards to reduce risk of injury or property damage by secondary effects of seismic activity.

Mariposa County Code
The Mariposa County Building and Construction Code (Title 15 Chapter 10) adopts the CBC by reference through County Ordinance 1073, with modifications. Modifications to the Code relate largely to administration and enforcement, and do not provide additional regulations relating to clearing and grading procedures.

Fish Camp Town Planning Area Specific Plan
The Fish Camp TPA Specific Plan contains the following policies and procedures that are relevant to the project (Mariposa County 2016):

Section VII C. Topography and Soil Erosion
- Policy VII.C-1. All development in the slopes areas of Fish Camp with grades of 15 percent or greater should take place at minimum densities. Development in such areas can take place using the Planned Development Overlay to maintain densities projected in each land use.
- Policy VII.C-2. All subdivisions proposed on slopes of 15 percent or greater should be required to prepare engineered geologic and soils reports prior to the approval of the subdivisions. Such reports will provide valuable information regarding the structure and stability of the soils and underlying geology.
- Policy VII.C-3. All subdivision roads should be fully engineered including erosion and drainage control measures. Such measure may include surface drainage protection, sediment basins, and physical grade stabilization structures, in addition to the standard seeding and mulching practices.
- Policy VII.C-4. All soils affected by grading and vegetation removal should be revegetated using the specific recommendations provided by the Soil Conservation service.
- Policy VII.C-5. All proposed subdivisions should provide for future maintenance of erosion control measures and drainage facilities.
- Policy VII.C-6. All development proposals shall be reviewed to ascertain possible geologic hazards. If such hazards are identified, specific mitigating measures should be developed and implemented.

4.10.2 Existing Environmental Setting

GEOLOGY AND SOILS

Regional Geology
The regional geology is dominated by the Mesozoic granitic complexes of the western Sierra Nevada Batholith. Estimates of the intrusions that formed the Serra Nevada Batholith are placed between 64 and 135 million years old. The Fine Gold and Yosemite Valley intrusive suites of the western Sierra Nevada characterize the region immediately surrounding the project area.
Local Geology
Locally, the Fish Camp area is predominantly Bass Lake tonalite, an early cretaceous plutonic unit of the Fine Gold intrusive suite. This unit outcrops over an area of approximately 800 square miles of the western Sierra Nevada, and is typical of Sierra Nevada intrusives in composition, exhibiting a foliated, medium-grained crystalline structure of quartz and plagioclase feldspar (Bateman 1989). Limited outcrops of tertiary volcanic andesite occur in the northeastern area of Fish Camp, near the project area. These rocks were emplaced by volcanic flows originating from vents in the Sierra Nevada approximately 20 million years ago. Such flows were similar to hot mud in appearance and physical character, and often followed stream channels. The low ridge north of Big Creek, Highway 41, and the project area were the site of a volcanic flow.

Well completion reports for existing groundwater wells in the area were collected to evaluate subsurface geologic conditions. These well completion reports indicate that the granitic material mapped at the surface extends to over 1,200 feet below ground surface (bgs). The well completion reports generally also show a thin soil horizon over a zone of weathered granitic material above massive yet fractured granitic material. The fractures identified in the well completion reports occur at varying depths and elevations. This is a pattern typical of mountainous terrain (Todd Groundwater 2016).

Soils
Soils in the project area are poorly-developed mountain soils with a shallow depth profile. Depth to weathered bedrock is observed between 36 and 60 inches, and depth to bedrock is between 60 and 80 inches. The Natural Resources Conservation Service (NRCS) Soil Survey of Mariposa County (NRCS 2016) indicates that the following soil unit occurs beneath the project site (Exhibit 4.10-1).

- **Chaix-Holland families complex (124), 15 to 35 percent slope:** The families that comprise this soil complex, Chaix and Holland, are shallow mountain soils comprised primarily of sandy loam, with some clay. The Chaix and Holland families are classified in Hydrologic Soil Group B. Soils in Hydrologic Group B exhibit moderately low runoff potential when thoroughly wet, and do not exhibit episodes of ponding or flooding. Some soils having loam, silt loam, silt, or sandy clay loam textures (as in the Chaix-Holland families complex) are placed Hydrologic Soil Group B if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments.

- **Waterwheel-Humic Dystroxerepts complex (285yp), 15 to 45 percent slope:** The main families that comprise this soil complex are the Waterwheel and Humic Dystroxerepts soils, which are both shallow mountain and landslide soils. They are comprised primarily of sandy loam and loamy sand, which coarsens with depth. They belong to Hydrologic Soil Group A, which have low runoff potential and high infiltration rates even when thoroughly wet.

The project area is characterized by jointed, weathered subsurface rock, which acts as a conduit for groundwater flow. This flow can be highly localized because it is dependent on the specific nature of jointing and fracture patterns. Well log results show that there is a great deal of variability in the depth to groundwater at a local scale. The static groundwater table measured in wells in the vicinity of the project area is below the depth of soil cover in the area; depths for many wells within the project boundary and within the vicinity are well in excess of 100 feet or more. However, a single well adjacent to the property exhibited groundwater at a depth of 4.9 feet (59 inches) (Todd Groundwater 2016). These results indicate that the soils in the project area are very well-drained, low-runoff soils.

SEISMIC HAZARDS
The state of California contains a number of significant, active faults, and is highly susceptible to earthquakes, and therefore is predisposed to earthquake hazards. California has addressed these hazards to public safety and property through identification and regulations. Zones of required investigation for possible earthquake faulting, landslides, and liquefaction are delineated and distributed to cities, counties, and state construction agencies to help identify where higher building standards may be necessary for safe development.
Seismic hazards resulting from earthquakes include ground rupture along a fault line, also called surface rupture, ground shaking, liquefaction, subsidence, and mass wasting. Each of these potential hazards is discussed below.

Ground Shaking
The intensity of seismic shaking, or strong ground motion, during an earthquake is dependent on the distance and direction from the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions of the surrounding area. Ground shaking could potentially result in the damage or collapse of buildings and other structures. The project area is outside the zone of impact from active faults nearest to the project area (Table 4.10-1), and as a result these faults would produce minimal ground shaking in the area of the project.

Faults
Most earthquakes originate along fault line. A fault is a fracture in the Earth’s crust along which rocks on one side are displaced relative to those on the other side due to shear and compressive crustal stresses. Most faults are the result of repeated displacement that may have taken place suddenly and/or by slow creep (Hart and Bryant 2007: p. 3). The state of California has a classification system that designates faults as either active, potentially active, or inactive depending on how recently displacement has occurred along them. Faults that show evidence of movement within the last 11,000 years (the Holocene geologic period) are considered active, and faults that have moved between 11,000 and 1.6 million years ago (comprising the later Pleistocene geologic period) are considered potentially active.

The project area is located within a region of California that has relatively low seismic activity and corresponding seismic hazard. The gentle western flank of the Sierra Nevada mountains does not exhibit active fault zones, contrasting with the sharp eastern flank that is marked by many normal-type basin and range faults.

There are no mapped faults in the immediate vicinity of the project area. The nearest fault systems include the Melones, Foothills, and Bear Mountains Fault Systems (Table 4.10-11). The Melones and Bear Mountains Fault Zones represent the easternmost and westernmost strands of the Foothills Fault Zone, respectively. None of these fault systems have exhibited Quaternary activity (within the past 1.6 million years) along their southern reaches in the areas closest to the project site. The Melones Fault System has experienced some activity during the Late Quaternary (<130,000 years ago) in the area immediately surrounding New Melones Lake, which is a distance of approximately 56 miles from the project site. There is also evidence for Quaternary activity along the Bear Mountains Fault Zone in the area immediately north of the Bear Mountains, a distance of approximately 75 miles from the project site. These fault systems are not recognized as seismically active systems. The nearest seismically active fault zones include the basin and range-style extensional faults of the Hartley Springs, Hilton Creek, and Silver Lake fault zones approximately 35 miles east of the project site (Table 4.10-1; Jennings and Bryant 2010). Regional mapping of the earthquake shaking potential for the state places the project site within the lowest level of earthquake hazard in the state. Furthermore, almost all of Mariposa County, including the Fish Camp TPA, falls within the lowest earthquake hazard zone of 10-20 percent probability. No earthquakes with a magnitude above 5.0 have occurred in Mariposa County between 1800 and the present. There were a number of earthquake incidents in 1997, but all were of magnitude 2.7 or less. The majority of the County falls within the low-risk category for seismic activity (Mariposa County 2015b). However, it is possible that very infrequent earthquakes could produce shaking that could be felt at the project site.
Table 4.10-1  Nearby Faults

<table>
<thead>
<tr>
<th>Fault or Fault Zone</th>
<th>Distance from Project Site</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melones Fault Zone</td>
<td>15 miles</td>
<td>Late Quaternary (&lt;130,000 years ago) to Quaternary (&lt;1.6 million years ago)</td>
</tr>
<tr>
<td>Foothills Fault Zone</td>
<td>22 miles</td>
<td>Late Quaternary to Quaternary</td>
</tr>
<tr>
<td>Bear Mountains Fault Zone</td>
<td>79 miles</td>
<td>Late Quaternary to Quaternary</td>
</tr>
<tr>
<td>Rawhide East Flat Fault (Foothills Fault System, southern reach)</td>
<td>55 miles</td>
<td>Late Quaternary</td>
</tr>
<tr>
<td>Rawhide Flat East Fault (Foothills Fault System, southern reach)</td>
<td>55 miles</td>
<td>Late Quaternary</td>
</tr>
<tr>
<td>Bowie Flat Fault (Foothills Fault System, southern reach)</td>
<td>55 miles</td>
<td>Late Quaternary</td>
</tr>
<tr>
<td>Green Springs Run Fault (Foothills Fault System, southern reach)</td>
<td>55 miles</td>
<td>Late Quaternary</td>
</tr>
<tr>
<td>Negro Jack Point Fault (Foothills Fault System, southern reach)</td>
<td>55 miles</td>
<td>Late Quaternary</td>
</tr>
<tr>
<td>Poomran Gulch Fault (Foothills Fault System, south central reach)</td>
<td>76 miles</td>
<td>Late Quaternary</td>
</tr>
<tr>
<td>Haupt Creek Fault (Foothills Fault System, south central reach)</td>
<td>75 miles</td>
<td>Quaternary</td>
</tr>
<tr>
<td>Youngs Creek Fault (Foothills Fault System, south central reach)</td>
<td>75 miles</td>
<td>Quaternary</td>
</tr>
<tr>
<td>Waters Peak Fault (Foothills Fault System, south central reach)</td>
<td>80 miles</td>
<td>Quaternary</td>
</tr>
<tr>
<td>Lone Fault (Foothills Fault System, south central reach)</td>
<td>86 miles</td>
<td>Late Quaternary</td>
</tr>
<tr>
<td>Hartley Springs Fault Zone</td>
<td>35 miles</td>
<td>Holocene (&lt;15,000 years ago)</td>
</tr>
<tr>
<td>Hilton Creek Fault Zone</td>
<td>40 miles</td>
<td>Seismically Active (&lt;150 years ago)</td>
</tr>
<tr>
<td>Silver Lake Fault</td>
<td>35 miles</td>
<td>Holocene¹</td>
</tr>
</tbody>
</table>

Source: Jennings and Bryant 2010.

¹ Only Holocene-age faults are considered potentially active.

Surface Fault Rupture
Surface rupture is the surface expression of movement along a fault. Structures built over an active fault can be torn apart if the ground ruptures. The potential for surface rupture is based on the concepts of recency and recurrence. Surface rupture along faults is generally limited to a linear zone a few meters wide. The Alquist-Priolo Act (see the Regulatory Setting discussion above) was created to prohibit the location of structures designed for human occupancy across, or within 50 feet of, an active fault, thereby reducing the loss of life and property from an earthquake. The project site is not located within an Alquist-Priolo active fault zone (Hart and Bryant 2007), and there is no evidence of active faulting within the project site.

Liquefaction and Lateral Spreading
Liquefaction is a phenomenon in which loose, saturated, granular soil deposits lose a significant portion of their shear strength because of excess pore water pressure buildup. Cyclic loading, such as an earthquake, typically causes the increase in pore water pressure and subsequent liquefaction. These soils are liquefied during seismic shaking and re-solidify when shaking stops. The potential for liquefaction is highest in areas with high groundwater and loose, fine, sandy soils at depths of less than 50 feet. According to mapping
conducted pursuant to the Alquist-Priolo Act, the project site and surround area are not on a site of potential liquefaction (Hart and Bryant 2007).

Liquefaction may also lead to lateral spreading. Lateral spreading (also known as expansion) is the horizontal movement or spreading of soil toward an “open face,” such as a streambank, the open side of fill embankments, or the sides of levees. It often occurs in response to liquefaction of soils in an adjacent area. The potential for failure from lateral spreading is highest in areas where there is a high groundwater table, where there are relatively soft and recent alluvial deposits, and where creek banks are relatively high. Big Creek flows along the border of the project site; however, because potential liquefaction of soil is not anticipated at the site and because the stream bank of Big Creek is not considered high, the potential for lateral spreading to occur should also be considered minimal.

Subsidence
Land subsidence is the gradual settling or sinking of an area with very little horizontal motion. It occurs because of changes taking place underground. Subsidence can be induced by both natural and human phenomena. Natural phenomena include subsidence resulting from shifting of tectonic plates and dissolution of limestone resulting in sinkholes. Subsidence related to human activity includes pumping water, oil, or gas from underground reservoirs; collapse of underground mines; drainage of wetlands; and soil compaction. Subsidence is not a notable hazard in Mariposa County; therefore, subsidence monitoring does not occur. (Mariposa County 2015c). Conditions at the site (shallow soils underlain by granite bedrock) are not conducive to subsidence.

Mass Wasting and Landslides
Mass wasting refers to the collective group of processes that characterize down slope movement of rock and unconsolidated sediment overlying bedrock. These processes include landslides, slumps, rockfalls, flows, and creeps. Many factors contribute to the potential for mass wasting, including geologic conditions as well as the drainage, slope, and vegetation of the site. Cut and fill slopes (such as road cuts), heavily loaded soils, slopes affected by fire, or areas affected by frost heave can be especially susceptible to mass wasting.

In 2011, the California Geological Survey (CGS) developed a map for the State of California which illustrates susceptibility to deep seated landslides. Deep seated landslides are a type of mass wasting event where the origin of movement is deep in the ground, usually involving regolith (broken rock overlying bedrock) or bedrock. To determine susceptibility, CGS used a methodology based on the location of past landslides, rock strength and distribution, and steepness of slopes. Based on a review of the map and accompanying literature, areas of moderate to high landslide susceptibility have been identified in the mountains north of the project area, with local high to very high susceptibility in the mountains north and east of the project area. The project area itself, however, is located in a part of Mariposa County where landslide susceptibility is rated in the low to moderate range (Landslide Susceptibility Class V) (Wills et al. 2011). This rating also extends to the areas south and west of the project area.

Small-scale mass wasting events affect the County each year, although with a low population density, few have affected communities or infrastructure. Notably however, in April 2006, a series of rain events triggered a costly landslide that inundated SR 140, 7.6 miles west of El Portal, and blocked one of the primary access roads into Yosemite National Park. Since 2004, eight landslide events have been documented in the County, although none of these were recorded in Fish Camp or along Highway 41 (Mariposa County 2015c).

NON-SEISMIC HAZARDS
There are also a number of hazards in which seismic activity does not play a part, or does not play a significant part. These are described below.
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 above). Under normal conditions, these erosive processes control the rate at which erosion occurs, together with physical characteristics of the material being eroded. Anthropogenic activities can accelerate that rate, causing excessive erosion and a wide variety of detrimental effects on the environment including sedimentation of waterways, eutrophication of water bodies, slope instability, ground instability, loss of agricultural productivity through the removal of topsoil, or even desertification.

The granitic masses characteristic to Fish Camp are subject to weathering through jointing patterns and exfoliation. Such weathering causes large masses of granite to break down into smaller fragments which are then more susceptible to rock falls, especially on steeper slopes.

Expansive Soils
Expansive soils (also known as shrink-swell soils) are soils that contain expansive clay minerals that can absorb significant amounts of water into their crystalline structure. The presence of these clay minerals 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. 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. The soils within the project area do not contain any significant amount of clay, and as a result would have a low shrink-swell potential.

4.10.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA
Based on Appendix G of the CEQA Guidelines, the project would have a significant adverse effect related to geology, seismicity, or mineral resources if it:

- exposes people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - 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;
  - strong seismic ground shaking;
  - seismic-related ground failure, including liquefaction;
  - landslides; or
  - avalanche.

- is located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially culminate in an on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

- is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
causes substantial soil erosion or loss of topsoil;

- is located on soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;

- results in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

- results 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.

METHODS AND ASSUMPTIONS

The evaluation of coverage changes and potential geologic and soil impacts is based on a review of documents pertaining to the project study area, including CGS and USGS technical guides; the NRCS 2007 Soil Survey; environmental impact reports; background reports prepared for plans and projects in the vicinity; and published and unpublished geologic literature. The information obtained from these sources was reviewed and summarized to understand existing conditions and to identify potential environmental effects. In determining the level of significance, the analysis assumes that the project alternatives would comply with relevant, federal, state, and local laws, regulations, and ordinances.

Potential geologic and soil effects associated with the project alternatives can be classified as temporary or permanent. Temporary impacts generally include effects associated with construction activities, such as ground disturbance and short-term increases in erosion. Permanent impacts would be associated with proposed facilities, such as impervious surfaces, or potential seismic or geologic hazards associated with the project elements.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Mineral Resources

The project site is not located within a mapped mineral resource zone (Mariposa County 2015a); therefore, there would be no loss in the availability of a known mineral resource of value to the region and the residents of the state. Additionally, there are no locally important mineral resource recovery sites delineated or otherwise identified in the Mariposa County General Plan or the Fish Camp Town Planning Area Specific Plan that are within the project area. Of the four permitted operational mines and quarries in Mariposa County, the closest is the Fremont and Long Consolidated Mine, located a considerable distance – approximately 25 miles west – from the project site. Therefore, no impact to mineral resources would occur, and this topic is not further addressed in this EIR.

Alquist-Priolo Earthquake Fault Zone

The project site is not located in an Alquist-Priolo Earthquake Fault Zone and no known mapped fault rupture traces are present on the site (Hart and Bryant 2007; Jennings and Bryant 2010). The closest fault is the Melones fault, located approximately 8 miles west of the project site (Jennings and Bryant 2010). The Melones Fault does not extend into the project site, and is inactive in the areas nearest to the project. Therefore, there would be no impact related to potential fault rupture, and this topic is not further addressed in this EIR.

Expansive Soils

Soils in the project site are not susceptible to expansion because they do not contain any significant amount of clay material. Therefore, no impact to stability resulting from expansive soils would occur, and this topic is not further addressed in this EIR.
Septic Tanks
No septic tanks would be used for the project. The proposed Tenaya Cabins Project and the potential future single-family residence would be connected to the sewer and wastewater treatment system of the Tenaya Lodge, which includes a new WWTP that provides tertiary treatment. Therefore, there would be no impact related to septic tanks, and this topic is not further addressed in this EIR.

Avalanche Hazard
The project site is not located in a region of high avalanche risk. There would be no impact related to avalanche hazard, and this topic is not further addressed in this EIR.

IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.10-1: Exposure of people or structures to risk of loss, injury, or death resulting from seismically-related ground shaking or seismically-induced hazards

The project area is located in Seismic Hazard Zone III, which corresponds to an area that may experience damage due to earthquakes having moderate intensities (maximum momentum magnitudes of 4.9 or greater). However, seismically active fault zones have been identified in the region. In the event of a very rare, strong earthquake, project components could be subjected to ground shaking. Proposed project structures would be designed and constructed in accordance with the current seismic safety and structural design requirements set forth in the California Building Code. Therefore, there would be no substantial risk of loss, injury, death, or property damage from strong seismic shaking. Furthermore, due to the moderate seismicity of the area, as well as the character of native slope gradients, soils, and rock conditions of the project site, the potential for future instability of the native terrain is considered low. For these reasons, the project would have a less-than-significant impact related to exposure of people or structures to seismic hazards.

There is no regulated Alquist-Priolo Earthquake Fault Zone within the project area or in the regional vicinity of the project; however, there are tectonically active areas to the east of the project, including the Hartley Springs, Hilton Creek, and Silver Lake fault zones. These fault zones are within a distance that could subject the project area to a moderate level of ground shaking, which could result in damage to structures and injury or death to people if they are within structures that fail.

Liquefaction, lateral spreading, and seismic settlement are conditions that can occur from ground shaking during earthquakes. However, the project site has a shallow depth to weathered bedrock, and the surface soils in the project area exhibit high infiltration of runoff. Therefore, the potential for liquefaction, lateral spreading, and settlement is low. Strong seismic ground shaking can also trigger landslides and rock falls; however, the project area is located in a part of the county rated in the low to moderate range for landslide risk. The project site is relatively flat and there are no steep granite slopes or cliffs immediately adjacent to the project site; therefore the risk of damage to structures, and the risk of injury or death to people from falling rocks is minimal.

The proposed cabins, clubhouse, utility connections, and potential future residence would be designed and built in compliance with CBC standards, which account for the maximum considered earthquake ground motion and contain provisions for building placement and design. Therefore, there would be no substantial risk of loss, injury, death, or property damage from strong seismic shaking. With these precautions, the project would have a less-than-significant impact related to exposure of people or structures to seismic hazards.

Mitigation Measures
No mitigation is required.
Impact 4.10-2: Potential for substantial soil erosion or loss of topsoil

Project implementation would require clearing, trenching, and grading associated with the construction of cabins, roadways, utility lines, a clubhouse, and a single family home. Soils may be exposed to increased erosion during construction activities. Sediments carried in runoff from disturbed areas could enter nearby surface waters (Big Creek). Therefore, the project’s potential for soil erosion or loss of topsoil would be potentially significant.

The locations of the concrete pads for the cabins, the roadways, the clubhouse, and the single-family home would need to be cleared and graded for construction. In addition, trenching would occur for utility connections and expansion of the leach field. Topsoil would be removed and stockpiled for reuse on site for landscaping or non-structural areas. Project implementation would limit disturbance and removal of trees, vegetation, or rock formation which could otherwise contribute to increased rates of erosion. All grading would be completed in compliance with the Mariposa County Building and Construction Code (Title 15 Chapter 10), which adopts the CBC by reference through Ordinance 1073. The CBC contains standards for soil compaction, sediment control during construction, and re-vegetation following construction, as well as other standards. Furthermore, the project applicant would revegetate disturbed areas and would implement best management practices (BMPs) according to the guidance of the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction. However, oils exposed from construction activities are highly vulnerable to erosion by stormwater. Stormwater with a high sediment load from erosion can in turn enter into local natural drainages, such as Big Creek, and create problems such as high turbidity and total suspended solids. Therefore, project construction would result in a potentially significant impact related to erosion.

Mitigation Measures

Mitigation Measure 4.10-2: Prepare and implement a stormwater pollution prevention plan

The project applicant shall implement Mitigation Measure 4.11-1, as required in this Draft EIR. The project would require coverage by the statewide General Construction Permit. The General Construction Permit requires implementation of BMPs, monitoring of numeric action levels, and adherence to a site-specific Stormwater Pollution Prevention Plan (SWPPP) prepared to address conditions at the site during construction. Therefore, the project applicant shall prepare and implement a SWPPP, as described in Mitigation Measure 4.11-1.

Significance after Mitigation

Compliance with the General Construction Permit and Mariposa County policies per Mitigation Measure 4.11-1 would reduce potential water quality effects from construction activities to a less-than-significant impact.
4.11 HYDROLOGY AND WATER QUALITY

This chapter describes the physical characteristics of the Tenaya Cabins Project area with regard to surface hydrology, drainage, flooding, groundwater, and water quality. An overview of the applicable laws and regulations related to these resources is presented, as well as an analysis of the environmental effects associated with the implementation of the project.

4.11.1 Regulatory Background

FEDERAL

Clean Water Act
The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Various elements of the CWA address water quality. These are discussed below.

CWA Water Quality Criteria/Standards
Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulation below, the State Water Resources Control Board (SWRCB) and its nine regional water quality control boards (RWQCBs) have designated authority in California to identify and adopt applicable water quality objectives.

CWA Section 303(d) Impaired Waters List
Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that states develop a total maximum daily load (TMDL) for pollutants that caused a water body to become listed. The TMDL is the amount of the pollutant that the water body can receive and still be in compliance with water quality objectives.

In California, implementation of TMDLs is achieved through water quality control plans, known as basin plans. Basin plans contain specific water quality standards, as well as a program of implementation for how those water quality standards may be achieved. A TMDL might be one component of that program. Basin plans, their contents, and the applicability of Section 303(d) are discussed in further detail in the section on state regulations below.

CWA Section 401 and 402 National Pollutant Discharge Elimination System
The NPDES permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the U.S. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. “Nonpoint source” pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or...
discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion of state regulations below).

National Toxics Rule
In 1992, EPA issued the National Toxics Rule (NTR) (40 CFR 131.36) under the CWA to establish numeric criteria for priority toxic pollutants in 14 states and jurisdictions, including California, to protect human health and aquatic life. The NTR established water quality standards for 42 pollutants for which water quality criteria exist under CWA Section 304(a) but for which the respective states had not adopted adequate numeric criteria. EPA issued the California Toxics Rule (CTR) in May 2000. The CTR establishes numeric water quality criteria for 130 priority pollutants for which EPA has issued Section 304(a) numeric criteria that were not included in the NTR.

Federal Antidegradation Policy
The federal Antidegradation Policy, established in 1968, is designed to protect existing uses of waters and water quality and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- existing in-stream uses and the water quality necessary to protect those uses shall be maintained and protected;
- where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and,
- where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

In accordance with the federal Antidegradation Policy, California has adopted an Antidegradation Policy through Resolution No. 68-16. The state Antidegradation Policy is outlined in the discussion on state regulations below.

Safe Drinking Water Act
As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, EPA regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary maximum contaminant levels (MCLs). MCLs and the process for setting these standards are reviewed triennially. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California’s drinking water program to the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW). SWRCB-DDW is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

STATE

California Porter-Cologne Act
California’s primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the nine RWQCBs power to protect water quality, and is the primary vehicle for implementation of California’s responsibilities under the Clean Water Act. The SWRCB
and individual RWQCBs have the authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substances, sewage, or oil or petroleum products.

The Porter-Cologne Act requires that each RWQCB formulate and adopt a water quality control plan (basin plan) for watersheds within its region. The basin plans act as the primary regulatory tool for RWQCBs, and provide the foundation for most actions taken by the RWQCBs. Basin plans must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its state water policy. The Porter-Cologne Act also provides that a RWQCB may include within its Basin Plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Central Valley RWQCB

The applicable RWQCB for the proposed project is the Central Valley RWQCB. Through the powers granted by the Porter-Cologne Act, they have adopted a basin plan for the Central Valley region (Basin Plan) that includes a comprehensive lists of water bodies within the region, as well as detailed language about the components of applicable Water Quality Objectives. The Central Valley RWQCB also administers the adoption of waste discharge requirements (WDRs), manages groundwater quality, adopts projects within its boundaries under the NPDES General Permit for the State, and applies policies adopted by the SWRCB.

Basin Plan

The Central Valley RWQCB implements the Basin Plan for the Central Valley Region, which recognizes natural water quality, existing and potential beneficial uses, and water quality problems associated with human activities in Mariposa County (Central Valley RWQCB 2015). Through the Basin Plan, the Central Valley RWQCB executes its regulatory authority to enforce the implementation of TMDLs, and to ensure compliance with surface WQOs.

The Basin Plan includes narratives and numerical WQOs designed to provide protection for all designated and potential beneficial uses in all its principal streams and tributaries. Applicable beneficial uses include municipal and domestic water supply, irrigation, non-contact and contact water recreation, ground water recharge, fresh water replenishment, hydro-electric power generation, and preservation and enhancement of fish, wildlife, and other aquatic resources (Central Valley RWQCB 2015).

The Basin Plan was originally adopted and approved in 1986 and has been subsequently revised and amended a number of times. The Fourth Edition was revised and approved by the Central Valley RWQCB in June of 2015 (Central Valley RWQCB 2015).

Consistent with Water Code Section 13241, the Basin Plan establishes the WQO “to develop and use recycled water” in the Central Valley (Central Valley RWQCB 2015). In accordance with this objective, the project would entail the use of recycled water for landscape irrigation.

Section 303(d) Impaired Waters

The receiving water body for the project area is Big Creek, which flows into the upper Merced River. Neither Big Creek nor the upper Merced River are on the Section 303(d) list of impaired waters (Central Valley RWQCB 2010); therefore, there no TMDL has been established for Big Creek.

California Waste Discharge Requirements

The California Waste Discharge Requirements (WDR) Program is codified in CCR Title 27 Section 20005 et. seq. and regulates point source discharges that are exempt pursuant to Section 20090 of CCR Title 27, and are not covered under the federal NPDES program. These permits are administered by the local RWQCB and are intended to cover activities or discharges that could affect California’s surface, costal, or ground water not covered by the above programs.

WDRs currently apply to the Tenaya Lodge Wastewater Treatment Plant (WWTP) through RWQCB Order No. 99-086. A summary of these requirements is show in Table 4.11-1.
NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity
The SWRCB adopted the statewide NPDES General Construction Permit in August 1999. The state requires that projects disturbing more than one acre of land during construction file a Notice of Intent with their RWQCB to be covered under this permit. Construction activities subject to the General Construction Permit (General Permit) include clearing, grading, stockpiling, and excavation. Operators are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters through implementation of best management practices (BMPs). BMPs are the controls that an operator can implement to prevent stormwater pollution and erosion. The General Permit identifies specific BMPs, as well as numeric action levels to achieve minimum standards of technology and water quality. Numeric action levels are numeric benchmark values for certain parameters that, if exceeded in effluent sampling, trigger the operator to take appropriate actions.

A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit to prevent construction pollutants from contacting stormwater, and prevent erosion or keep products of erosion from moving off-site into receiving waters. The SWPPP must include the minimum BMPs required by the permit, as well as additional controls for site-specific conditions. These BMPs must address source control and, if necessary, pollutant control.

Low Impact Development – Sustainable Stormwater Management
On January 20, 2005, the SWRCB adopted sustainability as a core value for all California Water Boards’ activities and programs, and directed RWQCB staff to consider sustainability in all future policies, guidelines, and regulatory actions. As part of the effort to promote sustainability, the RWQCBs are advancing Low Impact Development (LID) principles in California in various ways. LID is a sustainability promoting practice that benefits water supply and contributes to water quality protection. Unlike traditional stormwater management, LID uses site design and stormwater management to maintain the site’s pre-development runoff rates and volumes. The goal of LID is to mimic a site’s predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional stormwater management.

California Department of Water Resources

California Water Code
The California Water Code is enforced by the California Department of Water Resources (DWR). The mission of the DWR is “to manage the water resources of California in cooperation with other agencies, to benefit the State’s people, and to protect, restore, and enhance the natural and human environments” DWR is responsible for promoting California’s general welfare by ensuring beneficial water use and development statewide. The laws regarding groundwater wells are addressed in the California Water Code: Division 1, Article 2 and Articles 4.300 to 4.311; and Division 7, Articles 1-4. Further guidance is provided by bulletins published by DWR, such as bulletins 74-81 and 74-90 related to groundwater well construction and abandonment standards.
Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030, and has since been modified by Senate Bill (SB) 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB1168, SB 1319, and AB 1739) in 2014. The intent of the Acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

**Sustainable Groundwater Management Act of 2014**

The Sustainable Groundwater Management Act of 2014 (SGMA)\(^1\) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). SGMA applies to the groundwater basins designated in DWR Bulletin 118 (DWR 2003). By enacting the SGMA, the legislature intended to provide local agencies within designated groundwater basins with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1). Neither the project nor the rest of the Fish Camp area are within a DWR Bulletin 118 designated groundwater basin (DWR 2003), and as such it is not currently affected by SGMA.

**California Antidegradation Policy**

In 1968, as required under the federal Antidegradation Policy described previously, the SWRCB adopted an Antidegradation Policy aimed at maintaining high quality for waters in California. The Antidegradation Policy states that the disposal of wastes into state waters shall be regulated to achieve the highest water quality consistent with maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of the state. The policy provides as follows:

a) Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.

b) Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements.

**California Safe Drinking Water Act**

The California Safe Drinking Water Act ensures clean drinking water for the state. In Mariposa County, all water systems with five or more connections, or a single connection serving at least 25 people per day, 60 or more days per year, are overseen by the State Department of Health Services, Office of Drinking Water. In addition, AB 1803, adopted in 1985, requires monitoring of public drinking water wells for organic chemicals.

**LOCAL**

**Mariposa County General Plan**

The following policies from the *Mariposa County General Plan (2006)* Circulation, Infrastructure, and Services; Open Space; and Safety elements apply to the project.

**Water and Wastewater**

**Goal 9-5:** Adequate water and wastewater services shall be provided to properties in the County.

- **Policy 9-5a:** New projects and subdivisions should be served by basic water and wastewater infrastructure.

**Goal 11-2:** Protect and manage the use of Mariposa County’s limited water resources.

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\(^1\) The SGMA is comprised of three separate bills: Senate Bill 1168, Senate Bill 1319, and Assembly Bill 1739. All three were signed into law by the Governor on September 16, 2014.
Policy 11-2b: Preserve surface and sub-surface water quality.

Erosion
Goal 11-5: Avoid erosion and loss of soils due to development activities.

Policy 11-5a: Minimize impacts of grading activities.

Flood Protection
Goal 16-4: Reduce the risk of flood loss to preserve property and save lives.

Policy 16-4a: Control development in flood hazard areas.
Policy 16-4b: All new construction in a flood hazard area shall be flood proofed.

Goal 16-5: Minimize the impacts of floods on the people and businesses of Mariposa County.

Policy 16-5a: Ensure adequate capacity is maintained in flood plain and drainage channels to handle flood flows.
Policy 16-5b: Minimize the loss of access across floodways and in flood hazard areas.
Policy 16-5c: Water retention facilities shall be constructed to prevent flooding and to ensure that pre-development off- and on-site surface flows are maintained with no net increase.

Mariposa County Local Hazard Mitigation Plan
The adoption of the Disaster Mitigation Act (DMA) in 2000 at the federal level incentivized the development of local hazard mitigation planning. DMA also provided the legal basis for the Federal Emergency Management Agency’s (FEMA’s) mitigation plan requirements for mitigation grant assistance. In June of 2015, Mariposa County adopted a Local Hazard Mitigation Plan (LHMP), which profiles County-related hazards and identifies approaches to prepare and mitigate against such hazards. Mariposa County recognizes flooding as a potential natural hazard to infrastructure and community safety and categorizes County areas into Flood Hazard Areas (Mariposa County 2015b). (See Section 4.13, “Hazards and Hazardous Materials,” for additional information about this Plan.)

Fish Camp Town Planning Area Specific Plan
The following policies related to water and hydrologic resources in the Fish Camp Town Planning Area Specific Plan (Mariposa County 1983) apply to the project area.

Section VII C. Topography and Soil Erosion
Policy VII.C-3. All subdivision roads should be fully engineered including erosion and drainage control measures. Such measure may include surface drainage protection, sediment basins, and physical grade stabilization structures, in addition to the standard seeding and mulching practices.

Policy VII.C-4. All soils affected by grading and vegetation removal should be revegetated using the specific recommendations provided by the Soil Conservation Service.

Policy VII.C-5. All proposed subdivisions should provide for future maintenance of erosion control measures and drainage facilities.

Section VII D. Development and the Effects on Surface Water Resources
Policy VII.D-3. Erosion control measures as explained in Section VII C. should be required for all development proposals.
Policy VII.D-4. Residential and resort commercial development should not be permitted in the Big Creek Flood Channel. The channel area is most appropriate for open space uses and public recreation and park development.

4.11.2 Existing Environmental Setting

CLIMATE

Fish Camp and the surrounding mountains have a warm Mediterranean climate during the summer, and cold and snowy conditions during the winter months. Precipitation in the Fish Camp area generally occurs as rain and snow between November and March. On average, more than half of annual precipitation occurs between December and February. Snowfall generally melts in early to mid-Spring; in most years, snow is completely melted by the beginning of May. Based on climatic records from the National Climatic Data Center Cooperative Observer Program weather station at the South Entrance of Yosemite National Park (WRCC 2015), average annual precipitation in the Fish Camp area is 43.4 inches per year. However, the Fish Camp area, like the rest of California, is currently experiencing a multiple year drought. Average precipitation for the past four water years (water years 2012 through 2015) has been 46 percent of normal, averaging only 20 inches per year. This is the driest four-year period on record for the Fish Camp area.

HYDROLOGY

The Fish Camp area is within the Big Creek sub-watershed of the Merced River Watershed. Big Creek drains approximately 17.5 square miles of mountainous terrain upstream of Fish Camp and the project site. Exhibit 4.11-1 illustrates the Fish Camp sub-watershed of Big Creek. Big Creek flows into Fish Camp from the east, flows along the northeastern boundary of the Tenaya Cabins site, and then flows northward to its confluence with the Merced River in Yosemite National Park. Water in Big Creek is derived from snowmelt and rainfall runoff. Streamflow in Big Creek near Fish Camp has been measured by the U.S. Geologic Survey (USGS 2015) at the location shown on Exhibit 4.11-1. Monthly Big Creek discharge measurements from the USGS gage are shown in Table 4.11-1. The USGS discontinued stream discharge monitoring at this location in late 2012.

The reach of Big Creek adjacent to the project site is typical of western draining creeks in the Sierra Nevada. There is a normal water channel that is well developed, one to two feet in depth and characterized rock bed with soil banks with scattered willow and pine tree growth along the banks. Above the normal water channel is a historic flood plain that is defined by a soil bench area above the normal channel and another set of soil banks set back from the normal channel and that rise 15± feet above the normal water channel.

The reach of Big Creek at the boundary of the Tenaya Cabins Project site has an invert elevation of 4,990 NGVD29 Datum at the upstream end and an invert elevation of 4,985 at the downstream end. This reach has a total streamed length of 1,170 feet and average bed slope of 0.0043. The creek cross sections are irregular in shape, but tend to have steeper left hand slope (looking downstream) and a milder right hand slope. Vegetative cover within the channel consists of scattered willow growth at the normal water line and pines and manzanita brush in the floodplain area.

Rainbow Lake, located on the project site, is small lake is fed by local precipitation runoff and snowmelt and is not connected to Big Creek or other named streams.

HYDROGEOLOGY

The geology of the Fish Camp area is largely defined by the granitic rocks of the western slope of the Sierra Nevada batholith. Detailed information on the surface geology and soils of the area can be found in Chapter 4.10, “Geology, Soils, and Seismicity.” Well completion reports for existing groundwater wells in the area (Exhibit 4.11-2) were collected to evaluate subsurface geologic conditions, and indicate that the granitic material mapped at the surface extends to over 1,200 feet below ground surface (bgs). The well completion
reports generally also show a thin soil horizon over a zone of weathered granitic material above massive yet fractured granitic material. The fractures identified in the well completion reports occur at varying depths and elevations, and are typical of mountainous terrain (Appendix I).

The hydrogeology of the Fish Camp area is typical of granitic mountainous terrain, where groundwater is controlled by the weathering and structure of the bedrock. The occurrence and flow of groundwater is significantly different in fractured bedrock conditions than in unconsolidated sediments (e.g., porous sands and gravels). In this type of hydrogeologic environment, the presence of groundwater and potential capacity of a well is dependent not only on its geographic location and geology, but also on the number and size of fractures encountered where the well is drilled, the degree of connectivity between those fractures and other fractures, and the seasonal and annual recharge of the resulting fracture network.

All water supplies in the Fish Camp area have historically been provided from local groundwater. There are currently eight individual water suppliers in Fish Camp, and some demands that appear to be met by other supplies. The known water suppliers are:

- Tenaya Lodge and Cottages
- Fish Camp Mutual Water Company (FCWMC)
- Yosemite Alpine Community Services District (YACSD)
- Block D Water Service
- Marshall / Casagrande Property
- Yosemite Mountain Ranch
- Camp Green Meadows
- White Chief Mountain Lodge

Each of these entities relies on groundwater from fractured bedrock wells completed in the granitic material (Appendix I). In addition to the wells operated by the current water suppliers, there are also three wells on the planned SilverTip Resort property. These wells and the well currently used to supply Block D are planned to be the source of supply for the planned SilverTip Resort. The known existing active (or planned to be used) production wells in Fish Camp were evaluated in the Groundwater Study provided in Appendix I of this Draft EIR. The evaluation identified 15 known active water supply wells and two springs. See Appendix I for summarized geologic, construction, and capacity information for these wells and springs.

The wells with available information were used to construct cross sections showing the relative surface elevations, total depths, fracture intervals, production capacities, and static water levels of wells along two perpendicular lines of cross section running through the locations of the existing Tenaya Lodge wells and extending north to the SilverTip Resort wells and east to the Camp Green Meadows well. The lines of cross section are shown along with well locations on Exhibit 4.11-3, and the cross sections are shown on Exhibits 4.11-4 and 4.11-5. These cross sections show that the total depths, fractured zones, and static water levels in wells vary widely in the Fish Camp area. There does not appear to be strong correlation between fractured zones encountered in wells. However, the static groundwater elevations do show some correspondence between wells. Specifically, the Tenaya Lodge wells all appear to have similar static groundwater elevations, yet no correlation to most other wells, as shown in Exhibit 4.11-4. There does appear to be some correlation between the static groundwater elevation in Tenaya Lodge Well 4 and FCWMC Well 1, and perhaps the Yosemite Mountain Ranch Well, as shown on Exhibit 4.11-5. Such static groundwater elevation correlations are not clear indicators of hydraulic communication between wells, but they are suggestive of a possible connection. It is also notable that the static groundwater elevations in the Tenaya Lodge wells are far below the ground surface elevation in the location of Big Creek, making a direct hydraulic connection at the time the water levels were recorded appear unlikely.

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2 The number of wells currently in use to meet Other Existing Demands is unknown; therefore, this number could be greater than stated above.
Exhibit 4.11-1

Watersheds

NCDC COOP Weather Station at Yosemite National Park South Entrance

Proposed Explorer Cabins Project Property

Existing Tenaya Lodge

USGS Big Creek Stream Gage

Fish Camp Sub-Watershed of Big Creek

Explorer Cabins Project Property
Tenaya Lodge and Cottages

Scale in Feet

[Map Image]
No information regarding flow between groundwater and Big Creek was available for the water budget evaluation, and it was assumed that there is currently limited flow between groundwater and the creek. The relationship between groundwater and surface water is functionally similar in fractured bedrock systems and unconsolidated groundwater systems. In both cases, groundwater and surface water may be connected depending on groundwater levels relative to the stream. In the Fish Camp area, it is presumed that groundwater and Big Creek are connected and characterized by flow from surface water to groundwater when the creek discharge is high in the winter and spring months, and flow from groundwater to surface water in the summer and fall. These connections are likely to have the most effect on shallow groundwater near the creek. When groundwater is extracted from the fractured bedrock system, it is replaced through recharge that otherwise would have contributed to surface water flow. Conceptually, even in fractured bedrock groundwater systems, groundwater extractions would have an effect on surface water. Given the highly variable mountainous topography of the watershed, only a portion of Big Creek is likely to interact with groundwater in the Fish Camp area. To the extent practical, the potential effect of increased groundwater pumping on Big Creek associated with the project was evaluated as part of a water budget included in the Groundwater Study (Appendix I) and discussed in Impact 4.11-5, below.

**DRAINAGE**

The existing drainage conditions at the site are primarily characterized by natural, undeveloped conditions, with no impervious surfaces. Surface runoff and drainage flows mostly unimpeded. There are some existing dirt access roads within the project boundary which constitute a soft cover and reduce infiltration in those areas. Infiltration and surface runoff flow into the Big Creek drainage.

The 2-year, 24-hour rain event was analyzed for pre-project and post-project runoff. Total rainfall for this event is approximately 5 inches of rain in a 24-hour period. Based on this metric, the current runoff volume at the site for the 2-year, 24-hour rain event is estimated at 87,120 cubic feet.

**BASE FLOOD ELEVATION**

Per the Mariposa County LHMP, the Fish Camp TPA, including the project site, is not located in a Flood Hazard Area and, therefore, is not considered at risk for flood-related hazards (Mariposa County 2015b). In addition, according to the FEMA Flood Insurance Rate Map (FIRM), the project site is located outside a 100-year flood hazard area. However, because Mariposa County has not participated in the NFIP, the Base Flood (1-percent exceedance water surface flood event) Elevation (BFE) was calculated for the reach of Big Creek at the western boundary of the Tenaya Cabins Project site starting 460 feet upstream of the Highway 41 bridge crossing and ending at 1,720 feet upstream of the bridge. The BFE was calculated using the BFE discharge rate, the creek topography in this reach of Big Creek, and the Hydrologic Engineering Centers River Analysis System water surface profile software, as described in detail in Appendix H. The discharge rate was determined to be 5,800 cubic feet per second (cfs). The BFE boundary line for Big Creek in the project reach is shown in Exhibit 4.11-6.

**WATER QUALITY**

As discussed, neither Big Creek nor the upper Merced River are on the Section 303(d) list of impaired waters.

The Central Valley Regional Water Quality Control Board’s Basin Plan identifies much of the upper portions of the Merced Basin as having good water quality (2015). In the Fish Camp area, Big Creek is regarded as an important and fragile resource, with water quality that supports an abundance of native rainbow and introduced German brown trout. For these reasons, the Fish Camp TPA identifies Big Creek as an important scenic and recreational resource. The Fish Camp TPA also identifies concern over possible future development in the vicinity of Fish Camp and its impact on water quality parameters that affect fish stocks (Mariposa County Planning Department 1982).
Exhibit 4.11-6  Base Flood Elevation Limit

Source: Blair, Church & Flynn 2016
4.11.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA
Based on Appendix G of the CEQA Guidelines, the project could have a significant adverse effect related to hydrology and water quality if it would:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the amount of surface runoff in a manner that would result in flooding onsite or offsite;
- create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- place structures in a 100-year flood hazard area that would impede or redirect flood flows;
- expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or a dam; or
- result in substantial risk of inundation by seiche, tsunami, or mudflow.

METHODS AND ASSUMPTIONS
Evaluation of potential hydrologic, flood hazard, and water quality impacts is based on a review of existing information from existing documents and studies that address water resources in the vicinity of the Tenaya Cabins Project site:

- Upscale Campground Flood Study near Fish Camp, CA (Blair, Church & Flynn, February 2016) (Appendix H)
- Groundwater Supply Report, Tenaya Explorer Cabins EIR Support (Todd Groundwater, February 2016) (Appendix I)

Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this chapter. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, state, and local ordinances and regulations.
ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Floodplain/Flood Hazard Impacts
A preliminary delineation of the 100-year floodplain for Big Creek was completed for the Tenaya Cabins Project as illustrated on Exhibit 4.11-6. Although this floodplain is not regulated by FEMA, the Mariposa County General Plan (Flood Protection Goals 16-4 and 16-5) requires protection of the 100-year floodplain of all rivers and streams. The flood plain along Big Creek would be avoided (unaltered) by the proposed project. As indicated on the proposed site plans (Exhibits 3-3 and 3-4 in Chapter 3 of this Draft EIR), all project facilities and related ground disturbance would remain outside the delineated 100-year floodplain. Furthermore, as described in Impact 4.11-2, below, the proposed project would be required to retain stormwater so as to maintain runoff from the project site at pre-project conditions. Therefore, the project would have no impact related to placing housing or structures within a 100-year flood hazard area, and this issue is not discussed further.

There are no dams on Big Creek upstream of the Tenaya Cabins project site. Therefore, there is no risk of flooding due to failure of a dam, and this issue is not discussed further.

Tsunami/Seiche/Mudflow Impacts
Because of the elevation of the project site (approximately 5,000 feet) and distance from the nearest large body of water—Bass Lake (at approximately 3,400 feet in elevation and approximately 15 miles south on Highway 41 from the proposed entrance to the project site)—the project site would not be affected by inundation as a result of seiche or tsunami. Therefore, this issue is not discussed further.

The potential for risks associated with landslides and mudflows are discussed in Section 4.10, “Geology and Soils.”

Impact of Groundwater Drawdown on Surface Water
As discussed above, Big Creek is likely connected to groundwater in some capacity. If groundwater elevations in fractured bedrock are higher than the creek surface elevation, groundwater could discharge into the creek. This is most likely to occur in late summer through early fall when creek flow is lowest. As with inflow from the creek, the volume of outflow to the creek cannot be quantified using available data. It is recognized that increased pumping in Fish Camp could intercept groundwater that otherwise could flow to Big Creek. However, the potential effect is likely small, given the orders of magnitude difference between monthly and total Fish Camp water demand and monthly and annual flow in Big Creek. As discussed for groundwater inflows, subsurface outflow is assumed to be negligible. Please see Impact 4.11-5, below for discussion of the groundwater water budget; otherwise, drawdown of surface water is not discussed further.

IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.11-1: Violate any water quality standard or water discharge requirement, or otherwise substantially degrade water quality: construction impacts

Implementation of the Tenaya Cabins Project would require grading, earth moving, excavation, underground infrastructure installation, and building construction. Sediments carried in runoff from disturbed areas could enter nearby surface waters (Big Creek). Additionally, construction-related pollutants could come into contact with stormwater and affect surface or groundwater quality. Therefore, construction activities would have a potentially significant impact on water quality.

During construction of the Tenaya Cabins Project, the site would undergo clearing, grading, and excavation to build the facilities associated with the project. Soils exposed from these activities are highly vulnerable to erosion by stormwater. Stormwater with a high sediment load from erosion can in turn enter into local natural drainages, such as Big Creek, and create problems such as high turbidity and total suspended solids.
Construction activities may also involve the use of chemicals or other pollutants that could become exposed to stormwater drainage and in turn enter and contaminate local surface or groundwater. These effects on a drainage, if left unchecked, can be significant to aquatic life and the natural functioning of the local ecosystem. Moreover, contamination of groundwater could affect the water quality of groundwater supplies in the area. Therefore, project related construction activities would result in a potentially significant water quality impact.

**Mitigation Measures**

**Mitigation Measure 4.11-1: Prepare and implement a stormwater pollution prevention plan**

As described in Section 4.11.1, above, the project would require coverage by the statewide General Construction Permit. The General Construction Permit requires implementation of BMPs, monitoring of numeric action levels, and adherence to a site-specific SWPPP prepared to address conditions at the site during construction. Therefore, the project applicant shall prepare a SWPPP, which shall include measures such as the following:

- Temporary BMPs to prevent the transport of earthen materials and other construction waste materials from disturbed land areas, stockpiles, and staging areas during periods of precipitation or runoff, including: filter fences, fiber rolls, erosion control blankets, mulch (such as pine needles and wood chips); and temporary drainage swales and settling basins.

- Designated contractor staging areas for materials and equipment storage outside of riparian areas. Designated staging and storage areas would be protected by construction fencing and/or silt barriers, as appropriate. Following project completion, all areas used for staging would be stabilized or revegetated.

- Temporary BMPs to prevent the tracking of earthen materials and other waste materials from the project site to offsite locations, including stabilized points of entry/exit for construction vehicles/equipment and designated vehicle/equipment rinse stations, and sweeping.

- Temporary BMPs to prevent wind erosion of earthen materials and other waste materials from the project site, including routine application of water to disturbed land areas and covering of stockpiles with plastic or fabric sheeting.

- To avoid temporary impacts to the water quality of wet meadow in the vicinity of the clubhouse and boardwalk, no vehicles or equipment shall be refueled within 100 feet of jurisdictional areas unless a bermed and lined refueling area is constructed. Spill kits shall be maintained on the site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks. No vehicles or construction equipment shall be stored overnight within 100 feet of jurisdictional areas unless drip pans or ground covers are used. In addition, a minimum 25-foot setback shall be observed from the outer edge of all wet meadow and forested/shrub wetland/riparian communities (see Exhibit 4.4-1). Setbacks shall be fenced or flagged before construction occurs in adjacent areas. If a 25 foot buffer is not feasible a reduced setback may be utilized if approved by a qualified biologist.

- Temporary BMPs to capture and contain pollutants generated by concrete construction including lined containment for rinsate to collect runoff from washing concrete delivery trucks and equipment.

- Protective fencing to prevent damage to trees and other vegetation to remain after construction, including tree protection fencing and individual tree protection such as protective casings of wood slats around the bases of trees.

- Temporary BMPs for the containment or removal of drilling spoils generated from construction of bridge foundations and abutments.
Daily inspection and maintenance of temporary BMPs to ensure proper function. The prime contractor would be required to maintain a daily log of Temporary Construction BMP inspections and keep the log onsite during project construction, available for review by the Central Valley RWQCB and Mariposa County.

Tree removal activities, including the dropping of trees, would be confined to the construction limit boundaries.

Construction boundary fencing to limit disturbance and prevent access to areas not under active construction.

**Significance after Mitigation**
Compliance with the General Construction Permit and Mariposa County policies per Mitigation Measure 4.11-1 would reduce potential water quality effects from construction activities to a less-than-significant impact.

**Impact 4.11-2: Violate any water quality standard or water discharge requirement, or otherwise substantially degrade water quality: operational impacts**

Conversion of undeveloped land to developed resort commercial and residential use for the Tenaya Cabins Project would alter the types, quantities, and timing of contaminant discharges in stormwater runoff. This could contribute to the long-term degradation of local surface and groundwater if the project is not properly designed and implemented. This would be a potentially significant impact.

Implementation of the Tenaya Cabins Project would result in conversion of undeveloped land to developed resort commercial and residential uses, where urban contaminants including oil and grease, trace metals, organics, and trash would be generated. These contaminants could be exposed to stormwater runoff if they are not properly managed and contained, which could ultimately contaminate surface and groundwater. Additionally, household and commercial products, or pesticides and fertilizers may be used within the project area. Accidental spills, misuse of products, or illicit activity could expose these products to stormwater drainage. Over time, long-term, unmitigated exposure to these contaminants could produce irreversible contamination to local water supplies. This would be a potentially significant impact.

The Tenaya Cabins Project would connect to the Tenaya Lodge WWTP. As described above and summarized in Table 4.11-1, WDRs currently apply to the Tenaya Lodge WWTP through RWQCB Order No. 99-086. The Tenaya Lodge implements a testing plan to monitor onsite disposal and groundwater quality. The testing must demonstrate compliance with RWQCB WDRs. In addition, the project would include expansion of the existing Tenaya Lodge center leach field with an additional 637 linear feet of leach lines, which would increase the total leach field disposal capacity from 33,600 gallons per day (gpd) to 42,195 (gpd). This leach field expansion would provide capacity to discharge treated effluent associated with the proposed Tenaya Cabins at full occupancy (see Impact 4.12-2 for further details). Therefore, the effluent discharge from the wastewater treatment plant would not negatively affect the quality of local surface and groundwater quality. The wastewater from the proposed treatment plant is of a quality standard consistent with the recycled water standards of California Code of Regulations, Title 22. The project-related wastewater discharge would therefore represent a less-than-significant water quality impact.

**Mitigation Measures**

**Mitigation Measure 4.11-2: Install permanent stormwater controls and water quality BMPs**
The project applicant shall implement the following stormwater controls and water quality BMPs:

- Best management practices for the containment and isolation of products, and use of non-toxic products whenever possible would reduce the quantity of contaminants exposed to stormwater.
Recognizing that in some instances it is impossible to isolate all contaminants from stormwater discharges, stormwater controls shall be implemented to reduce the amount of runoff that discharges directly to surface water. Water quality treatment facilities/best management practices (BMPs)/low impact development (LID) measures shall be designed according to the guidance of the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and for Industrial and Commercial as well as the Mariposa County Erosion and Sedimentation Policies for Construction Activities and the Specific Plan Topography and Soil Erosion requirements. Final site plans shall illustrate stormwater controls and water quality BMPs as a condition of project approval.

Storm drainage from on- and offsite impervious surfaces (including roads) shall be collected and routed through specially designed vegetated swales, infiltration trenches, water quality inlets, detention basins, filters, etc. for entrapment of sediment, debris and oils/greases or other identified pollutants. BMPs shall be designed at a minimum in accordance with the Mariposa County Erosion and Sedimentation Policies for Construction Activities and the Specific Plan Topography and Soil Erosion requirements.

No stormwater controls or BMPs shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.

All BMPs shall be maintained as required to insure effectiveness. The applicant shall provide for the establishment of vegetation, where specified, by means of proper irrigation. Proof of ongoing maintenance, such as contractual evidence, shall be provided to Mariposa County upon request. Maintenance of these facilities shall be provided by the project owner/permittee. Contractual evidence of a monthly parking lot sweeping and vacuuming, and catch basin cleaning program shall be provided upon request. Failure to do so will be grounds for discretionary permit revocation.

Significance after Mitigation
The project’s operational water quality impacts would be reduced to a less-than-significant level through implementation of permanent stormwater controls and water quality BMPs required in Mitigation Measure 4.11-2.

Impact 4.11-3: Substantially alter drainage patterns or increase surface runoff in a manner that would exceed the capacity of existing or planned stormwater drainage systems or result in onsite or offsite flooding

Implementation of the Tenaya Cabins Project would result in the development of new impervious surfaces such as structures and roadways, leading to an increased potential for stormwater runoff. In addition, the project may decrease in the permeability of uncovered surfaces as a result of compaction. Therefore, the project could reduce infiltration and increase the peak flow and volume of surface runoff. This impact would be potentially significant.

The peak flow and volume of stormwater runoff generated from the project area would be affected by development through conversion of vegetated and otherwise pervious surfaces to impervious surfaces (e.g., roads, roofs, driveways, walkways) and by the development of drainage systems that connect these impervious surfaces to streams or other water bodies. Compaction resulting from increased pedestrian traffic in the area may also reduce the permeability of natural surfaces. The increase in impervious surfaces can increase the rate and volume of runoff and eliminate storage and infiltration that would naturally occur along drainage paths.

The configuration of the proposed project considers the location of existing access roads and natural features. Proposed roads at the site would be paved in the location of existing unpaved access roads to the extent possible, and the overall layout of structures would be configured around trees and vegetation to preserve infiltration characteristics. Nevertheless, the project would increase impervious surfaces on the site and increase the peak flow and volume of surface runoff. The pre-project runoff volume of the 2-year, 24-
hour rain event was calculated at 87,120 cubic feet. The post-project runoff volume was calculated at 117,600 cubic feet, which equates to a little more than 31,000 additional cubic feet of runoff (Pers. Comm., Blair, Church, & Flynn 2016). The impact of this increased runoff volume would be potentially significant.

Mitigation Measures

Mitigation Measure 4.11-3: Prepare and implement a final drainage report that reduces runoff to pre-project conditions

As part of the project approval process, the applicant shall submit a Drainage Report prepared by a Registered Civil Engineer that addresses at minimum:

- written text addressing existing conditions,
- the effects of the proposed improvements,
- all appropriate calculations,
- watershed maps,
- changes in flows and patterns, and
- proposed on- and off-site improvements to accommodate flows from the project.

The final Drainage Report shall provide details showing that stormwater run-off shall be reduced to pre-project conditions (no net increase in runoff) through the installation of retention/detention facilities. Retention/detention facilities shall be designed to the satisfaction of the Mariposa County Public Works Department. The County may, after review of the project final drainage report, delete this requirement if it is determined that drainage conditions do not warrant installation of this type of facility. Maintenance of detention facilities by the property owner, or entity responsible for project maintenance shall be required.

No retention/detention facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.

Significance after Mitigation

Implementation of Mitigation Measure 4.11-3 would reduce post-project runoff to pre-project conditions and the project would not result in an increase in surface runoff that would result in erosion, siltation, or offsite flooding, or cause the capacity of stormwater drainage systems to be exceeded. Therefore, this impact would be less than significant.

Impact 4.11-4: Substantially deplete groundwater supplies

Implementation of the proposed project would rely on groundwater from the three existing Tenaya Lodge wells as its primary water source. The project is estimated to result in an increased water demand of 9.6 acre-feet per year (afy), a ten (10) percent increase over the existing average annual estimated water demand of 93.8 afy within the Fish Camp area. While the project would increase demand and groundwater pumping and could result in changes in groundwater flow paths and cause localized drawdown effects on existing wells, available studies indicate that it would not substantially reduce the overall volume of groundwater available for all current and anticipated future users in Fish Camp. Nonetheless, there is potential for the project to affect one well, and this localized drawdown on an existing well is considered a potentially significant impact to groundwater supply.

As described further in Section 4.12, “Utilities and Public Services,” of this Draft EIR, water for domestic and firefighting purposes would be provided by the three existing wells in the Tenaya Lodge water system, located on the Tenaya Lodge property. Treatment to potable drinking water standards is and would continue to be provided at the wellhead of each well. The average annual water demand for the project is estimated to be 3,137,118 gallons per year, which is equivalent to 9.6 afy (Table 4.12-5). Peak daily project water demands were estimated by multiplying average daily water demand of 8,595 gallons by a factor of 2.0
(Chin 2000) for a peak day demand of 17,190 gallons, which is equivalent to 12 gallons per minute (gpm) of continuous 24-hour per day pumping (Table 4.12-5).

**Combined Three Day Pumping Test**

In fractured bedrock groundwater environments, it is possible for a well to have an effect on groundwater elevations in other wells, even distant wells. Conversely, it is possible for wells that are near to each other to have no respective effect. The effect of wells in fractured bedrock is dependent on how connected the fractures in the wells are to each other. No mapping of subsurface fracture locations, orientations, or depths has been completed for the Fish Camp area. Therefore, a three day (72 hour) duration pumping test was completed for the Tenaya Cabins Project (see Appendix I). The purpose for test was twofold: 1) assess the capacity of the wells to meet the demands of the existing Lodge and the proposed project, and 2) test whether increased use of the existing Tenaya Lodge wells would have a negative impact on any other existing or reasonably foreseeable planned groundwater uses in Fish Camp. The pumping test was coordinated with all known pumpers and well owners in Fish Camp.

The three existing Tenaya Lodge wells were pumped at the maximum capacity of the pumping equipment in place in each well for the entire duration of the test, which was 36, 30, and 54 gpm for Tenaya Well 3, 4, and 5, respectively. All of the other wells in Fish Camp were maintained non-operational for the entire duration of the test. Water levels were measured in the pumping wells and all known existing water supply wells in Fish Camp, which is all the wells shown on Exhibit 4.1--3.

**Effects of Tenaya Lodge Wells on Other Wells**

Groundwater elevation and drawdown hydrographs for all of the monitored wells combined for the entire test duration are shown on Exhibits 4.11-7 and 4.11--8, respectively. Drawdown hydrographs of wells grouped by geographic region and water supplier are shown on Exhibit 4.11-9 through 4.11-10. Drawdown hydrographs of each well plotted individually and tabular water level data for each well for the entire test are included in the groundwater supply report (Appendix I).

The results of this monitoring showed an apparent pumping effect on only one well, FCMWC Well 1. The maximum drawdown observed in FCMWC Well 1 while testing the Tenaya Lodge wells was 3.66 feet. The static water level measurement collected before the start of the Tenaya Lodge pumping test showed 278 feet of saturated thickness in FCMWC Well 1. The observed drawdown from pumping the Tenaya wells was less than 2 percent of the total saturated thickness in FCMWC Well 1. Although the observed drawdown was slight, the effects of pumping the Tenaya Lodge wells may have a long-term effect on FCMWC Well 1. This long-term effect may take the form of decreased groundwater elevation and or decreased production capacity in FCMWC Well 1 (Appendix I).

None of the remaining wells in Fish Camp showed drawdown during the Tenaya Lodge well pumping test. In fact, most of the other wells showed increases in groundwater elevation throughout the test (Appendix I). Nevertheless, the pumping test identified an apparent connection between the groundwater tapped by both FCMWC Well 1 and the Tenaya Lodge wells. The pump test indicates that the effects of the Tenaya pumping on the FCMWC Well 1 is slight and, under the test performed for the EIR, would not adversely affect well productivity. However, the test was conducted over a relatively short period and was not able to simulate a variety of conditions that could occur, such as multiple area wells operating simultaneously, more extreme drought conditions, etc. Because water availability is a critical issue and there is a slight potential that the project could affect the productivity of the FCMWC Well 1, this impact is considered potentially significant.
Exhibit 4.11-7

Tenaya and Yosemite Mountain Ranch Pumping Test Hydrograph

Source: TODD Groundwater 2016
Exhibit 4.11-8

Fish Camp Mutual Water Company Wells Pumping Test Hydrograph

Source: TODD Groundwater 2016
Exhibit 4.11-10  Green Meadows, Marshall, and White Chief Pumping Test Hydrograph
Mitigation Measures

Mitigation Measure 4.11-4: Prepare and implement well monitoring program

DN shall establish a monitoring program for FCMWC Well 1 and shall, at a minimum, include short duration pumping tests to assess production capacity and pumping water levels. These tests shall be completed on a monthly basis during the months of August, September, and October and shall include the following:

- Delaware North shall coordinate with FCMWC to test FCMWC Well 1 once a month during the months of August, September, and October. A qualified well driller, hydrologist or hydrogeologist, approved by the County, shall conduct the testing and provide monitoring reports.
- Each test shall be preceded by a minimum of eight (8) hours of non-operation in FCMWC Well 1.
- A static depth to water measurement shall be collected and recorded following the period of non-operation and preceding the start of the test.
- Following the period of non-operation and collection of the static depth to water measurement, FCMWC Well 1 shall be pumped at the full capacity of the existing pumping equipment for a period of at least four (4) hours.
- Depth to water measurements shall be collected in FCMWC Well 1 throughout the four (4) hour test. Depth to water measurements shall be collected at least every ten (10) minutes throughout the test.
- Production volume and rate measurements shall be collected from the discharge of FCMWC Well 1 at least every ten (10) minutes throughout the test.
- The three Tenaya Lodge wells shall be maintained non-operational for a period of at least four (4) hours prior to the start of the test and shall remain non-operational for the first two (2) hours of the test.
- After the first two (2) hours of the test have elapsed, the Tenaya Lodge wells shall be turned on and allowed to operate at full capacity.
- The production rate and pumping depth to water measurements from FCMWC Well 1 shall be compared to previous test results.
  - This evaluation with compare each test to previous tests, and also compare the first two (2) hours of each test (when the Tenaya Lodge wells are not operating) to the first two (2) hours of previous tests, and the second two (2) hours of each test (when the Tenaya Lodge wells are pumping) to the second two (2) hours of previous tests.
  - The comparisons shall consider specific capacity information for incremental time steps during the test (e.g. every hour) and compare these data to those from the same time step in previous tests.
  - The results of each test shall be compared to the previous tests from that year and to the tests from the same month in previous years.
- A sustained reduction of over ten (10) percent of the capacity of FCMWC Well 1, measured either by a reduction in pumping rate or a reduction in specific capacity, shall trigger the need for implementation of water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages. A sustained ten (10) percent reduction shall apply only to decreases in the capacity of the well when compared to prior years. Small seasonal changes in well production capacity are to be expected, and these shall not trigger implementation of water demand management measures.
Any reduction of over twenty (20) percent of the capacity of FCMWC Well 1, either compared to previous months or the previous year, shall trigger implementation of water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages.

This monitoring program shall be initiated as far as possible in advance of completion of project construction. Collection of baseline pumping rate and water level data from FCMWC Well 1 before the project becomes operational will improve the usefulness and reliability of the monitoring data.

The FCMWC Well 1 monitoring program shall be implemented for five (5) years. If there is no defined drought during that five (5) year period, then Delaware North, FCMWC, and Mariposa County may extend the monitoring for a second five (5) year period, not to exceed a total of ten (10) years.

If triggered as a result of the FCMWC Well 1 monitoring program described above, DN shall implement one or more of the following water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to incrementally reduce groundwater pumping until supplemental monitoring of FCMWC Well 1 shows no residual reduction in the production capacity.

- Adjust operation of the three existing wells in the Tenaya Lodge water system; alternate well pumping so that the Tenaya wells do not pump at the same time.
- Reduce the rates of pumping in three existing wells in the Tenaya Lodge water system.
- Reduce occupancy at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to reduce the total demand for water.
- Install additional water conservation devices throughout the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to reduce the total demand for water.

Significance after Mitigation
Implementation of Mitigation Measure 4.11-4 requires monitoring to identify potential drawdown of FCMWC Well 1. If triggered as a result of the FCMWC Well 1 monitoring program, DN shall implement water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to allow for recovery of the production capacity of FCMWC Well 1. These measures would reduce the potential impact to productivity of the FCMWC Well 1 to a less-than-significant level.

Impact 4.11-5: Interfere with groundwater recharge
Implementation of the Tenaya Cabins Project would result in the development of new impervious surfaces such as structures and roadways, which could impede groundwater recharge. However, the water budget indicates that there is adequate recharge to the groundwater system to meet the existing plus project demands for the Fish Camp area. Average annual recharge is conservatively estimated to be approximately 190 afy, and existing plus project pumping is estimated to be 103.4 afy; net demand (accounting for return flows) is a fraction of this amount. This is a less-than-significant impact.

Implementation of the Tenaya Cabins Project would result in the development of new impervious surfaces such as structures and roadways, which could impede groundwater recharge. However, as required by Mitigation Measure 4.11-3, described above, the project would be required to reduce post-project runoff to pre-project conditions through onsite detention and infiltration. In addition, a water budget analysis for groundwater in the area was prepared, as discussed below and in Appendix I.

The Fish Camp sub-watershed area is shown in Exhibit 4.11-1. The water budget for groundwater in this area includes calculation of inflows and outflows to the sub-watershed groundwater system to estimate the volume of water recharging to and discharging from groundwater on an annual basis. The water budget was
evaluated for the 20 years between 1995 and 2014. This time period is representative of long-term conditions and includes average, wet, and dry years.

**Inflows**

Groundwater inflows include direct percolation from precipitation and snowmelt, infiltration from streamflow, and subsurface inflow. Percolation is likely to occur during and for some time following precipitation events. Big Creek flows through a portion of the sub-watershed and could recharge groundwater when groundwater levels are lower than creek surface elevations. Subsurface inflow could occur from surrounding fractured bedrock. However, for the purposes of this water budget, it is assumed that watershed divides and groundwater divides coincide.

The groundwater study (Appendix I) included monthly time step soil moisture balance and runoff analyses to estimate inflows from direct deep percolation. Deep percolation of precipitation is the portion of precipitation (rainfall or snowmelt) that falls on the watershed, infiltrates through the root zone, and recharges underlying groundwater. Deep percolation of precipitation can contribute a significant portion of inflow to a basin, and it is influenced by precipitation volume and intensity, soil type, topography, evapotranspiration, hydrogeology, and impervious areas.

Big Creek flows through the watershed and is fed by rainfall runoff and snowmelt. Creek flow is highest during snowmelt periods of the year (March through June), generally peaking in late April or May (Todd Groundwater 2016). The late summer through early fall flow in the creek is low, generally less than 0.5 cfs. Recharge to groundwater is likely to occur during high creek flows. For the period 1995 through 2012, the average flow in the month May was 29.9 cfs, which is 1,742 acre-feet per month (afm). Average annual flow in Big Creek during the same period was 7,376 afy. Even though the volume of water in the creek is an order of magnitude greater than direct recharge from percolation, the extent and volume of recharge from the Big Creek is unclear. Groundwater elevations are likely to be at the highest at the same time that creek flow is high, limiting the capacity of groundwater to accept potential recharge from the creek. Therefore, it is unlikely that Big Creek is a significant source of recharge to groundwater within the Fish Camp sub-watershed (Appendix I).

Some subsurface inflow probably occurs on the eastern boundary of the sub-watershed along Big Creek, but this is likely small and balanced by similar subsurface outflow along Big Creek toward the north.

From 1995 to 2014, the average volume of recharge to groundwater is estimated to be 191 afy, which is approximately 4.7 percent of total precipitation.

**Outflows**

Outflows from the fractured bedrock groundwater system around Fish Camp currently include pumping and discharge to the creek. The existing and planned future water demands in the Fish Camp area (i.e. cumulative conditions) would rely on local groundwater and recycled water to a limited extent at the Tenaya Lodge and Project (Appendix I). Total existing water demand is estimated at 93.8 afy (Section 4.12, “Utilities and Public Services”). Existing water demand plus the Project water demand of 9.6 afy is a total of 103.4 afy. It should be noted that neither the existing nor future demand estimates reflect return flows to groundwater. Most of the water used indoors is returned to groundwater through septic systems and wastewater system discharges, commonly referred to as wastewater return flows. The assessment of landscape irrigation demands for the Tenaya Lodge and Cottages indicated that only 11 percent of the water used at Tenaya is for irrigation. Assuming that this is representative for the entire Fish Camp area (i.e., most of the water used indoors is returned to groundwater through septic and wastewater system discharge), then about 90 percent of all pumped groundwater is returned to the groundwater system.

As discussed above, Big Creek is likely connected to groundwater in some capacity. If groundwater elevations in fractured bedrock are higher than the creek surface elevation, groundwater could discharge into the creek. This is most likely to occur in late summer through early fall when creek flow is lowest. As with inflow from the creek, the volume of outflow to the creek cannot be quantified using available data. It is recognized that increased pumping in Fish Camp could intercept groundwater that otherwise could flow to
Big Creek. However, the potential effect is likely small, given the orders of magnitude difference between monthly and total Fish Camp water demand and monthly and annual flow in Big Creek. In addition, this effect is largely reduced by wastewater return flows. As discussed for groundwater inflows, subsurface outflow is assumed to be negligible.

**Comparison of Inflows to Outflows**
The water budget indicates that there is adequate recharge to the groundwater system to meet the existing plus project demands for the Fish Camp area. Average annual recharge is conservatively estimated to be approximately 190 afy, and existing plus project pumping is estimated to be 103.4 afy; net demand (accounting for return flows) is a fraction of this amount (Appendix I). Therefore, this impact would be less than significant.

**Mitigation Measures**
No mitigation is required.
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4.12 UTILITIES AND PUBLIC SERVICES

This chapter evaluates the potential impacts of the Tenaya Cabins Project on utilities and public services. Utilities evaluated include water, wastewater, solid waste, electricity/energy, and snow storage. Public services considered in this analysis include fire protection, emergency medical services, and police services. Stormwater drainage and water quality are addressed in Section 4.11, “Hydrology and Water Quality,” and wildfire hazards, fire protection, and emergency response are evaluated in Section 4.13, “Hazards and Hazardous Materials.”

4.12.1 Regulatory Background

FEDERAL

Water

Clean Water Act
The Clean Water Act (CWA) employs a variety of regulatory and nonregulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The U.S. Environmental Protection Agency (EPA) established primary drinking water standards in Section 304 of the CWA. States are required to ensure that the public’s potable water meets these standards.

Section 402 of the CWA creates the National Pollutant Discharge Elimination System (NPDES) regulatory program. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover various industrial and municipal discharges, including discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than 1 acre, and mining operations. All so-called “indirect” dischargers are not required to obtain NPDES permits. “Indirect” dischargers send their wastewater into a public sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering a surface water.

Safe Drinking Water Act
As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, EPA regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary maximum contaminant levels (MCLs). MCLs and the process for setting these standards are reviewed triennially. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California’s drinking water program to the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW). SWRCB-DDW is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

STATE

Water

California Water Code, Water Supply Wells, and Groundwater Management
The California Water Code (CWC) is enforced by the California Department of Water Resources (DWR). DWR’s mission is “to manage the water resources of California in cooperation with other agencies, to benefit the State’s people, and to protect, restore, and enhance the natural and human environments.” DWR is
Utilities and Public Services

Ascent Environmental

responsible for promoting California’s general welfare by ensuring beneficial water use and development statewide. The laws regarding groundwater wells are described in CWC Division 1, Article 2 and Articles 4.300 to 4.311; and Division 7, Articles 1-4. Further guidance is provided by bulletins published by DWR, such as bulletins 74-81 and 74-90 related to groundwater well construction and abandonment standards.

Groundwater Management is outlined in the CWC, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030, and has since been modified by Senate Bill (SB) 1938 in 2002, AB 359 in 2011, and AB 1739 in 2014. The intent of the Groundwater Management Act is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

California Code of Regulations, Title 22, Chapter 3 Regulations
The use of water recycled from domestic sewage is regulated by the California Regional Water Quality Control Board (Regional Water Board). California Water Code Section 13551 establishes a State policy to encourage the use of recycled water. Permission to use recycled water is based on the ability to adequately treat domestic wastewater to the point that the recycled water (effluent) meets the requirements of existing Title 22, Chapter 3 Regulations of the California Administrative Code. Title 22, “Disinfected Tertiary Recycled Water,” was promulgated by the California Department of Public Health Services (CDPH) to ensure proper health protection and specify the level of treatment appropriate for the intended applications (CDPH 2014).

Treatment typically consists of filtration to remove suspended solids, some bacteria, and other pollutants. Disinfection then destroys any remaining bacteria and viruses, using chemicals (such as chlorine) or non-chemical methods like ultraviolet light. Regulations stipulate water quality standards in conjunction with requirements for treatment, sampling, and monitoring. With recycled water, a key concern is the potential risk of human exposure to pathogenic organisms.

The CDPH is responsible for regulating the use of recycled water in California. The Regional Water Board’s issue requirements for individual projects in conformance with the CDPH regulations. Article 4 in Title 22 of the CCR sets water quality standards and treatment reliability criteria for recycled water, including Title 22 regulatory requirements for use of recycled water to protect the beneficial uses of recycled water for land applications, such as irrigation of landscaping, fields, or public access lands.

Solid Waste

California Integrated Waste Management Act
To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 50 percent of all solid waste from landfill facilities by January 1, 2000. Solid waste plans are required to explain how each city’s AB 939 plan will be integrated with the County plan. In order of priority, the plans must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

Energy

California Environmental Quality Act
Under Appendix F of the State CEQA Guidelines, the State of California sets forth goals for energy conservation, including decreasing per capita energy consumption and reliance on fossil fuels, and increasing reliance on renewable energy sources. CEQA requires EIRs to describe potential energy impacts of projects, with an emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Public Resources Code [PRC] Section 21100(b)(3)).
California Code of Regulations, Energy Efficiency Standards
Energy consumption of new buildings in California is regulated by State Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 2, Chapter 2-53. Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting. The 2013 Building Energy Efficiency Standards have improved efficiency requirements from previous codes and the updated standards are expected to result in a statewide energy consumption reduction.

Effective January 1, 2011, CALGreen became California’s first green building standards code. It is formally known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations. CALGreen establishes mandatory minimum green building standards and includes more stringent optional provisions known as Tier 1 and Tier 2. Cities and counties, at their discretion, may adopt Tier 1 or Tier 2 as mandatory or adopt and enforce other standards that are more stringent than the CALGreen Code.

LOCAL

Mariposa County General Plan
The following goals found in the Circulation, Infrastructure, and Service Element and the Safety Element of the Mariposa County General Plan (2006) are relevant to the project (Mariposa County 2015a):

Goal 9-5: Adequate water and wastewater services shall be provided to properties in the County.

Goal 9-6: Provide adequate solid waste disposal.

Goal 9-9: Maintain quality emergency service delivery.

Goal 16-1: Enforce development standards lessening fire hazard danger.

Policy 16-1a: Non-residential development activity shall be within acceptable fire department response time limits and coverage areas; or a development project shall provide its own on-site fire protection facilities and firefighters as approved by the County Fire Department.

Policy 16-1c: All subdivisions and development projects shall conform to adopted fire code and other fire prevention regulations.

Goal 16-3: Sustain adequate fire protection service levels.

Goal 16-12: Minimize risks to people and property during emergencies through pre-planning.

Policy 16-12a: Coordinate local and State emergency response efforts.

Mariposa County Code, Title 8
Title 8, “Health and Safety,” of the Mariposa County Code contains provisions for countywide landfill use. It stipulates that landfill privileges are limited to County residents and regulates permitted refuse. Title 8 also ensures safe and adequate ambulance services.

Mariposa County Code, Title 13
Title 13, “Water and Sewers,” of the Mariposa County Code regulates and establishes standards pertaining to water supply, sewer infrastructure, sewage disposal, and wells.

Fish Camp Town Planning Area Specific Plan
The Fish Camp Town Planning Area (Fish Camp TPA) Specific Plan Objective 7 is to promote and provide adequate and cost effective public services such as fire protection, public roads, water and sewer services,
and snow removal. The Specific Plan also contains the following policies and procedures that are relevant to the project:

**Section VII A. Water Facilities**
- VII.A-1. All development proposals should be required to demonstrate adequate and reliable sources of water for domestic and fire protection services.

**Section VII B. Transportation and Circulation**
- VII.B-2: All development proposals should be reviewed with road capacity, safety, and road maintenance as important considerations.
- VII.B-3. All proposed developments should be reviewed to ensure that adequate off-street parking is provided and that such parking is accessible from the street at all times of the year.
- VII.B-4: All proposed development roads should be paved to facilitate snow removal and winter access. Maximum allowable grades should be 10 percent.
- VII.B-5: Adequate and reliable snow removal is necessary. Such services may be provided for by the County and paid for with benefit assessments or through a community wide service district established to provide snow removal and other services.

**Section VII D: Development and Effects on Surface Water Resources**
- VII.D-1: Subdivision proposals creating lots of less than 2.5 acres should not be approved without adequate wastewater facilities.
- VII.D-6: All resort commercial uses, except those with existing sewage treatment systems, should be required to hook up with a community sewage disposal facility when it is constructed.

### 4.12.2 Existing Environmental Setting

Utilities and public services in the Fish Camp TPA are provided by various entities, as identified in Table 4.12-1 and discussed in detail below.

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<thead>
<tr>
<th>Table 4.12-1</th>
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### Table 4.12-1  Existing Utility and Public Service Providers

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<td>NPS – Yosemite National Park</td>
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Source: Compiled by Ascent Environmental 2016; Mariposa County 2015b, 2015c, 2016

### WATER

#### Water Demand
Water in Fish Camp is supplied solely from fractured bedrock groundwater. Fish Camp is not within a designated groundwater basin, and there are currently no legal restrictions to groundwater pumping. Water demands for the Fish Camp area have been estimated for all of the existing users:

- Tenaya Lodge and Cottages,
- Fish Camp Mutual Water Company (FCMWC),
- Yosemite Alpine Community Services District (YACSD),
- Block D Water Service,
- Marshall / Casagrande Property,
- Yosemite Mountain Ranch,
- Camp Green Meadows,
- White Chief Mountain Lodge, and
- other water services.

These existing water users and the method applied to the estimation of existing water demands are described below. The existing water demands are summarized in Table 4.12-2 and in the Groundwater Study prepared by Todd Groundwater in Appendix I.

**Tenaya Lodge and Cottages Existing Water Demand**
Although the Tenaya Lodge and Cottages were originally developed separately, and maintain some individual infrastructure, including separate groundwater well supplies, they are currently owned, managed, and operated as one resort facility. In total, the Tenaya Lodge and Cottages include groundwater demands associated with the following facilities:

- 249 lodge rooms,
- 53 cottage rooms in 17 separate cottages,
- pools and spas,
- conference facilities,
- restaurants and bars,
- laundry facilities, and
- landscape irrigation.
Water use records by well from May 2010 through December 2014 for the Tenaya Lodge water system, and from January 2009 through August 2015 for the Tenaya Cottages water system were used to calculate average monthly and annual use for both the Tenaya Lodge and Cottages, as shown in Table 4.12-2.

### Table 4.12-2 Existing Annual Groundwater Demand Summary, Fish Camp

<table>
<thead>
<tr>
<th>Water System or User</th>
<th>Number of Active Wells</th>
<th>Average Annual Water Demand (gallons)</th>
<th>Average Daily Water Demand (gallons)</th>
<th>Peak Day Water Demand (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenaya Lodge</td>
<td>3</td>
<td>16,870,310</td>
<td>51.8</td>
<td>46,188</td>
</tr>
<tr>
<td>Tenaya Cottages</td>
<td>1</td>
<td>2,722,862</td>
<td>8.4</td>
<td>7,455</td>
</tr>
<tr>
<td>Fish Camp Mutual Water Company</td>
<td>4</td>
<td>4,225,000</td>
<td>13.0</td>
<td>11,567</td>
</tr>
<tr>
<td>Yosemite Alpine Community Services District</td>
<td>2</td>
<td>691,118</td>
<td>2.1</td>
<td>1,892</td>
</tr>
<tr>
<td>Block D Water Service Area</td>
<td>1 well and 2 springs</td>
<td>1,085,000</td>
<td>3.3</td>
<td>2,971</td>
</tr>
<tr>
<td>Marshall / Casagrande Property</td>
<td>1</td>
<td>35,000</td>
<td>0.1</td>
<td>96</td>
</tr>
<tr>
<td>Yosemite Mountain Ranch</td>
<td>1</td>
<td>350,000</td>
<td>1.1</td>
<td>958</td>
</tr>
<tr>
<td>Camp Green Meadows</td>
<td>1</td>
<td>2,775,900</td>
<td>8.5</td>
<td>7,600</td>
</tr>
<tr>
<td>White Chief Mountain Lodge</td>
<td>1</td>
<td>1,823,328</td>
<td>5.6</td>
<td>4,992</td>
</tr>
<tr>
<td>Other Existing Water Demands</td>
<td>Unknown</td>
<td>1,190,000</td>
<td>3.7</td>
<td>3,258</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>17</td>
<td><strong>30,578,519</strong></td>
<td><strong>93.8</strong></td>
<td><strong>86,977</strong></td>
</tr>
</tbody>
</table>

Notes: General: All values rounded, totals may reflect the effects of rounding.

1. Peak day estimated by multiplying average daily water demand by peaking factor of 2 (Appendix I).
2. Average Tenaya Lodge and Cottage water demand from use in Table 3-1 in the Groundwater Supply Report in Appendix I.
3. FCWM average annual water demand based on 2014 water use records.
4. FCMWC average annual water demand based on water use records from June 2012 through August 2015.
5. Block D average water demand estimated on a per-parcel basis using per-parcel use data from FCWM and YACSD.
6. Marshall / Casagrande property average water demand estimated using per-parcel use data from FCWM and YACSD.
7. Yosemite Mountain Ranch average water demand estimated using per-parcel use data from FCWM and YACSD, assuming use equivalent to 10 parcels.
8. Camp Green Meadows average water demand estimated based on an assumed full time population of 95 campers and staff using 80 gallons per day, which is assumed to account for all uses including landscape irrigation.
9. White Chief Mountain Lodge average water demand estimate based on 80 percent occupancy in 20 motel rooms and 6 cabins, all occupied by 3 people on average using 80 gallons per person per day.
10. Other water demands estimated assuming 34 single family parcels (Exhibit 3-1 in the Groundwater Supply Report in Appendix I with per-parcel demands similar to FCWM and YACSD).

### Fish Camp Mutual Water Company Existing Water Demand

The FCMWC is a water company serving 94 parcels in Fish Camp (Todd Groundwater 2016). These parcels are primarily single family residential units with a mixture of full time and seasonal occupation (Todd Groundwater 2016). FCMWC water supply is provided solely from local groundwater, as described below. FCMWC supplied water use records by well for January 2014 through August 2015; these are assumed to be representative of average annual water demands, which are shown in Table 4.12-2.

### Yosemite Alpine Community Services District Existing Water Demand

YACSD is a community services district that provides water service to 47 parcels of single family residential units with a mixture of full time and seasonal use in Fish Camp (Todd Groundwater 2016). YACSD water supply is provided solely from local groundwater, as described below. YACSD provided water use records for June 2012 through August 2015. Average annual existing YACSD water demand based on recent historical water use is shown in Table 4.12-2.

### Block D Water Service Existing Water Demand

Block D water service area includes 31 parcels (Todd Groundwater 2016). The parcels within the Block D water service area are single family residences with a mixture of full time and seasonal use (Todd Groundwater 2016), similar to FCWM and YACSD. Water supply to the Block D service area is from...
groundwater produced by a well and two springs, as described below. Water use records for the Block D service area were not available for review as part of this assessment. Lacking available water use records, water demand for the Block D service area was estimated based on the water uses in the FCMWC and YACSD service areas, which have similar land uses. Given the similarity of land uses between FCMWC, YACSD, and Block D, it is assumed that the per-parcel water demands in these service areas should also be similar to one another. Combined, FCMWC and YACSD serve 141 parcels in Fish Camp with an average of just over 2,458,000 gallons of water per year (Table 4.12-2). Water use on a per-parcel basis in FCMWC is significantly higher than in YACSD, so using only one or the other of these known water uses to estimate per-parcel water demand would skew the estimate. Therefore, a weighted average of the per-parcel water uses based on the number of parcels in each service area for FCMWC and YACSD was used. The weighted average is a conservative statistical approach that in this case biases towards the service area with more parcels. The weighted average per-parcel water use is just under 35,000 gallons, or 0.11 acre-feet per year (afy). The average annual estimated water demand for the 31 parcels in Block D shown in Table 4.12-2 was calculated using an average demand of 35,000 gallons per parcel.

Marshall/Casagrande Property Existing Water Demand
The Marshall / Casagrande property is a single parcel containing a single vacation home used by the Marshall / Casagrande family. The property has its own water supply from a single well onsite, and no records of water use from the well are available. The existing average annual water demand for the Marshall / Casagrande property was estimated using the average per-parcel demands for FCMWC and YACSD described above. The resulting demand estimate is shown in Table 4.12-2.

Yosemite Mountain Ranch Existing Water Demand
Yosemite Mountain Ranch is a large vacation property of over 3,400 acres. There is a full-time caretaker in residence on the property and additional facilities for the use of the owners. Water demands for Yosemite Mountain Ranch are served by a single well on the property, but no records of water use are available. Existing average annual water demand for the Yosemite Mountain Ranch property was estimated using the average per-parcel demands for FCMWC and YACSD described above and a conservative assumption that the demands are equivalent to 10 single family residential parcels. The resulting demand estimate is shown in Table 4.12-2.

Camp Green Meadows Existing Water Demand
Camp Green Meadows is an academic facility operated by the Merced County Office of Education. The camp operates as a school full time throughout the school year and offers summer camp and conference facilities in the summer months. The camp has facilities for 80 campers and 15 full time staff, including cabins, cafeteria, offices, and outdoor recreation areas (Todd Groundwater 2016). All water demand at the camp is supplied by groundwater, as described below. No records of water use are available for Camp Green Meadows, so average annual existing water demand was estimated. These demands were estimated using the conservative assumptions that the camp houses 80 campers and 15 full time staff year-round, and that all water uses are equivalent to a daily demand of 80 gallons per person per day (gpcd). This daily per capita water demand estimate is consistent with water industry standards and with the estimated per capita water use at the Tenaya Lodge and Cottages, which is described below. Average annual estimated water demand for the Camp at Green Meadows is included in Table 4.12-2.

White Chief Mountain Lodge Existing Water Demand
The White Chief Mountain Lodge is a motel offering 20 rooms and 6 cabins in Fish Camp. All water demand at the motel is supplied by groundwater; however no records of water use are available. Therefore, average annual existing water demand was estimated assuming that the 20 rooms and 6 cabins are occupied by an average of 3 people 80 percent of the year, and that all water uses are equivalent to a daily demand of 80 gpcd. Average annual estimated water demand for the White Chief Mountain Lodge is included in Table 4.12-2.

Other Existing Water Demands
A total of 34 parcels in Fish Camp are not provided water service by any of the above entities; all appear to be single family residential properties (Todd Groundwater 2016). These parcels are assumed to be served either by individual private wells or small water systems, and no water use information was available for these parcels. It is also assumed that these parcels have demands similar to FCMWC and YACSD;
Accordingly, average annual water demand was estimated using the average per-parcel demands for FCMWC and YACSD, as described above.

**Total Annual Average Existing Water Demand**
The average water demands for nine known water users and the other existing demands in Fish Camp represent a total average annual demand of 30,578,519 gallons per year, which is equivalent to 93.8 afy.

**Water Supply**
All water supplies in the Fish Camp area have historically been provided from local groundwater. There are currently eight individual water suppliers in Fish Camp, and some demands that appear to be met by other supplies. The known water suppliers are:

- Tenaya Lodge / Tenaya Cottages
- FCWMC
- YACSD
- Block D Water Service
- Marshall / Casagrande Property
- Yosemite Mountain Ranch
- Camp Green Meadows
- White Chief Mountain Lodge

Each of these entities relies on groundwater from fracture bedrock wells completed in the granitic material (Appendix I). In addition to the wells operated by the current water suppliers, there are also three wells on the planned SilverTip Resort property. These wells and the well currently used to supply Block D are planned to be the source of supply for the planned SilverTip Resort. The known existing active (or planned to be used) production wells in Fish Camp were evaluated (Todd Groundwater 2016). This evaluation identified 15 known active water supply wells and two springs and summarized geologic, construction, and capacity information for these structures as available (Appendix I). Information regarding all of the known water supply wells in Fish Camp is summarized in Table 4.12-3.

**WASTEWATER**
Wastewater in Fish Camp is served by onsite, private wastewater treatment plants (WWTP) or septic systems. The Tenaya Lodge and Cottages are served by the newly upgraded Tenaya WWTP, which commenced operation in January 2016. The Tenaya Lodge WWTP has capacity to treat up to 125,000 gallons per day (gpd) (an increase over its former capacity of 80,000 gpd). The WWTP is a tertiary treatment system that combines an activated process, membranes to filter wastewater, and an ultraviolet (UV) disinfection system in a single unit. Filtered material captured in the screens are washed, compacted, and then disposed of at the Mariposa County Sanitary Landfill.

The WWTP discharges treated effluent to either leach fields adjacent to the lodge or to a sub-surface drip irrigation system (during the irrigation season), also adjacent to the lodge, as addressed in WDR Order No. 99-086. The Order states that the 2,484 linear feet of leach lines were designed to a loading rate of 1.5 gallons per square foot per day, providing for a total permitted leach field capacity of 30,000 gpd. There are flow meters and soil moisture sensors on five sub-zones of leach field to monitor flow and distribute effluent appropriately. In the irrigation season, mid-April through mid-October, the sub-surface drip irrigation system is permitted to provide an additional 64,250 gpd of effluent disposal capacity (Appendix J). To account for the possibility of the need to dispose more effluent on a daily basis than available capacity, the WWTP contains 150,000 gallons of emergency storage.

---

1. The number of wells currently in use to meet Other Existing Demands is unknown; therefore, this number could be greater than stated above.
## Table 4.12-3 Well Information Summary, All Wells in Fish Camp

<table>
<thead>
<tr>
<th>Water System or User</th>
<th>Well Identification</th>
<th>Well Information Source</th>
<th>Approximate Ground Surface Elevation (feet MSL)</th>
<th>Total Well Depth (feet)</th>
<th>Water Supply Production Capacity (gpm)</th>
<th>Depth to Static Water October 19, 2015 (feet)</th>
<th>Maximum Drawdown during Three Day Tenaya Pumping Test (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenaya Lodge</td>
<td>Tenaya Lodge Well 3</td>
<td>Well Completion Report / Drillers Log</td>
<td>5,195</td>
<td>950</td>
<td>36</td>
<td>532.2</td>
<td>122.5</td>
</tr>
<tr>
<td></td>
<td>Tenaya Lodge Well 4</td>
<td>Well Completion Report / Drillers Log</td>
<td>5,035</td>
<td>757</td>
<td>30</td>
<td>380.39</td>
<td>32.27</td>
</tr>
<tr>
<td></td>
<td>Tenaya Lodge Well 5</td>
<td>Well Completion Report / Drillers Log</td>
<td>5,186</td>
<td>1,275</td>
<td>54</td>
<td>538</td>
<td>157.6</td>
</tr>
<tr>
<td>Tenaya Cottages</td>
<td>Tenaya Cottages Well 1</td>
<td>No information available</td>
<td>5,112</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>246</td>
</tr>
<tr>
<td>Fish Camp Mutual Water Company</td>
<td>Fish Camp Mutual Water Company Well 1</td>
<td>Well Completion Report / Drillers Log</td>
<td>5,087</td>
<td>675</td>
<td>Unknown</td>
<td>397.04</td>
<td>3.66</td>
</tr>
<tr>
<td></td>
<td>Fish Camp Mutual Water Company Well 2</td>
<td>Well Completion Report / Drillers Log</td>
<td>5,037</td>
<td>1,000</td>
<td>27</td>
<td>156.33</td>
<td>-1.03</td>
</tr>
<tr>
<td></td>
<td>Fish Camp Mutual Water Company Well 3</td>
<td>No information available</td>
<td>Unknown</td>
<td>538</td>
<td>12</td>
<td>25.76</td>
<td>-0.89</td>
</tr>
<tr>
<td></td>
<td>Fish Camp Mutual Water Company Well 4</td>
<td>No information available</td>
<td>Unknown</td>
<td>157.6</td>
<td>Unknown</td>
<td>18.55</td>
<td>0</td>
</tr>
<tr>
<td>Yosemite Alpine Community Services District</td>
<td>Yosemite Alpine CSD Well 1</td>
<td>SilverTip Resort EIR</td>
<td>4,962</td>
<td>320</td>
<td>Unknown</td>
<td>14.8</td>
<td>-1.7</td>
</tr>
<tr>
<td></td>
<td>Yosemite Alpine CSD Well 2</td>
<td>SilverTip Resort EIR</td>
<td>4,984</td>
<td>230</td>
<td>Unknown</td>
<td>11.81</td>
<td>-0.81</td>
</tr>
<tr>
<td>SilverTip Resort</td>
<td>Silver Tip Resort Well 2</td>
<td>SilverTip Resort EIR</td>
<td>5,036</td>
<td>823</td>
<td>32</td>
<td>81.55</td>
<td>-3.55</td>
</tr>
<tr>
<td></td>
<td>Silver Tip Resort Well 3</td>
<td>SilverTip Resort EIR</td>
<td>5,073</td>
<td>1,000</td>
<td>11</td>
<td>132.74</td>
<td>-14.54</td>
</tr>
<tr>
<td>SilverTip Resort / Block D Water Service Area</td>
<td>Silver Tip Resort Well 4</td>
<td>SilverTip Resort EIR</td>
<td>5,050</td>
<td>950</td>
<td>5</td>
<td>149.7</td>
<td>-23.1</td>
</tr>
<tr>
<td>SilverTip Resort</td>
<td>Silver Tip Resort Well 5</td>
<td>SilverTip Resort EIR</td>
<td>4,964</td>
<td>525</td>
<td>104</td>
<td>85.7</td>
<td>-3.1</td>
</tr>
<tr>
<td>Marshall / Casagrande Property</td>
<td>Marshall Property Private Domestic Well</td>
<td>Verbal from property owner</td>
<td>4,997</td>
<td>Unknown</td>
<td>Unknown</td>
<td>4.9</td>
<td>-0.2</td>
</tr>
<tr>
<td>Yosemite Mountain Ranch</td>
<td>Yosemite Mountain Ranch Private Domestic Well</td>
<td>No information available</td>
<td>5,160</td>
<td>Unknown</td>
<td>Unknown</td>
<td>366.1</td>
<td>0</td>
</tr>
<tr>
<td>Camp Green Meadows</td>
<td>Camp Green Meadows Well 1</td>
<td>Verbal from property owner</td>
<td>4,994</td>
<td>Unknown</td>
<td>Unknown</td>
<td>121.56</td>
<td>-1.11</td>
</tr>
<tr>
<td>White Chief Mountain Lodge</td>
<td>White Chief Mountain Lodge Well</td>
<td>No information available</td>
<td>5,051</td>
<td>Unknown</td>
<td>Unknown</td>
<td>167</td>
<td>-0.6</td>
</tr>
</tbody>
</table>

Notes: 1 Negative drawdown values indicate that water levels in observation wells rose during the three day Tenaya well pumping test.
SOLID WASTE

Solid waste from Fish Camp is taken to the Mariposa County landfill. The Mariposa County Department of Public Works contracts with the County Total Waste Systems, Inc. to operate the landfill. The landfill is located 2.2 miles north of Mariposa on Highway 49. The landfill’s operating hours are Tuesday through Saturday 8:00 a.m. to 4:00 p.m. The recycling center operates during the same hours.

The peak throughput at the landfill is 47 tons per day, although the facility can handle 60 tons per day. It encompasses a total of 58 acres with 40 acres designated for disposal areas. Maximum capacity is expected to be reached in 2065. The landfill accepts construction and demolition materials, mixed municipal solid waste, sludge, tires, and other designated waste products.

The Fish Camp Transfer Station is located two miles north of Fish Camp and is open only on Saturday between 8:00 a.m. and 10:00 a.m. Although the land is owned by USFS, the County operates and manages the 0.6-acre station. Peak throughput is approximately 3.1 cubic yards per day.

ENERGY

Pacific Gas & Electric Company (PG&E) provides electricity to the Fish Camp area. Following implementation, the project would also be served by PG&E. At the time of writing this EIR, private solar options are becoming more available throughout the State and may be applied to privately own residences and structures. As solar energy becomes more common, it may provide supplement energy to PG&E and Fish Camp residents.

Natural Gas is not available in the Fish Camp area. Propane is supplied by Ferrellgas.

SNOW REMOVAL

Snow removal on Highway 41 is provided by Caltrans. Snow removal on county roads in Fish Camp (including the Fish Camp Fire Station) is provided by the Thunder Ridge Company, which has been providing snow removal services for the Fish Camp area for several years (Mariposa County 2015c).

SHERIFF AND POLICE

The Mariposa County Sheriff’s Department provides law enforcement services for the Fish Camp TPA. The community is served from the station in Mariposa. The average response time for Fish Camp is approximately 45 minutes. The County Sheriff’s Department employed 31 sworn officers, as of 2001 (Mariposa County 2001). Although Mariposa County does not have adopted standards for numbers of sworn officers per capita, a generally accepted minimum standard is one officer per 1,000 population. The population of Mariposa County in 2014 was approximately 17,682 (U.S. Census Bureau 2015). With 31 sworn officers, the County exceeds that standard by nearly double the number of officers per capita. The Sheriff’s Department currently patrols the Fish Camp area twice a week.

4.12.3 Environmental Impacts and Recommended Mitigation Measures

SIGNIFICANCE CRITERIA

Based on Appendix G of the CEQA Guidelines, the project would have a significant adverse effect related to Utilities and Public Services if it would:
Utilities
- require new or expanded water entitlements because of insufficient water supplies available to serve the project from existing entitlements and resources;
- require or result in the construction of new water delivery, collection, or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- require or result in the construction of new wastewater delivery or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- require sewer service that may not be available by the area’s waste water treatment provider; or
- require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; and/or

Energy Consumption
- result in inefficient and wasteful consumption of energy during construction or operations or require new or expanded energy facilities that could cause significant environmental effects; and/or

Solid Waste
- be served by a landfill with insufficient permitted capacity to accommodate the project’s solid waste disposal needs in compliance with all applicable laws; and/or

Snow Removal
- result in insufficient snow removal and storage such that vehicular or pedestrian public safety is not maintained or require new or expanded snow storage facilities that could cause significant environmental effects; and/or

Public Services
- result in substantial adverse physical impacts associated with the provision of a or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts to maintain acceptable service ratios, response, times, or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.

METHODS AND ASSUMPTIONS
As identified in Chapter 3, “Project Description,” the project includes improvements to various utility systems to serve the proposed project, including water transmission lines, a water storage tank, sewer lines, and electrical distribution infrastructure, and propane tanks. This EIR assesses potential impacts from consumption of resources and construction of utility infrastructure to serve the proposed project. The environmental effects of installing and operating these improvements are disclosed as appropriate in each resource topic chapter. For example, the impacts to biological resources associated with constructing and operating infrastructure improvements are identified and analyzed in Section 4.4, “Biological Resources.”

Impacts on utilities were identified by comparing existing service capacity and facilities against future demand associated with project implementation. Evaluation of potential impacts is based on a review of documents pertaining to the project area, including a Groundwater Study prepared by Todd Groundwater (2016) (see Appendix I of this Draft EIR), study of the Tenaya Lodge WWTP disposal capacity (see Appendix J of this Draft EIR), Mariposa County and Fish Camp planning documents, and through consultation with representatives of utility providers.
Stormwater drainage and water quality are addressed in Section 4.11, “Hydrology and Water Quality.” Wildfire hazards, fire protection, and emergency response are addressed in Section 4.13, “Hazardous Materials.”

WATER DEMAND

The Tenaya Cabins Project water demands would include the following components: indoor water use in the cabins, food preparation and service, laundry, pool and spa use, and landscape irrigation. All of these water uses are proposed to be served by groundwater supplied by the existing Tenaya Lodge water system, with the exception of landscape irrigation, which is proposed to be served by recycled water from the upgraded Tenaya Lodge WWTP (operational as of January 2016).

The adjusted average water demands for the Tenaya Lodge and Cottages without irrigation use were used to estimate per-capita daily demands for each of the facilities, as shown in Table 4.12-4 (Todd Groundwater 2016). Average monthly population estimates for the per-capita daily water demand calculations were based on the existing number of rooms, recent historical occupancy rate data, and an assumption that both Lodge and Cottage rooms are occupied by three people on average. The resulting monthly average population estimates were used to calculate independent per-capita daily water demand estimates for the existing Lodge and Cottage facilities. These values were then averaged using a population based weighted average to honor the higher per-capita demand and population estimates for the Lodge as compared to the Cottages. The resulting conservative per-capita daily demand estimate for water without irrigation is 71 gpcd per year. Indoor water use rates of 60 to 100 gpcd are typical in the California water industry. (It should be noted that the same set of calculations was also completed for all water uses including irrigation, which resulted in a per-capita daily demand of 80 gpcd. This is the value used to estimate the existing Camp Green Meadows and White Chief Mountain Lodge demands discussed above.)

The proposed 54 cabins at full capacity are expected to serve 162 people, based on an average of three people per cabin. Monthly occupancy distribution for the Project was estimated using the recent historical monthly occupancy rates for the Lodge and Cottages provided by DN. The resulting estimated monthly population estimate was combined with average per-capita daily water demands from Table 4.12-4 to calculate the Tenaya Cabins Project water demands, which are shown in Table 4.12-5.

The project water demands would vary over the year and by day. Therefore, the water system must be able to handle daily demands during peak water use periods. Peak daily demands are estimated in Table 4.12-5 by multiplying average daily water demand of 8,595 gallons by a factor of 2.0 (Appendix I) for a peak day demand of 17,190 gallons, which is equivalent to 12 gallons per minute (gpm) of continuous 24-hour per day pumping.

WASTEWATER

Wastewater generated by the project was based on the project’s estimated water demand of 8,595 gpd as shown in Table 4.12-5. This water demand does not include landscape irrigation. Nearly all water used for domestic purposes (i.e., showers, toilets, sinks) would be discharged as wastewater to the Tenaya Lodge WWTP, meaning that the estimated 8,595 gpd of water is expected to result in a nearly equivalent wastewater discharge. A peaking factor of 1.5 was used consistent with the peaking factor for the Tenaya Lodge, resulting in an estimated peak wastewater treatment demand from the project of 12,893 gpd. This project-related wastewater was then added to the average daily and peak daily flow to the Tenaya WWTP from the Lodge and Cottages. The total existing plus project wastewater treatment demand was then compared to the WWTP treatment and disposal capacity, as detailed in Impact 4.12-2 below.

ENERGY

The analysis of energy efficiency is based on the projection of electricity and natural gas usage (as a proxy for propane), as utilized for the modeling of air emissions in Appendix F of this Draft EIR.
### Table 4.12-4  Estimated Per-Capita Water Demand, Tenaya Lodge and Cottages

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Total Water Use (gallons)</th>
<th>Estimated Irrigation (gallons)</th>
<th>Estimated Non-Irrigation Water Demand (gallons)</th>
<th>Occupancy Rate</th>
<th>Number of Rooms</th>
<th>Population Estimate, Assuming 3 People Per Room</th>
<th>Water Use Per Person Per Month (gallons)</th>
<th>Per-Capita Daily Demand (gallons)</th>
<th>Average Total Water Use (gallons)</th>
<th>Estimated Irrigation Water Demand (gallons)</th>
<th>Occupancy Rate</th>
<th>Number of Rooms</th>
<th>Population Estimate, Assuming 3 People Per Room</th>
<th>Water Use Per Person Per Month (gallons)</th>
<th>Per-Capita Daily Demand (gallons)</th>
<th>Average P Capita Daily Demand (gpcd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>704,350</td>
<td>0</td>
<td>704,350</td>
<td>46%</td>
<td>249</td>
<td>341</td>
<td>2,068</td>
<td>67</td>
<td>109,266</td>
<td>0</td>
<td>109,266</td>
<td>24%</td>
<td>53</td>
<td>39</td>
<td>2,816</td>
<td>91</td>
</tr>
<tr>
<td>February</td>
<td>741,300</td>
<td>0</td>
<td>741,300</td>
<td>48%</td>
<td></td>
<td>355</td>
<td>2,089</td>
<td>75</td>
<td>131,860</td>
<td>0</td>
<td>131,860</td>
<td>38%</td>
<td>61</td>
<td>2,171</td>
<td>78</td>
<td>75</td>
</tr>
<tr>
<td>March</td>
<td>870,625</td>
<td>0</td>
<td>870,625</td>
<td>53%</td>
<td></td>
<td>394</td>
<td>2,207</td>
<td>71</td>
<td>145,297</td>
<td>0</td>
<td>145,297</td>
<td>54%</td>
<td>86</td>
<td>1,699</td>
<td>55</td>
<td>68</td>
</tr>
<tr>
<td>April</td>
<td>1,183,475</td>
<td>192,156</td>
<td>991,319</td>
<td>76%</td>
<td></td>
<td>570</td>
<td>1,739</td>
<td>58</td>
<td>192,771</td>
<td>23,844</td>
<td>168,927</td>
<td>79%</td>
<td>126</td>
<td>1,341</td>
<td>45</td>
<td>56</td>
</tr>
<tr>
<td>May</td>
<td>1,461,720</td>
<td>251,511</td>
<td>1,210,209</td>
<td>87%</td>
<td></td>
<td>648</td>
<td>1,866</td>
<td>60</td>
<td>238,901</td>
<td>31,209</td>
<td>207,692</td>
<td>86%</td>
<td>137</td>
<td>1,515</td>
<td>49</td>
<td>58</td>
</tr>
<tr>
<td>June</td>
<td>2,080,800</td>
<td>307,449</td>
<td>1,773,351</td>
<td>94%</td>
<td></td>
<td>704</td>
<td>2,520</td>
<td>84</td>
<td>317,129</td>
<td>38,151</td>
<td>278,978</td>
<td>90%</td>
<td>143</td>
<td>1,956</td>
<td>65</td>
<td>81</td>
</tr>
<tr>
<td>July</td>
<td>2,485,060</td>
<td>344,172</td>
<td>2,140,888</td>
<td>98%</td>
<td></td>
<td>729</td>
<td>2,936</td>
<td>95</td>
<td>380,876</td>
<td>42,708</td>
<td>338,168</td>
<td>95%</td>
<td>152</td>
<td>2,232</td>
<td>72</td>
<td>91</td>
</tr>
<tr>
<td>August</td>
<td>2,385,680</td>
<td>317,698</td>
<td>2,067,982</td>
<td>97%</td>
<td></td>
<td>726</td>
<td>2,848</td>
<td>92</td>
<td>378,336</td>
<td>39,422</td>
<td>338,913</td>
<td>95%</td>
<td>152</td>
<td>2,234</td>
<td>72</td>
<td>88</td>
</tr>
<tr>
<td>September</td>
<td>1,880,100</td>
<td>243,397</td>
<td>1,636,703</td>
<td>88%</td>
<td></td>
<td>657</td>
<td>2,493</td>
<td>83</td>
<td>336,155</td>
<td>30,203</td>
<td>305,952</td>
<td>83%</td>
<td>133</td>
<td>2,307</td>
<td>77</td>
<td>82</td>
</tr>
<tr>
<td>October</td>
<td>1,315,420</td>
<td>158,849</td>
<td>1,156,571</td>
<td>81%</td>
<td></td>
<td>606</td>
<td>1,909</td>
<td>62</td>
<td>204,737</td>
<td>19,711</td>
<td>185,025</td>
<td>81%</td>
<td>128</td>
<td>1,446</td>
<td>47</td>
<td>59</td>
</tr>
<tr>
<td>November</td>
<td>867,960</td>
<td>0</td>
<td>867,960</td>
<td>62%</td>
<td></td>
<td>465</td>
<td>1,868</td>
<td>62</td>
<td>145,657</td>
<td>0</td>
<td>145,657</td>
<td>67%</td>
<td>106</td>
<td>1,369</td>
<td>46</td>
<td>59</td>
</tr>
<tr>
<td>December</td>
<td>893,820</td>
<td>0</td>
<td>893,820</td>
<td>51%</td>
<td></td>
<td>381</td>
<td>2,346</td>
<td>76</td>
<td>141,878</td>
<td>0</td>
<td>141,878</td>
<td>58%</td>
<td>93</td>
<td>1,531</td>
<td>49</td>
<td>71</td>
</tr>
<tr>
<td><strong>Annual Total</strong></td>
<td><strong>16,870,310</strong></td>
<td><strong>1,815,232</strong></td>
<td><strong>15,055,078</strong></td>
<td></td>
<td></td>
<td><strong>6,575</strong></td>
<td><strong>2,241</strong></td>
<td>74</td>
<td><strong>2,722,862</strong></td>
<td><strong>225,248</strong></td>
<td><strong>2,497,615</strong></td>
<td></td>
<td></td>
<td><strong>1,354</strong></td>
<td><strong>1,885</strong></td>
<td>62</td>
</tr>
</tbody>
</table>

Notes: General: All values rounded to nearest whole number, totals may reflect the effects of rounding.
1. All values from Table 3-1.
2. All values from Table 3-3.
3. Non-irrigation demand estimate the result of subtracting estimated irrigation water demand from total average water use.
4. Occupancy rates based on recent historical data provided by Delaware North.
5. Population estimates calculated assuming three people per room on average.
6. Population based weighted average honors the higher per-capita water use and population at the Tenaya Lodge as compared to the Cottages.
### Table 4.12-5  Estimated Project Water Demand

<table>
<thead>
<tr>
<th></th>
<th>Recent Occupancy Rates for Existing Tenaya Lodge and Cottages¹</th>
<th>Monthly Population Estimate, Proposed Explorer Cabins²</th>
<th>Estimated Per-Capita Water Demand, Explorer Cabins³ (gpcd)</th>
<th>Average Daily Water Demand by Month⁴ (gpd)</th>
<th>Days per month</th>
<th>Explorer Cabins Monthly Water Demand Estimate⁵ (gpm)</th>
<th>Residential Parcel Monthly Water Demand Estimate⁶ (gpm)</th>
<th>Total Monthly Water Demand Estimate⁷ (gpm)</th>
<th>Monthly Water Demand Estimate (Acre-Feet per Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>35%</td>
<td>57</td>
<td>69.2</td>
<td>3,922</td>
<td>31</td>
<td>121,583</td>
<td>1,415</td>
<td>122,998</td>
<td>0.4</td>
</tr>
<tr>
<td>February</td>
<td>43%</td>
<td>69</td>
<td>75.0</td>
<td>5,209</td>
<td>28</td>
<td>145,855</td>
<td>1,732</td>
<td>147,588</td>
<td>0.5</td>
</tr>
<tr>
<td>March</td>
<td>53%</td>
<td>86</td>
<td>68.3</td>
<td>5,896</td>
<td>31</td>
<td>182,768</td>
<td>2,155</td>
<td>184,922</td>
<td>0.6</td>
</tr>
<tr>
<td>April</td>
<td>78%</td>
<td>126</td>
<td>55.6</td>
<td>7,000</td>
<td>30</td>
<td>210,003</td>
<td>3,143</td>
<td>213,146</td>
<td>0.7</td>
</tr>
<tr>
<td>May</td>
<td>87%</td>
<td>140</td>
<td>58.2</td>
<td>8,160</td>
<td>31</td>
<td>252,963</td>
<td>3,497</td>
<td>256,460</td>
<td>0.8</td>
</tr>
<tr>
<td>June</td>
<td>92%</td>
<td>149</td>
<td>80.8</td>
<td>12,041</td>
<td>30</td>
<td>361,236</td>
<td>3,717</td>
<td>364,953</td>
<td>1.1</td>
</tr>
<tr>
<td>July</td>
<td>96%</td>
<td>156</td>
<td>90.8</td>
<td>14,189</td>
<td>31</td>
<td>439,871</td>
<td>3,899</td>
<td>443,770</td>
<td>1.4</td>
</tr>
<tr>
<td>August</td>
<td>96%</td>
<td>156</td>
<td>88.5</td>
<td>13,799</td>
<td>31</td>
<td>427,777</td>
<td>3,893</td>
<td>431,671</td>
<td>1.3</td>
</tr>
<tr>
<td>September</td>
<td>86%</td>
<td>139</td>
<td>82.0</td>
<td>11,385</td>
<td>30</td>
<td>341,539</td>
<td>3,463</td>
<td>345,002</td>
<td>1.1</td>
</tr>
<tr>
<td>October</td>
<td>81%</td>
<td>131</td>
<td>59.0</td>
<td>7,720</td>
<td>31</td>
<td>239,311</td>
<td>3,267</td>
<td>242,578</td>
<td>0.7</td>
</tr>
<tr>
<td>November</td>
<td>65%</td>
<td>105</td>
<td>59.2</td>
<td>6,188</td>
<td>30</td>
<td>185,629</td>
<td>2,610</td>
<td>188,238</td>
<td>0.6</td>
</tr>
<tr>
<td>December</td>
<td>55%</td>
<td>89</td>
<td>70.5</td>
<td>6,245</td>
<td>31</td>
<td>193,582</td>
<td>2,209</td>
<td>195,792</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Annual Totals</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>365</td>
<td>3,102,118</td>
<td>35,000</td>
<td>3,137,118</td>
<td>9.6</td>
</tr>
<tr>
<td><strong>Average Daily Demand Estimate</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>365</td>
<td>3,102,118</td>
<td>35,000</td>
<td>3,137,118</td>
<td>9.6</td>
</tr>
<tr>
<td><strong>Peak Day Demand Estimate⁸</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>8,595 gallons per day (gpd)</td>
<td>17,190 gallons per day (gpd)</td>
<td>12 gallons per minute (gpm), pumping 24 hours a day</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes: General: All values rounded to nearest whole number, totals may reflect the effects of rounding.

- **gpm** = gallons per month
- ¹ Occupancy rates based on recent historical data provided by Delaware North.
- ² Population estimates calculated assuming three people per cabin on average in 54 cabins.
- ³ Population based weighted average per-capita daily demand from Table 3-4.
- ⁴ Per-capita daily demand multiplied by population.
- ⁵ Daily water demand multiplied by number of days per month.
- ⁶ Peak day estimated by multiplying average daily water demand by peaking factor of 2 (Appendix I).
- ⁷ Water demand estimate for the half-acre residential parcel from per-parcel use data from FCMWC and YACSD, monthly distribution according to recent Tenaya Lodge and Cottage occupancy rates.
- ⁸ Peak day estimated by multiplying average daily water demand by peaking factor of 2 (Appendix I).
ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Telecommunications and Gas
Telecommunications and propane services to the project site would be served in connection to the existing services at the Tenaya Lodge from Sierra Telephone and Northland Cable TV, and Ferrellgas. The extension of such services from the Lodge would not affect existing services. The environmental impacts of installing utility lines and propane tanks are fully addressed throughout this Draft EIR, as the utility lines are included in the project footprint of disturbance, which is described in Chapter 3 of this Draft EIR. This issue is not discussed further.

Snow Removal
Caltrans provides road maintenance and snow removal for Highway 41. Delaware North would provide maintenance and snow removal for all onsite roads and snow removal to maintain access to refuse containers.

Schools and Recreation Facilities
The project would not result in substantial adverse physical impacts associated with the provision of a or need for new or physically altered school or recreation facilities, as discussed in Section 4.2 of this Draft EIR. These issues are not discussed further.

Wildland Fire Hazards, Fire Protection, and Emergency Response
Wildland fire hazards, fire protection, and emergency response are discussed in detail in Chapter 4.13, “Hazards and Hazardous Materials,” of this Draft EIR.

IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.12-1: Increase demand for water supply

Project water demands for all components of the Tenaya Cabins Project except landscape irrigation are estimated to be 9.6 afy, with average daily demands of 8,595 gallons and a peak day demand of 17,190 gallons. The existing Tenaya Lodge water system is proposed to be used to meet the project’s demand. When the proposed-project water demand is added to the demands of the existing Tenaya Lodge, the total demand on the Tenaya Lodge water supply system would be 61.4 afy. The combined Lodge-plus-project average demand is estimated to be 54,783 gallons per day, with a combined peak day demand of 109,566 gallons per day. Based on a three day continuous well pumping test, the project-plus-existing-Lodge demand can be met by pumping 7.6 hours per day and the combined peak day demand would require pumping just over 15 hours per day. The existing Tenaya Lodge water supply is sufficient to serve the proposed project. The proposed project’s water demand would not require new water supply or entitlements. Therefore, this impact would be less than significant.

Water for domestic and firefighting purposes would be provided by the three existing wells in the Tenaya Lodge water system, located on the Tenaya Lodge property. Treatment to potable drinking water standards is and would continue to be provided at the well head of each well. Approximately 6,750 linear feet of water pipeline would need to be installed to connect Parcel 1 and Parcel 2 of the project site to the existing Tenaya Lodge water system (see the light-blue line on Exhibits 3-11 and 3-12). The pipes would be placed under the proposed project roads and would connect to the existing system and the proposed water tank. The existing Tenaya Lodge water pipelines have capacity to handle the additional water demand for the cabins, clubhouse, and single-family home and would not need upgrading. The environmental impacts of installing the water lines are fully addressed throughout this Draft EIR, as the utility lines are included in the project footprint of disturbance, which is described in Chapter 3 of this Draft EIR.
**Project Water Demand Estimate**

As described above, the proposed project’s 54 cabins at full capacity are expected to serve 162 people, based on an average of three people per cabin. Monthly occupancy for the Tenaya Cabins Project was estimated using recent historical monthly occupancy rates for the Lodge and Cottages (Table 4.12-4). The resulting estimated monthly population estimate was combined with the per-capita daily demand estimate for water without irrigation of 71 gpcd per year to calculate project water demands (Table 4.12-5). The average annual water demand for the project is estimated to be 3,137,118 gallons per year, which is equivalent to 9.6 afy (Table 4.12-5).

Demand for water within the project would vary over the year and by day. Therefore, the water system must be able to handle daily demands during peak water use periods. Peak daily demands were estimated by multiplying average daily water demand of 8,595 gallons by a factor of 2.0 (Appendix I) for a peak day demand of 17,190 gallons, which is equivalent to 12 gallons per minute (gpm) of continuous 24-hour per day pumping (Table 4.12-5).

**Proposed Project Water Supply**

The Tenaya Cabins would tie into the existing Tenaya Lodge water supply system to serve all water demands except landscape irrigation. The existing Tenaya Lodge water supply comes exclusively from three groundwater wells located on the Tenaya Lodge property: Tenaya Wells 3, 4, and 5. These wells and the rest of the Tenaya Lodge water supply system are permitted through the SWRCB-DDW and have supplied water without incident to the Tenaya Lodge since they were constructed in 1994, 2003, and 2009, respectively in sequence. The SWRCB-DDW tracks water use and water quality as reported by licensed water system operators. The Tenaya Lodge water supply system is operated by licensed operators, and it currently meets or exceeds all SWRCB-DDW requirements for drinking water supply capacity and water quality (Appendix I).

**Water Supply Sufficiency**

As described in Section 4.11, “Hydrology and Water Quality,” of this Draft EIR, a three day combined pumping test was performed on October 19 through 22, 2015 to evaluate the capacity of the Tenaya Lodge wells to meet the demands of the existing Tenaya Lodge and the proposed project. The three existing Tenaya Lodge wells were pumped at the maximum capacity of the pumping equipment in place in each well for the entire duration of the test. Averaged over the entire three day period, Tenaya Well 3 produced 36 gpm, Tenaya Well 4 produced 30 gpm, and Tenaya Well 5 produced 54 gpm, for a combined total of 120 gpm (Table 4.12-3).

The average daily demand for the project is 8,595 gallons per day and average daily demand for the existing Lodge is 46,188 gallons per day for a combined project plus existing average daily demand of 54,783 gallons per day (Table 4.12-5 and Appendix I). The peak day demand for the project is 17,190 gallons (Table 4.12-5) and peak day demand for the existing Tenaya Lodge is 92,377 gallons per day (Table 4.12-2). The combined peak day demand for the Tenaya Lodge and proposed Tenaya Cabins would be 109,566 gallons (Appendix I). The existing Tenaya Lodge wells were tested at a combined rate of 120 gpm for a 3-day continuous period (Table 4.12-3). Pumping at this rate, the project plus existing Lodge demand can be met by pumping 7.6 hours per day and the combined peak day demand would require pumping just over 15 hours per day.

**Effects of Tenaya Lodge Wells on Other Wells**

As explained in Impact 4.11-4, in fractured bedrock groundwater environments, it is possible for a well to have an effect on groundwater elevations in other wells, even distant wells. Conversely, it is possible for wells that are near to each other to have no respective effect. The effect of wells in fractured bedrock is dependent on how connected the fractures in the wells are to each other. No mapping of subsurface fracture locations, orientations, or depths has been completed for the Fish Camp area. Therefore, a three day (72 hour) duration pumping test was completed for the Tenaya Cabins Project (see Appendix I). The purpose for test was twofold: 1) assess the capacity of the wells to meet the demands of the existing Lodge and the proposed project, and 2) test whether increased use of the existing Tenaya Lodge wells would have
a negative impact on any other existing or reasonably foreseeable planned groundwater uses in Fish Camp.

The three existing Tenaya Lodge wells were pumped at the maximum capacity of the pumping equipment in place in each well for the entire duration of the test, which was 36, 30, and 54 gpm for Tenaya Well 3, 4, and 5, respectively. All of the other wells in Fish Camp were maintained non-operational for the entire duration of the test. Water levels were measured in the pumping wells and all known existing water supply wells in Fish Camp, which is all the wells shown on Exhibit 4.11–3.

Groundwater elevation and drawdown hydrographs for all of the monitored wells combined for the entire test duration are shown on Exhibits 4.11-7 and 4.11-8, respectively. Drawdown hydrographs of wells grouped by geographic region and water supplier are shown on Exhibit 4.11-9 through 4.11-10. Drawdown hydrographs of each well plotted individually and tabular water level data for each well for the entire test are included in the groundwater supply report (Appendix I).

The results of this monitoring showed an apparent pumping effect on only one well, FCMWC Well 1. The maximum drawdown observed in FCMWC Well 1 while testing the Tenaya Lodge wells was 3.66 feet, less than 2 percent of the total saturated thickness in FCMWC Well 1. None of the remaining wells in Fish Camp showed drawdown during the Tenaya Lodge well pumping test. In fact, most of the other wells showed increases in groundwater elevation throughout the test (Appendix I). Nevertheless, the pumping test identified an apparent connection between the groundwater tapped by both by FCMWC Well 1 and the Tenaya Lodge wells. The pump test indicates that the effects of the Tenaya pumping on the FCMWC Well 1 is slight and, under the test performed for the EIR, would not adversely affect well productivity. However, the test was conducted over a relatively short period and was not able to simulate a variety of conditions that could occur, such as multiple area wells operating simultaneously, more extreme drought conditions, etc. Because water availability is a critical issue and there is a slight potential that the project could affect the productivity of the FCMWC Well 1, Mitigation Measure 4.11-4 requires DN to implement a well monitoring program to identify potential drawdown of FCMWC Well 1. If triggered as a result of the well monitoring program, DN shall implement water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to allow for recovery of the production capacity in FCMWC Well 1. Implementation of Mitigation Measure 4.11-1 would reduce the impact to productivity of FCMWC Well 1 to a less-than-significant level.

**Groundwater Recharge**

As described in Impact 4.11-5, the water budget indicates that there is adequate recharge to the groundwater system to meet the existing plus project demands for the Fish Camp area. Average annual recharge is conservatively estimated to be approximately 190 afy, and existing plus project pumping is estimated to be 103.4 afy. In addition, neither the existing nor future demand estimates reflect return flows to groundwater. However, most of the water used indoors is returned to groundwater through septic systems and wastewater system discharges, commonly referred to as wastewater return flows. The assessment of landscape irrigation demands for the Tenaya Lodge and Cottages indicated that only 11 percent of the water used at Tenaya is for irrigation. Assuming that this is representative for the entire Fish Camp area (i.e., most of the water used indoors is returned to groundwater through septic and wastewater system discharge), then about 90 percent of all pumped groundwater is returned to the groundwater system (Appendix I). The project would have a less-than-significant impact on groundwater recharge.

**Recycled Water for Irrigation**

As described in Impact 4.12-2, below, the existing Tenaya Lodge WWTP was recently upgraded; the new WWTP became operational in January 2016 and has capacity to treat up to 125,000 gpd of wastewater to California Code of Regulations, Title 22, standards for tertiary treated wastewater. The effluent may therefore be used as recycled water for land applications, such as irrigation of landscaping, fields, or public access lands. The Tenaya Cabins would install approximately 3,075 linear feet of recycled water pipes (“purple pipes”) to irrigate landscaping onsite with recycled water from the Tenaya Lodge WWTP. Considering the capacity of the Tenaya Lodge WWTP (125,000 gpd) and the limited low-water-use landscaping proposed
for the Tenaya Cabins Project, there would be sufficient recycled water to serve Tenaya Cabins irrigation-water demands.

**Conclusion**

The proposed project’s water demand would be met by the existing capacity of the Tenaya Lodge wells and the project would not require new water supply or entitlements. Furthermore, the project would not adversely affect groundwater recharge (groundwater recharge exceeds the project’s water demand), and well monitoring and water demand management would be implemented to prevent potential effects on FCMWC Well 1 productivity. Therefore, the project’s impact on water supply is **less than significant**.

**Mitigation Measures**

No mitigation is required.

**Impact 4.12-2: Require or result in the construction of new or expanded wastewater treatment facilities or result in the exceedance of wastewater discharge requirements of the applicable regional water quality control board**

The project would install sewer lines to convey project-generated wastewater to the Tenaya Lodge wastewater treatment plant, which has a capacity to treat up to 125,000 gallons per day (gpd) of wastewater. This capacity is sufficient to serve maximum demands from the Tenaya Lodge and Cottages (average daily flow of 80,000 gpd, and peak daily flow of 100,000 gpd) in addition to the maximum demands from the proposed Tenaya Cabins and future single family residence average (average daily flow of 8,595 gpd and peak daily flow of 12,893 gpd). The treatment plant complies with the wastewater discharge requirements (WDRs) of the Central Valley Regional Water Quality Control Board and the project would include the expansion of the central leach field at the Tenaya Lodge to accommodate the project-related effluent increase and allow for proper disposal of treated effluent from the WWTP. Therefore, this impact would be **less than significant**.

Project-generated wastewater would be collected with a below-grade piping system located under the proposed project roads and gravity fed to a lift station located near the low point of the property, as identified on Exhibit 3-11. From the lift station, wastewater would be pumped to the Tenaya Lodge WWTP located south of the project site on the southwestern side of the Tenaya Lodge, between the lodge and the cottages (Exhibit 3-12). Approximately 4,425 linear feet of sewer pipeline and approximately 2,300 linear feet of new sewer force main would be needed to connect Parcel 1 and Parcel 2 to the Tenaya Lodge WWTP as shown on Exhibit 3-12. The environmental impacts of installing these lines are fully addressed throughout this Draft EIR, as the utility lines are included in the project footprint of disturbance, which is described in Chapter 3 of this Draft EIR.

**Wastewater Treatment Capacity**

The Tenaya Lodge WWTP was recently upgraded; the new WWTP became operational in January 2016 and has capacity to treat up to 125,000 gpd of wastewater to California Code of Regulations, Title 22, standards for tertiary treated wastewater. The WWTP currently treats the effluent produced by the Tenaya Lodge and Cottages. The wastewater demand varies monthly. The summer is the busiest time with higher occupancy resulting in higher flows to the treatment plant. The summer average daily wastewater demand for the Lodge and Cottages is 67,300 gpd (in July) (Design, Community & Environment 2011). However, the maximum potential demands from the Tenaya Lodge and Cottages could represent an average daily flow of 80,000 gpd, and peak daily flow of 100,000 gpd (Design, Community & Environment 2011). The Tenaya Cabins Project would add up to an average daily flow of 8,595 gpd. The peak daily flow, based on the average daily demand multiplied by 1.5 (consistent for the peak factor for the Lodge), would be 12,893 gpd. Therefore, the combined total wastewater treatment demand at the Tenaya Lodge WWTP could represent an average daily flow of 88,595 gpd, and a peak daily flow of 112,893, which are within the WWTP’s 125,000 gpd capacity. No additional wastewater treatment capacity or facility upgrades would be necessary.
**Effluent Disposal Capacity**
The effluent disposal capacity is variable depending on time of year. The existing WWTP effluent disposal area consists of leachfields that have a capacity of 30,000 gpd (monthly average) that can be used year round. In addition, there is a subsurface disposal irrigation system that has a capacity of approximately 64,250 gpd (monthly average) that can be used mid-April to Mid-October when groundwater levels are low. Combined, the existing WWTP has a permitted monthly average disposal capacity of 80,000 gpd (Blair, Church & Flynn 2011). With the upgraded treatment quality (Title 22 requirements), the Tenaya Lodge and the Tenaya Cabins can use some of the treated effluent for irrigation of landscaping (during the irrigation season), which would further increase the effective disposal capacity (less effluent would need to be disposed in the leachfield).

The project would add an average flow of 8,595 gpd to the Tenaya WWTP disposal requirements. Considering the project’s anticipated wastewater in addition to the wastewater from the Lodge and Cottages, as well as the effluent disposal capacity from the leach fields, subsurface disposal irrigation system, and 150,000 gallons of storage, a water balance was prepared (Appendix J). During mid-April to mid-October when the subsurface disposal irrigation system is in operation, there would be sufficient effluent disposal capacity to handle discharge from the proposed project in addition to the Lodge and Cottages, and none of the emergency storage would be required. During winter months when the irrigation system is not in use, the leach fields would be able to accommodate the effluent discharge for all months, except November, in which 105 gallons of effluent storage would be required. However, during peaking events from November through March, effluent storage capacity would be reduced and could result in insufficient disposal and/or storage capacity.

To ensure sufficient effluent disposal capacity during peak events for the entire WWTP system (the Lodge, Cottages, and proposed project), the project would construct an additional 637 linear feet of leach lines (Exhibit 3-11). This would expand the disposal capacity at the central leach field to account for the 8,595 gpd flow from the Tenaya Cabins at full occupancy (Appendix J). This additional leach field capacity in addition to the existing subsurface irrigation and storage capacity, would provide adequate capacity for disposal of treated effluent during peaking events throughout all months of the year.

**Redundancy and Emergency Storage**
The Tenaya Lodge WWTP has alarms and redundancy as required for recycled water use by the California Code of Regulations, Title 22. The plant has a 50,000 gallon influent storage tank that is used to spread the flow evenly throughout the day. The plant also has a 50,000 gallon effluent tank that serves as additional capacity to evenly disperse the flow throughout the day. The treatment plant also has two 50,000-gallon emergency storage tanks that are reserved for use when the treatment plant cannot treat the flow to tertiary standards. The 100,000 gallons of emergency storage has return valving, alarms, and piping so that the wastewater can be returned to the treatment process to be adequately treated prior to discharge.

**Antidegradation Analysis**
WDRs currently apply to the Tenaya Lodge WWTP through RWQCB Order No. 99-086. A summary of these requirements is show in Table 4.11-1 in Section 4.11, “Hydrology and Water Quality.” The Tenaya Lodge implements a testing plan to monitor onsite disposal and groundwater quality. The testing must demonstrate compliance with RWQCB WDRs. Therefore, the effluent discharge from the Tenaya WWTP is not expected to negatively impact the groundwater at the site or the surrounding areas. The wastewater from the WWTP is of a quality standard consistent with the recycled water standards of Title 22.

**Conclusion**
The Tenaya Lodge WWTP has sufficient capacity to treat project-related wastewater and the WWTP monitors discharge and complies with the wastewater discharge requirements (WDRs) of the Central Valley RWQCB. To ensure sufficient capacity to dispose of treated effluent, the project would include construction of 637 linear feet of additional leach field lines to properly dispose the increased effluent generated from the project (8,595 gpd). Therefore, the project would have a less-than-significant impact on wastewater treatment and discharge.
Mitigation Measures
No mitigation is required.

Impact 4.12-3: Exceed landfill capacity

Project implementation would entail the production of solid wastes typical of a resort commercial development, such as food refuse, packaging, and disposable materials. Waste generated from the project would not exceed the capacity of the Mariposa County Sanitary Landfill such that additional landfill facilities would be required. This would be a less-than-significant impact.

Solid waste from the project site would be hauled to the Mariposa County Sanitary Landfill, a Class III landfill located approximately 2.2 miles north of the community of Mariposa on Highway 49. Solid waste in Fish Camp is conveyed to the landfill by Mariposa County Total Waste Systems, Inc. Refuse can also be deposited at the Fish Camp Transfer Station 1.5 miles north of Fish Camp for a fee.

The Mariposa County Sanitary Landfill currently supports 18,000 residents and approximately 4 million visitors to Yosemite National Park annually. The landfill has a maximum permitted throughput of 100 tons per day, a remaining capacity of 1,193,088 cubic yards (cy), and a maximum permitted capacity of 1,971,000 cy. The landfill has a projected lifespan through 2065 (CalRecycle 2016). Based on the generation of solid waste from the Tenaya Cottages (416 cy per year for 53 rooms) (Fulce pers. comm. 2016a), the estimated level of refuse produced by the Tenaya Cabins Project would be approximately 424 cy per year of solid waste. This amount would not result in a notable increase in solid waste such that the landfill would need to be expanded or waste would need be exported.

Bear resistant garbage containers or enclosures would be used at the Tenaya Cabins and at the single-family parcel and the project would comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. Specifically, Chapter 8.12 of the Mariposa County Code which regulates what refuse is permissible for disposal. Chapter 8.12 declares it unlawful to deposit household hazardous waste, medical waste, asbestos-containing materials, explosives, radioactive material, or other materials determined hazardous by the solid waste and recycling manager. Further, the aforementioned waste materials would not be produced from project operations.

The project would not result in the generation of solid waste that would exceed the capacity of the Mariposa County Landfill, nor result in the need to expand solid waste facilities. Project operations would also be consistent with the applicable laws and local codes related to solid waste disposal. This would be a less-than-significant impact.

Mitigation Measures
No mitigation is required.

Impact 4.12-4: Increased demand for law enforcement services

The Tenaya Cabins Project would add visitors to the Fish Camp area, which would create a limited additional demand for law enforcement services. The Tenaya Lodge security personnel provide security, complaint resolution and interaction with law enforcement or emergency response personnel in case of an incident. The Tenaya security personnel would expand their rounds to include the Tenaya Cabins site. Therefore, the project would not result in the need for additional or expanded law enforcement service facilities and would not result in decreased law enforcement service levels. This would be a less-than-significant impact.

In 2015, there were a total of 51 calls for law enforcement service and deputy response; 17 at the Tenaya Lodge and 34 in the Fish Camp TPA (Binnewies, pers. comm. 2016a). The Tenaya Cabins Project would create a limited additional demand for law enforcement services. Based on comparable information on calls for service from the Tenaya Lodge, the increase in calls for service in Fish Camp is estimated to be
approximately 1 to 2 per year and non-violent in nature. The Sheriff’s Department indicated that, due to the potential increase in visitation from the Tenaya Cabins, the Department was interested in Delaware North continuing to provide private security, such as is provided at the Tenaya Lodge (Binnewies, pers. comm. 2016b). Currently, Tenaya has security personnel on staff (Manager on Duty) who provides security, complaint resolution, and interfaces with law enforcement/emergency personnel in case of an incident. The security personnel make regular rounds of the Tenaya Lodge and Cottages and report internally any incidences, as well as report to local authorities if the situation warrants it. For the Tenaya Cabins Project, the security personnel (Manager on Duty) would expand their existing security services to include the cabins property.

Because the Tenaya Cabins Project would have a limited additional demand for law enforcement services and because onsite security personnel would be provided, the project would not result in the need for additional or expanded law enforcement service facilities and would not result in decreased law enforcement service levels. This impact is therefore less than significant.

**Mitigation Measures**

No mitigation is required.

**Impact 4.12-5: Result in inefficient and wasteful consumption of energy**

Implementation of the project would result in increased demand for electricity and propane. However, the proposed project would be designed to incorporate Title 24 energy efficiency requirements and would not result in the wasteful consumption of energy. The impact would be less than significant.

The Tenaya Cabins Project is estimated to utilize 246,807 kilowatt hours per year (kWh/year) of electricity. As a proxy for propane, an estimated 648,945 thousand British thermal units (kBTU) per year of natural gas was assumed for the project. In addition, the project may utilize propane for the water heaters, furnaces, and fireplaces which would result in each cabin and the clubhouse using an average of 288.58 gallons of propane per year (see Appendix F for energy usage inputs to the air quality modeling). This estimated energy consumption for the proposed project is considered a conservative estimate because this the demand assumed the cabins and residence would be occupied full-time. However, as resort recreation lodging, it is unlikely that the units would be occupied full-time year-round.

Implementation of the proposed project would construct new electricity lines on the project site, in coordination with the utility providers, which would extend to existing infrastructure. The environmental effects of constructing these improvements are evaluated in appropriate chapters of this Draft EIR (e.g., Biological Resources and Cultural Resources).

Energy would be required to during construction to operate and maintain construction equipment, and produce and transport construction materials. The energy needs for project construction would be temporary and is not anticipated to require significant additional capacity or significantly increase peak or base period demands for electricity and other forms of energy. Construction equipment use and associated energy consumption would be typical of that associated with residential and commercial projects in a mountainous area. Non-renewable energy would not be consumed in a wasteful, inefficient, or unnecessary manner.

Operation of the project would be typical of residential and commercial uses requiring electricity and propane for lighting, climate control at the clubhouse, and day-to-day activities. Operational energy use would also include landscape maintenance, snow removal equipment, and groundwater well operation. Indirect energy use would include wastewater treatment and solid waste removal. The project would be required to meet Title 24 standards for energy efficiency. Implementation of the California Building Efficiency Standards (Title 24, Section 6) would result in the proposed project residences requiring approximately 25 percent less energy and nonresidential buildings requiring 30 percent less energy than buildings constructed before 2008 (California Energy Commission 2012). In addition, the Tenaya Cabins Project would support transit by providing shuttle service to/from the Tenaya Cabins to the Lodge to both employees and visitors to
connect to the existing Yosemite Area Regional Transportation System (YARTS) bus services to/from Yosemite. There are regularly-scheduled tops at the Tenaya Lodge for both directions (to Yosemite and to Fresno) (YARTS 2016a and 2016b). The site plans also provide a pedestrian path between the project site and Lodge, as shown on Exhibits 3-4 and 3-9.

It should also be noted that, in an effort to increase energy efficiency, the Tenaya Lodge is replacing two 200-ton refrigeration (TR) cooling units with two 500TR units in summer of 2016. In association with new cooling towers, the system pumps will be replaced and associated pipes will be resized to maximize energy savings. This cooling system serves approximately 85 percent of the main Tenaya Lodge complex, including all the guest rooms. Replacing the existing units with new cooling towers will decrease energy consumption for the lodge. It is estimated that the new cooling system will result in 760,000 kWh/yr of energy savings (Fulce pers. comm. 2016b).

According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall per capita energy consumption, decreasing reliance on propane, and increasing reliance on renewable energy sources. The electricity provider for the proposed project, PG&E, secures approximately 30 percent of its energy from renewable resources (PG&E 2016). While the proposed project would increase the overall energy demand and may utilize propane, the project would meet Title 24 standards for energy efficiency, thereby providing a relatively energy efficient project. Therefore, the proposed project would not result in an inefficient or wasteful consumption of energy. This impact would be less than significant.

Mitigation Measures
No mitigation is required.
4.13 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential for wildland fire and the risk of upset associated with the routine use, storage, and transport of hazardous materials and the potential health and safety consequences on workers, visitors, and residents in the project area. The potential for toxic air contaminants are discussed in Section 4.7, “Air Quality;” potential risks associated with geology and seismic activity are analyzed in Section 4.10, “Geology, Soils, and Seismicity;” and water quality and hazards associated with flooding are discussed in Section 4.11, “Hydrology and Water Quality.”

4.13.1 Regulatory Background

FEDERAL

Management of Hazardous Materials

Federal laws require planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and if such materials are accidentally released, to prevent or mitigate injury to health or the environment. The U.S. Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in the Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws.


- The Resource Conservation and Recovery Act of 1976 (42 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”).

- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.

- 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 of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

- The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule.

Transport of Hazardous Materials

The U.S. Department of Transportation 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 U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration.

Worker Safety
The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

Fuel Reduction and Wildfire Prevention
The Fish Camp Town Planning Area (TPA) and the project site are nearly surrounded by the Sierra National Forest, under the jurisdiction of the U.S. Department of Agriculture (USDA) Forest Service (USFS). The USFS regulates 154 national forests and 20 national grasslands. In 2000, USFS developed the National Fire Plan (NFP) which addresses the unnatural state of forests from decades of fire repression. The NFP contains five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The Sierra National Forest has an active fuels management program to improve the health of the forest and reduce the fire hazard to woodlands and communities adjacent to National Forest lands (USFS 2015).

The Fish Camp TPA and project site are located within a federal Direct Protection Area (DPA), which is an area delineated by boundaries regardless of statutory responsibility and the protection is assumed by administrative units of either the federal or state agencies. The USFS has been identified as the agency with the direct protection responsibility, known as the Protecting Agency, which assumes both fire suppression and fiscal responsibilities as agreed upon. The USFS and state and county fire protection agencies, described below, have an agreement to mutually assist each other in cases of fires located on the boundaries of their jurisdictions.

Disaster Mitigation Act
The Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390) provides the legal basis for Federal Emergency Management Agency (FEMA) mitigation planning requirements for state, local and Indian Tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for state, local, and Indian Tribal entities to closely coordinate mitigation planning and implementation efforts. The requirement for a state mitigation plan is continued as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans. DMA 2000 also established a new requirement for local mitigation plans.

STATE

Management of Hazardous Materials
In California, both federal and state community right-to-know laws are coordinated through the Governor’s Office of Emergency Services (Cal OES). The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- emergency planning,
- emergency release notification,
 reporting of hazardous chemical storage, and
- inventory of toxic chemical releases.

Information gathered in these four categories helps federal, state, and local agencies and communities understand the chemical hazards in a particular location or area and what chemicals individual facilities are using, storing, or producing onsite.

The corresponding state law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, businesses are required to prepare a Hazardous Materials Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable state and/or federal thresholds (500 pounds or more of solids, 55 gallons or more of liquids, 200 cubic feet or more of compressed gases, or include extremely hazardous substances), the plan is submitted to the administering agency, in this case the Mariposa County Health Department, Environmental Health Services (Certified Unified Program Agency [CUPA]), to implement and enforce. The plan is to be updated annually.

The California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency (Cal EPA), has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, DTSC maintains a hazardous waste and substances site list for the state, known as the Cortese List. There are no Cortese list sites within the Tenaya Cabins Project site.

**Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan**

The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

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 Governor’s Office of Emergency Services, which coordinates the responses of other agencies in the project area.

**Management of Construction Activities**

Through the Porter-Cologne Water Quality Act and the National Pollution Discharge Elimination System (NPDES) program, the Regional Water Quality Control Board (RWQCB) has authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the RWQCB, see Section 4.11, “Hydrology and Water Quality.”

The proposed project falls within the jurisdiction of the Central Valley RWQCB and state Construction General Permit (Order No. 2009-009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). The NPDES Permit and Construction General Permit require that construction projects with greater than one acre of disturbance obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity, including a Notice of Intent and a Storm Water Pollution Prevention Plan (SWPPP) that includes proposed best management practices (BMPs) and a site-specific Construction Site Monitoring and Reporting Plan developed by a Qualified SWPPP Developer. Although a major focus of the SWPPP is management of stormwater on the construction site, it must also address proper use and storage of hazardous materials, spill prevention and containment, and cleanup and reporting of any hazardous materials releases, if they do occur.
Worker Safety
The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts onsite evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Fire Response and Emergency Services

Wildfire Responsibility Areas/State Responsibility Areas
The California Department of Forestry and Fire Protection (CAL FIRE) implements statewide regulations aimed at reducing wildfire hazards, including in wildland-urban interface areas. The laws are based in large part on hazard assessment and zoning. The laws apply to state responsibility areas (SRAs), which are defined as areas of the state in which the state has primary financial responsibility for preventing and suppressing fires, as determined by the State Board of Forestry pursuant to Sections 4125 and 4102 of the California Public Resources Code. As illustrated on Exhibit 4.13-1, the whole of the town of Fish Camp, including the project site, is designated as a very high fire hazard severity zone (CAL FIRE 2007) within a SRA served by CAL FIRE.

The provision of California Public Resources Code Title 14 Section 1270 et seq. address SRA fire safe regulation, including fire prevention and minimum fire safety standards related to defensible space for land uses in SRAs. Fire safe regulations address road standards for fire equipment access, standards for signage, minimum water supply requirements for emergency fire use, and fuel breaks and greenbelts, among others. Fire protection outside SRAs is the responsibility of federal or local jurisdictions. These areas are referred to by CAL FIRE as Federal Responsibility Areas (FRAs) and Local Responsibility Areas (LRAs).

As of July 2014, owners of habitable structures that can be used as residential space must pay an SRA Fire Prevention Fee to the State. This fee funds state efforts at fire prevention, including defensible space inspections, fire prevention engineering, emergency evacuation planning, and fire hazard severity mapping (CAL FIRE 2015).

2010 Strategic Fire Plan for California
The 2010 Strategic California Fire Plan (Fire Plan) is the state’s road map for reducing the risk of wildfire. The Fire Plan is a cooperative effort between the State Board of Forestry and Fire Protection and CAL FIRE. By emphasizing fire prevention, the Fire Plan seeks to reduce firefighting costs and property losses, increase firefighter safety, and to contribute to ecosystem health.

California Building Standards Code
The State of California provides minimum standards for building design through the California Building Standards Code (California Code of Regulations, Title 24). The California Building Code (CBC) applies to building design and construction in the state and is based on the federal International Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with more detailed and/or more stringent regulations. Chapter 7A of the California Building Code specifies building materials and construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire.

Government Code Section 66474.02
Before approving a tentative map (or a parcel map where a tentative map is not required) for an area located in a SRA or a very high fire hazard severity zone, the legislative body of the County must find that: the design and location of each lot in the subdivision, and the subdivision as a whole, are consistent with any applicable regulations adopted by CAL FIRE pursuant to PRC Sections 4290 and 4291; structural fire protection and suppression services will be developed; and ingress and egress meets the road standards for fire equipment access adopted pursuant to PRC Section 4290 and any applicable local ordinance.
California Occupational Safety and Health Administration
In accordance with California Code of Regulations, Title 8 Sections 1270 “Fire Prevention” and 6773 “Fire Protection and Fire Equipment,” the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance and use of all firefighting and emergency medical equipment.

California Health and Safety Code
State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building, childcare facility standards, and fire suppression training.

California Fire Code
The 2013 Edition of the California Fire Code (CFC) prescribes regulations consistent with nationally recognized accepted practices for safeguarding, to a reasonable degree, life and property from the hazards of:

- fire and explosion;
- hazardous conditions in the use or occupancy of buildings or premises; and
- dangerous conditions arising from the storage, handling and use of hazardous materials and devices.

The CFC also contains provisions to assist emergency response personnel. These fire-safety-related building standards are referenced in other parts of Title 24.

LOCAL

Mariposa County

Certified Unified Program Agency
The California Unified Program (discussed above) aims to relieve businesses from having to comply with overlapping and sometimes conflicting requirements of several similar but different hazardous materials regulatory programs. The Mariposa County Health Department, Environmental Health Services, is Cal-EPA-certified CUPA and administers hazardous materials/waste programs. Mariposa CUPA functions include community outreach and education, inspecting of facilities handling hazardous materials, investigating public complaints, reviewing construction plans, and initiating and monitoring corrective actions to ensure health and safety at regulated facilities.

Mariposa County General Plan
The following goals founds in the Safety section of the Mariposa County General Plan (2006) are relevant to the project (Mariposa County 2006):

Goal 16-1: Enforce development standards lessening fire hazard danger.

- Policy 16-1a: Non-residential development activity shall be within acceptable fire department response time limits and coverage areas; or a development project shall provide its own on-site fire protection facilities and firefighters as approved by the County Fire Department.

- Policy 16-1c: All subdivisions and development projects shall conform to adopted fire code and other fire prevention regulations.

Goal 16-2: Utilize the most efficient multi-level fire prevention and protection system.

Goal 16-3: Sustain adequate fire protection service levels.
Goal 16-11: Manage hazardous materials and hazardous waste to prevent unnecessary exposure and risk.

Goal 16-12: Minimize risks to people and property during emergencies through pre-planning.

- **Policy 16-12a:** Coordinate local and State emergency response efforts.

**Mariposa County Local Hazard Mitigation Plan**

The adoption of the Disaster Mitigation Act (DMA) in 2000 at the federal level (described above) incentivized the development of local hazard mitigation planning. DMA also provided the legal basis for FEMA’s mitigation plan requirements for mitigation grant assistance. The Mariposa County Office of Emergency Services (OES), a division of the Fire Department, handles emergency preparation and management pursuant to the Emergency Services Act (Government Code Section 8550). In June of 2015, Mariposa County OES adopted a Local Hazard Mitigation Plan for the County. The purpose of the plan is to assess risks posed by natural and human-caused hazards, and develop mitigation strategies to reduce the County’s vulnerability to these risks. The Plan identifies floods, landslide, winter storms, and wildfire as the most probable natural hazards that would affect the County. The LHMP identified the following four goals, consistent with the goals established in the County’s General Plan Volume I Section 16.2) to reduce or avoid long-term vulnerability to each hazard included in the 2015 LHMP:

- Reduce the possibility of damages and losses due to seismic hazards, landslide and ground shaking.
- Reduce the possibility of damages and losses due to weather-related hazards, including flood and winter storm.
- Reduce the possibility of damages and losses due to other hazards, including wildfire, power disruption and hazardous material event.
- Reduce the possibility of damages and losses due to public health emergencies.

The LHMP identifies mitigation actions, which are activities, measures, or projects that help achieve the mitigation goals. The mitigation actions are generally grouped into five broad categories: prevention, property protection, public education and awareness, natural resource protection, and structural projects.

**Mariposa County Community Wildland Fire Protection Plan**

The Mariposa County Community Wildland Fire Protection Plan (CWPP) provides an overview of the physical characteristics of the County and assessed the vulnerability of various communities within the County. The CWPP aims to protect human life and property from wildland fire, increase community and landscape resilience to wildfire, and instill responsible behaviors to prevent wildland fire. The CWPP identifies the factors (i.e., risk, hazard, values, mitigation, and structural vulnerability) that contribute to categorization of wildfire risk.

**Fish Camp Town Planning Area Specific Plan**

The Fish Camp TPA Specific Plan contains the following policies and procedures that are relevant to the project:

**Section VII F: Fire Protection and Response Measures**

- VII.F-1: New development will be required to meet the State “SRA” Fire Safe Regulations (Title 14, Sections 1270 et seq.) with regard to emergency access (including roadway widths), signage and building numbering, emergency water standards, and fuel modification (including clearance around structures).

- VII.F-2: Continue to implement, periodically update, and test the County’s Evacuation Plan as it applies to the Fish Camp Area.
4.13.2 Existing Environmental Setting

DEFINITION OF TERMS

For purposes of this EIR, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. A “hazardous material” is defined in the CFR as “a substance or material that ... is capable of posing an unreasonable risk to health, safety, and property when transported in commerce” (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

“Hazardous material” means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous wastes” are defined in California Health and Safety Code Section 25141(b) as wastes that:

... because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

“Wildland Fire” or “Wildfire” refers to an unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to extinguish the fire (Cal. Gov. Code Section 51177).

REGIONAL SETTING

Mariposa County

Mariposa County contains many businesses that use and store hazardous materials and generate hazardous wastes. Most are small to mid-sized operations such as automotive shops and maintenance yards. Additionally, gas stations, public utilities, fire stations, and water and wastewater treatment operations comprise a large portion of regulated facilities with the potential to release hazardous materials. Waste oil is the most common hazardous waste produced in the County. The County does not contain any hazardous waste facilities. According to the Mariposa County Health Department, 13 mobile incidents of hazardous materials release occurred within the County from 2002-2012 and 68 fixed site incidents occurred from 1993-2012 (Mariposa County 2015).

Wildland Fire Hazards

Wildland fire is an ongoing concern in the Sierra Nevada, including Mariposa County. Wildland fire is the number one natural disaster that threatens residents of the County. Approximately 70 percent of County communities are listed in the Federal Register or the California Fire Alliance as at high or very high risk from wildfires (Mariposa County 2012).

Generally, the fire season extends from early spring through late fall of each year during the hotter, dryer months. Increased wildfire conditions arise from a combination of high temperatures, low moisture content in the air and fuel, dense forest vegetation, and high winds. The landscape of grasslands, chaparral, and forests characteristic of Mariposa County puts it at high risk for wildland fires. Additionally, the steep topography of eastern Mariposa County contributes to the potential for fast burning, powerful fires to occur.
Global warming as a result of anthropogenic (human-related) activities has produced a climate that supports more frequent burnings. In the past 20 years, Mariposa County has experienced an increase in wildland fires (Mariposa County 2015). As global temperatures rise, precipitation levels may decrease, and snowpacks melt earlier in the year. These factors create drier conditions and cause forests to become more susceptible to frequent fires.

CAL FIRE and USFS have responded to over 300 wildland fires in Mariposa County from 1950-2011. Twenty fires have burned more than 3,000 acres over the past 20 years. The largest fire, named the Telegraph Fire, burned a total of 31,091 acres on July 25, 2008 (and a total of 34,091 acres over a 12 day period). The speed and intensity by which it burned classified it as a 50-year fire event. Based on previous events, Mariposa County may experience a wildland fire of over 3,000 acres to occur about once every other year with a 60 percent chance per year (Mariposa County 2015).

PROJECT SITE CHARACTERISTICS
According to the Mariposa County Health Department, a mobile hazardous material spill occurred in April 2012 on Highway 41 at Fish Camp that released sulfur into the environment (Mariposa County 2015). However, the potential for release of hazardous materials in Fish Camp is minimal due to the absence of businesses or operations that handle hazardous substances.

The State of California maintains the linked EnviroStor and Geotracker databases of known contamination sites pursuant to Government Code Section 65962.5. Based on the information gathered from these databases, no sites of known contamination exist within a 10 mile radius of the project site (Envirostor 2015).

Wildland Fire Hazards
As illustrated on Exhibit 4.13-1, the whole Fish Camp TPA, including the project site, is designated as a very high fire hazard severity zone (CAL FIRE 2007) within a SRA served by CAL FIRE. The Fish Camp TPA and project site are also within a federal DPA in which USFS is the lead Protecting Agency. Mariposa County Fire Department provides structural fire protection to developed population centers, such as the Fish Camp TPA. CAL FIRE is responsible for wildland fire protection in all privately owned lands that are wildlands, grasslands, or timber production areas. The USFS and National Park Service provide fire protection to the Sierra National Forest and Yosemite National Park. These federal, state, and county fire protection agencies have an agreement to mutually assist each other in cases of fires located on the boundaries of their jurisdictions. As described above, the nearest fire station is the Fish Camp (Company 33) station, which is staffed by all-volunteer fire-fighters. In the event of a fire, three staging areas for evacuees and emergency personnel are: Tenaya Lodge, Wawona Hotel, and Station 12 in Oakhurst (Mariposa County 2016).

Fire Protection and Emergency Medical Services
Mariposa County Fire Department provides structural fire protection to developed population centers, such as the Fish Camp TPA. The fire station nearest to the project site is the Fish Camp (Company 33) station, located at 7731 Summit Road in Fish Camp, approximately 1 mile west of the project site. The station is staffed by three volunteers on an on-call basis. Existing equipment includes one Type-1 engine, one Type-6 4WD engine, and one 3,000-gallon water tender. Average response time varies depending on availability of personnel. If volunteers in Fish Camp are available during an emergency call, response time is approximately two minutes. However, if Fish Camp volunteers are unavailable, engines are dispatched from the Yosemite National Park Wawona and Cedar Valley fire stations through a mutual aid agreement. In this case, the average response time is approximately 10 to 25 minutes.

Mercy Medical Transportations (Mercy) is under contract to the County to provide countywide emergency medical services until December 31, 2022. Medical transportation to the Fish Camp TPA and Wawona area is provided by Sierra Ambulance Service through an agreement with Mercy. Sierra Ambulance is an advanced life support (ALS) provider located in Oakhurst. Dispatch time is approximately 10 minutes (Jackson 2016).
**Emergency Access and Evacuation Plans**

In the event of a fire, three staging areas for evacuees and emergency personnel are: Tenaya Lodge, Wawona Hotel, and Station 12 in Oakhurst (Mariposa County 2016). The Mariposa Countywide Community Wildfire Protection Plan designates Highway 41 as the primary ingress/egress route in the event of a wildland fire. In the summer months only, Summit Road to Chowchilla Mountain Road to Ponderosa Basin to Highway 41 in Wawona may be taken; however, this route is unpaved and provides for one-way traffic only and is, therefore, not a preferred route for rapid evacuation. The Mariposa County Sheriff’s Department is responsible for all evacuations in the County (Mariposa County 2012). The Department utilizes an automated reverse-911 system to notify residents of pre-evacuations and evacuations. During evacuations, the Department also utilizes Mariposa County Search and Rescue. Further, the Mariposa County Sheriff’s Department Animal Control assists in the evacuation of all animals.

**4.13.3 Environmental Impacts and Recommended Mitigation Measures**

**SIGNIFICANCE CRITERIA**

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact related to hazards and hazardous materials if it would:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

- 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;

- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school;

- 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 create a significant hazard to the public or the environment;

- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;

- for a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;

- impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;

- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands; or

- conflict, or create an inconsistency, with any applicable plan, policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects related to hazards and hazardous materials.

**METHODS AND ASSUMPTIONS**

This impact analysis involved a review of applicable laws, permits, and legal requirements pertaining to hazards and hazardous materials, as discussed above. Within this framework, existing onsite hazardous materials, wildfire potential, and the potential for other safety or hazardous conditions were reviewed based
on site reconnaissance, publicly available hazard and hazardous materials information, site/location and cleanup status information, and other available information. The impact analysis considered potential for changes in the nature, extent, and presence of hazardous conditions to occur onsite as a result of project construction and operation, including increased potential for exposure to hazardous materials and hazardous conditions. Potential for hazards and hazardous conditions were reviewed in light of existing hazardous materials management plans and policies, emergency response plans, wildfire management plans, and applicable regulatory requirements.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Sites of Known or Potential Contamination
Data provided from Envirostor indicates that there are no known sites of contamination located near the project site. Therefore, risks associated with the release or upset of hazardous materials from a site of known or potential contamination would not occur. Project implementation would not result in human exposure to a known hazardous site. This topic is not be discussed further in this Draft EIR.

Private Airstrip Hazards
There are no private airstrips located within the vicinity of the project site. As a result, impacts related to safety hazards associated with the operation of a private airstrip would not occur. This topic is not addressed further in this Draft EIR.

IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.13-1: Expose people or the environment, including schools within 0.25 mile of the project site, to hazards because of the routine use, storage, or transport of hazardous materials or from accidental release or upset

Construction and operation of the Tenaya Cabins Project would involve the use, storage, and transport of typical hazardous materials (oil, cleaning products, etc.). All such hazardous materials and activities would be typical for construction and for resort commercial and residential uses, and would occur in compliance with local, state, and federal regulations, which would minimize the potential for upset or accident conditions. Therefore, impacts related to exposure of the public or environment, including schools within 0.25 mile of the project site, to hazardous materials through routine use, storage, or transport or from accidental release or upset would be less than significant.

Construction activities would temporarily increase the regional transportation, use, storage, and disposal of hazardous materials and petroleum products commonly used at construction sites such as gasoline, diesel fuel, lubricants, paints and solvents, and cement products. This could result in accidents or upset of hazardous materials that could create hazards to people and the environment. Construction workers, operational personnel, and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use of these materials during construction, as a result of accidents during transport of these materials, or releases during a fire or other emergency. The extent of the hazard would depend in large part on type of material, the volume released, and the mechanism of release (e.g., spill on the ground at the project site vs. a spill on a road during transport).

As part of construction, a SWPPP and Construction Site Monitoring and Reporting Plan would be prepared and implemented that would include BMPs and other measures to prevent releases of hazardous materials and contain and clean-up any accidental releases that might occur (e.g., rupture of a hydraulic line on a piece of equipment releasing hydraulic fluid or spill of transformer oil).

During project operation, the storage, use, and disposal of hazardous materials would be associated with household hazardous materials such as household cleaners, paint, pool maintenance chemicals, and
landscape maintenance chemicals. Hazardous materials similar to those used during construction could also be used periodically as part of operation, maintenance, and repair of the utilities infrastructure and facilities.

The project applicant, builders, and contractors would be required to use, store, and transport hazardous materials in accordance with local, state, and federal regulations, as discussed above in “Regulatory Setting,” above, including Cal/OSHA and DTSC requirements and manufacturer’s instructions. Transportation of hazardous materials on area roadways is also regulated by CHP and Caltrans. Facilities that would use hazardous materials onsite, including the swimming pool and spa, would be required to obtain any required permits and comply with appropriate regulatory agency standards designed to ensure proper use and storage and avoid hazardous materials releases. Chemicals used for landscape maintenance, such as fertilizers and pesticides, would be used in limited quantities, in accordance with instructions provided by the manufacturer.

Delaware North (DN) maintains a Spill, Prevention, Containment, and Control Plan (SPCCP) and a Hazardous Materials Management Plan (HMMP) for the Tenaya Lodge and Cottages. DN would expand these plans as necessary to include the proposed Tenaya Cabins under the SPCCP and HMMP. In compliance with the SPCCP, a response station (absorbent pillows, socks, etc.) has been set up for containment of potential spills in the hazardous materials storage area, east of the Tenaya Lodge adjacent to the loading dock. Additionally, the HMMP requires adequately trained personnel to comply with the appropriate operations, monitoring, and potential emergency response needed at the Lodge. Currently, six Lodge employees are OSHA Hazardous Waste Operations trained. In the event of a hazardous material spill, the emergency response procedures of Section 2.1 of the SPCCP would be implemented.

The Jack L. Boyd Outdoor School, also known as Camp Green Meadows (Merced County Office of Education) is located in Fish Camp TPA, east of the project site within 0.25-mile. Jack L. Boyd School offers seasonally specific outdoor and indoor classes to students of all ages. The proximity of the school to the project site makes it vulnerable to effects associated with hazardous materials. However, because the use of hazardous materials in project construction and operation would be typical for resort commercial and residential land uses, and because the project would be required to implement and comply with existing hazardous materials regulations, the project would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials.

The exposure of the public and the environment, including schools, from exposure to hazardous materials would be less than significant.

Mitigation Measures
No mitigation is required.

Impact 4.13-2: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Construction of the proposed project would result in additional vehicles, trucks, and equipment on Highway 41; however, it would be temporary and not extensive enough at any one time to result in the obstruction of an evacuation route or impair implementation of an emergency response or evacuation plan. As part of project operation, adequate emergency access to and from the project site would be established in coordination with Caltrans, the Mariposa County Fire Department, and CAL FIRE, and the project-related increase in traffic volume on Highway 41 would not interfere with emergency response or evacuation. This impact would be less than significant.

Access to the project site is provided from Highway 41, which is identified as an evacuation route in the Mariposa County Local Hazard Mitigation Plan (Mariposa County 2015). As described in Impact 4.6-1 of this Draft EIR, project construction would generate temporary employee and truck trips, which would use Highway 41 and could result in increased congestion. However, the project would include a traffic control
plan that would be implemented during construction operations. Additionally, the traffic generated during project construction is anticipated to be less than the traffic generated by project day-to-day operations, which was determined to be a less-than-significant impact (Impacts 4.6-2 and 4.6-3 of this Draft EIR).

As described in Chapter 3, “Project Description,” year-round emergency access would be provided to both Parcel 1 and Parcel 2 through the construction of the onsite access roads (Exhibits 3-9 and 3-10), which have been designed in compliance with emergency access requirements and in coordination with Mariposa County Fire Department and the Fire Protection District. The circulation plan includes two points of access to the project site: one from the project entry and a second emergency access at northern end of the site near Rainbow Lake. The emergency access road would be paved, 20-feet wide, gated, and maintained year-round. The turning radius of the onsite roads is shown on Exhibit 3-9.

Vehicle trips during project operation would represent an incremental increase over existing traffic volumes on Highway 41, particularly during summer and winter peak times. However, the additional traffic from the project would not result in significant impacts to traffic flow on Highway 41 (see Section 4.6, “Transportation and Circulation” Impacts 4.6-2 and 4.6-3). The proposed project would not interfere with or modify any existing evacuation routes. Furthermore, the Tenaya Lodge would continue to implement the SPCCP and HMMP, which prescribe emergency response procedures related to hazardous materials, as described in Impact 4.13-1.

Therefore, the potential for project implementation to result in impaired function of an adopted emergency response or evacuation plan would be less than significant.

**Mitigation Measures**
No mitigation required.

**Impact 4.13-3: Expose people or structures to wildland fire hazards or increase demand for fire protection and emergency medical services**

Implementation of the project would expose people and structures to an area with a very high risk of wildfire and would increase demand for fire protection and emergency services. Adherence to the California Building Code standards for fire prevention during construction, compliance with regulations for fire protection and emergency access would reduce the wildland fire threat to workers and residents of Fish Camp. Nonetheless, introduction of people and structures to an area with a very high risk of wildfire inherently increases human exposure to wildfire as well as demand for fire protection and emergency services. This impact would be potentially significant.

As illustrated on Exhibit 4.13-1, the whole of the town of Fish Camp, including the project site, is designated as a very high fire hazard severity zone (CAL FIRE 2007) within a SRA served by CAL FIRE. The Fish Camp TPA and project site are also within a federal DPA in which USFS is the lead Protecting Agency. The project site is currently undeveloped forested land, which is conducive to the rapid spread of wildfire, and is located adjacent to the Sierra National Forest and near Yosemite National Park where prescribed burns are performed as a forest management tool. Prescribed burns mimic the natural, low-intensity fire regime which endemic ecosystems rely on. While prescribed burns are intended to be controllable, prescribed fire can, and has, overwhelmed human control subsequently burning at higher temperatures and spreading more rapidly. Further, owing to the lack of fire in the area, unusually heavy fuel loads and stagnated stands of timber have built up over time. The average fuel load in the Fish Camp community is over 100 tons per acre. Human-related activities are projected to be the number one cause of wildland fire in the Fish Camp area (Mariposa County 2012).

Development of the project site would introduce construction vehicles and equipment within a forested area with very high fire hazards. Heat or sparks from construction vehicles or equipment activity (e.g., chainsaws, clippers) could ignite dry vegetation and cause a fire. Once constructed, the cabins, clubhouse, and residence
would place people and structures in an area with a very high risk of wildfire, possibly increasing the risk of ignition and increasing the number of people exposed to risk of wildfire.

As stated above, structural fire protection services are provided by the Mariposa County Fire Department from the Company 33 Fire Station located in Fish Camp. CAL FIRE is responsible for wildland fire protection in all privately owned lands that are wildlands, grasslands, or timber production areas. The USFS and National Park Service protect the Sierra National Forest and Yosemite National Park. These federal, state, and county fire protection agencies have an agreement to mutually assist each other in cases of fires located on the boundaries of their jurisdictions. Per the federal DPA, USFS is the federal Protecting Agency in the DPA, meaning they would take the lead as incident command for wildland fires in the Fish Camp TPA.

As described above, if volunteers in Fish Camp are available during an emergency call, response time is approximately two minutes. However, if Fish Camp volunteers are unavailable, engines are dispatched from the Yosemite National Park Wawona and Cedar Valley fire stations through a mutual aid agreement. In this case, the average response time is approximately 10 to 25 minutes. The level of service provided by County Fire Department could be a concern in the event of a wildfire.

Construction and operation of the Tenaya Cabins Project would be required to adhere to California Building Code and California Fire Code standards for fire prevention during construction activities, which require that fire prevention practices be followed and that basic fire suppression equipment be maintained within the development area at all times. The standards address proper storage, handling, and disposal of flammable materials during construction, as well as maintenance of access for firefighting and testing and approval of fire safe systems, such as automatic sprinkler systems (Unidocs 2008). A minimum of 25-foot clearance would be provided around proposed propane tanks and fire water would come from the water storage tank near the Tenaya Lodge, which would provide for gravity-fed water to the fire sprinkler system (removing the need for a water pump and associated generator). Per the National Fire Protection Agency and CFC Chapter 33, a Fire Protection Plan would be prepared for the project and would include the following:

- Procedures for reporting emergencies to the fire department.
- Procedures for emergency notification, evacuation and/or relocation of all persons in the building under construction and on the site.
- Procedures for hot work operations, management of hazardous materials and removal of combustible debris and maintenance of emergency access roads.
- Fire Department access to the site.
- Water supply for construction.
- Floor plans identifying the locations of exits, exit stairs, exit routes and portable fire extinguishers.
- Site plans identifying the designated exterior assembly areas for each evacuation route.
- Site plans identifying required fire apparatus access roadways and onsite fire hydrants.
- The name and contact phone number of the person(s) responsible for compliance with the Fire Protection Plan.

The project would also comply with the CAL FIRE SRA Fire Safe Regulations (2016) for emergency access and egress (Article 2), signing and building numbering (Article 3), emergency water standards (Article 4), and fuel modification standards (Article 5) per Title 14, Section 1270 et seq. of the California Code of Regulations. These regulations establish minimum wildfire protection standards in conjunction with building, construction, and development in SRAs. The project includes the installation of fire hydrants, located adjacent to the paved access road per the requirements of Mariposa County Fire Department, as well as a
120,000-gallon water storage tank required for fire storage per Mariposa County requirements. Per Mariposa County requirements, all cabins and the clubhouse would be equipped with sprinklers, and would comply with the wildland/urban interface fire construction requirements of CAL FIRE and the California Building Code. Furthermore, emergency access to both Parcel 1 and Parcel 2 (the residential parcel) has been included in the site plans in compliance with the requirements of Caltrans, the Mariposa County Fire Department, and CAL FIRE, as described in Impact 4.13-2, above.

Although construction and operation of the project would adhere to CAL FIRE and Mariposa County fire protection policies, the project would introduce people and structures to an area with a very high risk of wildland fire and level of service by the Mariposa County Fire Department could be a concern. This impact is potentially significant.

Mitigation Measures

Mitigation Measure 4.13-3: Provide supplementary fire protection staff and equipment

Prior to operation of the Tenaya Cabins Project, DN shall provide a minimum of two trained and certified emergency staff on premises or in the Fish Camp community and available to respond to emergencies at all times. The supplementary staff would be trained to meet Mariposa County Fire Department Volunteer Fire Service standards. Staffing may be provided by Tenaya Lodge employees who have completed the required training.

DN shall provide personal protection equipment (PPE) and positive communication equipment for all firefighting and emergency service personnel provided by DN. PPE and communication equipment shall be stored in a central, secure location. Communication systems shall permit uninterrupted contact between all firefighters at all times and at all locations on or within the property. In addition, there shall be positive communication at all times between a fire officer and recognized Emergency Command Center (ECC). All equipment required shall be approved by and become property of Mariposa County and maintained per manufacturer and National Fire Protection Association (NFPA) standards by DN.

DN and Mariposa County shall negotiate a mutually-agreeable project contribution to support the Mariposa County Fire Department apparatus inventory. This shall be included as a condition of permitting for the project.

The above requirements, or equivalent as approved by the Mariposa County Fire Department, shall be included in a fully executed agreement between the Fire Department and DN prior to the issuance of grading or building permit for the project.

Significance after Mitigation

Supplementary staffing, equipment, and mutually agreed contribution for the Mariposa County Fire Department as required by Mitigation Measures 4.13-3 would ensure that responders would be present in Fish Camp when volunteers are absent and would reduce this impact to a less-than-significant level.
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4.14 VISUAL RESOURCES

This section describes the existing visual characteristics and quality of the project site and the surrounding area, and evaluates the visual effects of the proposed Tenaya Cabins on its surroundings. The following analysis considers quality and character of existing scenic resources and the potential visibility of the project elements from surrounding areas, including both the physical characteristics and changes in lighting or glare in the project area. Potential short-term and long-term visual impacts that could result from project construction and operation are discussed.

4.14.1 Concepts Related to Visual Resources

Visual or scenic resources are generally defined as both the natural and built features of the landscape that contribute to the experience and appreciation of the environment by the general public. Depending on the extent to which a project would adversely alter the perceived visual character and quality of the environment, a visual or scenic impact may occur.

Visual changes and whether they are considered adverse are highly subjective. One person may conclude that any change in a pleasing visual setting is adverse. Others may find the same changes to be acceptable or even an improvement. Further, there are few formal tools available to evaluate changes to the visual environment and conclude significance. This EIR uses certain terms and concepts to aid the reader in understanding the content of this section. These terms and definitions are general in nature; however, they draw upon the methodologies of the U.S. Forest Service (USFS) and Federal Highway Administration (FHWA) (USFS 1995, FHWA 1981), two of the relatively few public agencies that have formalized visual resource assessment.

Visual Quality

Visual quality is defined as the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The attributes of line, form, and color combine in various ways to create landscape characteristics whose variety, vividness, coherence, uniqueness, harmony, and pattern contribute to the overall visual quality of an area. The visual quality rating for this analysis is a qualitative rating system based on the system used by FHWA (1981) and defines seven visual impact levels from very low to very high (very low, low, moderately low, average, moderately high, high, and very high).

The rating system is based on evaluative criteria using three primary components identified as vividness, intactness, and unity. These three criteria are described as follows:

- **Vividness** is the visual power or memorability of the landscape components as they combine in striking and distinctive visual pattern.

- **Intactness** is the visual integrity of the landscape and its freedom from non-typical encroaching elements. If all of the various elements of a landscape seem to “belong” together, there will be a high level of intactness.

- **Unity** is the visual harmony of the landscape considered as a whole. Unity represents the degree to which the visual elements maintain a coherent visual pattern.

Scenic Vista

A scenic vista is generally considered to be a location from which the public can experience unique and exemplary high-quality views, including panoramic views of great breadth and depth, often from elevated vantage points.
Viewer Groups
Viewer groups are differentiated by physical factors that modify perception, such as location, activities, and awareness or concern. Activities such as driving for commuting, shopping, or working can distract the observer from the visual environment. On the other hand, activities such as driving for pleasure, engaging in recreational pursuits like hiking or relaxing in scenic surroundings can heighten awareness of visual surroundings. Viewer groups may also be differentiated by levels of concern regarding changes to the visual environment; viewers who are very familiar with surroundings, such as residents or frequent visitors are more aware of adverse changes than viewers who are passing through an area on an infrequent basis.

Viewer Exposure
Viewer exposure addresses the variables that affect viewing conditions from potentially sensitive areas. Viewer exposure considers the following factors:

- landscape visibility – the ability to see the landscape;
- viewing distance – the proximity of viewers to the project;
- viewing angle – whether the project would be viewed from above (superior), below (inferior), or from a level (normal) line of sight;
- extent of visibility – whether the line of sight is open and panoramic to the project area or restricted by terrain, vegetation, and/or structures;
- duration of view – the elapsed time the project area would be visible to a particular viewer; and
- viewer numbers – whether the view is publicly accessible with large numbers of viewers or the view is a private view and experienced by small numbers of viewers.

Generally, the closer a resource is to the viewer, the more dominant, and thus the more visually important it is to the viewer. For purposes of analysis, landscapes are typically separated into foreground, middleground, and background views (USFS 1995). In general, the foreground is characterized by clear details (within 0.25 or 0.5 mile of the viewer); the middleground is characterized by the loss of clear detail in a landscape, creating a uniform appearance (from the foreground to 3–5 miles in the distance); and the background extends from the middleground to the limit of human sight (Bacon 1979).

Viewer Sensitivity
Viewer sensitivity is the overall measure of the variable receptivity of viewers to adverse visual changes in an existing landscape. People in different visual settings, typically characterized by different land uses in the vicinity of a project, have varying degrees of sensitivity to changes in visual conditions, often depending on the overall visual characteristics of the place. In areas of more distinctive visual quality, such as designated scenic highways, designated scenic roads, parks, and recreation and natural areas, viewer sensitivity is characteristically more pronounced. In areas of more indistinctive or representative visual quality, sensitivity to change tends to be less pronounced. This analysis of viewer sensitivity is based on the combined factors of visual quality before and after project implementation, viewer types and numbers of viewers, and visual exposure to the project. Viewer sensitivity is described as high, moderate, or low, depending on these factors.

Light Pollution
Light pollution refers to all forms of unwanted light in the night sky around and above us, including glare, light trespass, sky glow, and over-lighting. Views of the night sky can be an important part of the natural environment, particularly in communities surrounded by extensive open space, such as mountain communities. Excessive light and glare can also be visually disruptive to humans and nocturnal animal species.

Electric lighting also increases night sky brightness and is the human-made source of sky glow. Light that is either emitted directly upward by luminaires or reflected from the ground is scattered by dust and gas
molecules in the atmosphere, producing a luminous background. It has the effect of reducing one’s ability to view the stars (National Lighting Product Information Program [NLPIP] 2007).

Sky glow is highly variable depending on immediate weather conditions, quantity of dust and gas in the atmosphere, amount of light directed skyward, and the direction from which it is viewed. In poor weather conditions, more particles are present in the atmosphere to scatter the upward-bound light (NLPIP 2007).

4.14.2 Regulatory Background

FEDERAL

The project site is on privately owned lands. There are no federal laws or regulations addressing visual resources that are relevant to the project.

STATE

California Scenic Highway Program

California’s Scenic Highway Program was created by the California Legislature in 1963 and is managed by the California Department of Transportation (Caltrans). The goal of this program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways. A highway may be designated “scenic” depending on how much of the natural landscape travelers can see, the scenic quality of the landscape, and the extent to which development intrudes on travelers’ enjoyment of the view (Caltrans 2016).

The Program includes a list of highways eligible to become, or designated as, official scenic highways; and includes a process for the designation of official State or County Scenic Highways. Highway 41 from Route 49 in Oakhurst to the south gate of Yosemite National Park, which runs through the town of Fish Camp and adjacent to (directly west of) the project site, is an “Eligible” route under the Scenic Highway Program (Caltrans 2016). The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway.

California Energy Commission Building Energy Efficiency Standards for Outdoor Lighting

Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards), adopted by the California Energy Commission on November 5, 2003 includes requirements for outdoor lighting. These standards are updated periodically. The last update took effect in July 2014. These requirements vary according to the “Lighting Zone” in which the equipment is located. The Standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on the Lighting Zone in which the project is located. Existing outdoor lighting systems are not required to meet these lighting power allowances. However, alterations that increase the connected load, or replace more than 50 percent of the existing luminaires for each outdoor lighting application that is regulated by the Standards must meet the lighting power allowances for newly installed equipment.

The allowed lighting power is based on the brightness of existing lighting in the surrounding area. This is because the eyes adapt to darker surrounding conditions, and less light is needed to properly see; when the surrounding conditions get brighter, more light is needed to see. Providing greater power than is needed potentially leads to debilitating glare, to an increasing spiral of brightness as over-bright projects become the surrounding conditions for future projects causing future projects to unnecessarily consume energy and contribute to light pollution.
The Energy Commission defines the boundaries of Lighting Zones based on U.S. Census Bureau boundaries for urban and rural areas as well as the legal boundaries of wilderness and park areas. The smallest amount of power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4.

By default, government designated parks, recreation areas, and wildlife preserves are Lighting Zone 1; rural areas are Lighting Zone 2; and urban areas are Lighting Zone 3. Lighting Zone 4 is a special use district that may be adopted by a local government.

**LOCAL**

**Mariposa County General Plan**

The relevant goals and policies found in the Conservation and Open Space chapter of the *Mariposa County General Plan* (2006) with respect to visual resources are listed below.

**Goal 11-1:** Conserve the natural and scenic resources, and open space lands to protect and enhance the County’s quality of life and character ensuring a viable economy.

- **Policy 11-1a:** Conserve natural and scenic resources through County programs and development standards.
- **Policy 11-1d:** Ensure that light sources in new development are compatible with rural character and that the light sources do not produce glare that interferes with vision.

**Fish Camp Town Planning Area Specific Plan**

The Fish Camp Town Planning Area (TPA) Specific Plan establishes development standards for the land use classifications allowed in the TPA, which establish minimum lot areas, density standards, setback requirements, sign standards, fencing/wall/hedge standards, and height standards (35-foot maximum building height above natural grade line).

**4.14.3 Existing Environmental Setting**

**VISUAL CHARACTER**

**Region**

The project site is within rural Mariposa County, within the central Sierra Nevada Mountain Range. Approximately 52 percent of the County’s total area contains Yosemite National Park, an internationally recognized natural wonder and the nation’s second National Park to be established. State Routes 140, 132, 120, and 41 (adjacent to the project site), provide visitors access to the park through the County.

The topography of Mariposa County ranges from low rolling foothills in the west, to dramatic and steep slopes of Yosemite in the north-east. The majority of the County’s population resides in the mid-elevation areas of the county, along Highway 49. Preserving the “rural” lifestyle is a community value of Mariposa residents. About half of the County population lives in rural settings with the remainder residing in a mix of towns and communities. “Urban” development is concentrated in a handful of towns, the largest being the Town of Mariposa with approximately 2,100 residents at the last 2010 census, followed by Yosemite Village and Lake Don Pedro subdivision with about 1,300 people.

**Fish Camp Town Planning Area**

The project site is located in the town of Fish Camp, Mariposa County, which is bisected by Highway 41 approximately one mile from the south entrance to Yosemite National Park. The 280-acre town planning area (TPA) is situated in the divide between the Big Creek (Merced River) and Lewis Fork (Fresno River)
watersheds. Fish Camp is located within a narrow valley, which is enclosed on three sides by mountain peaks. The steep slopes of the eastern side of Hogan Mountain comprise the terrain to the west of Fish Camp with more a gradual incline in the east as the topography climbs toward the High Sierra (Fish Camp 1983:3). Near foreground (within 1,500 feet of the viewer), foreground (1,500 feet to 0.5 mile), and middleground views (0.5 mile to 3 miles) of resort commercial, residential, and forested lands are possible; however, background views are constrained by terrain.

Fish Camp is a resort-residential community with a tourism-based economy; services include lodging, recreational activities, food services, and auto repair. Highway 41 provides the main route through Fish Camp, and affords the predominant public viewing corridor. Most development along the highway maintains a rustic appearance from the highway, including lodging and commercial establishments, as shown in (Exhibits 4.14-1 and 4.14-2). Fish Camp is surrounded by Sierra National Forest lands and private timber holdings, which provide residents and visitors with a high-quality scenic landscape. The warm summers and cold winters in the region support natural communities consisting of mixed conifer forest (which dominates the landscape), meadows, and riparian habitat along Big Creek. Despite experiencing urban growth since the approval of its TPA Specific Plan in 1983, the community of Fish Camp emphasizes preserving the natural aesthetic qualities of the area.

Project Site
The Tenaya Cabins Project site is undeveloped conifer forest with existing dirt roads (Exhibit 4.14-3 and 4.14-4). The project site includes a one-acre pond (Rainbow Lake) at the northern end, Big Creek on the eastern boundary, Highway 41 on the western boundary, and meadow and wetlands on the southern portion of the site (Exhibit 4.14-4). The site’s natural features provide an area of high visual quality. From Highway 41, the project site is first visible as forested land with a gated dirt access road, and at the bend in Fish Camp where the General Store is located, a view opens up of Rainbow Lake at the north end of the project site.

Although the project site itself is currently undeveloped, it is surrounded by development and parcels within the Fish Camp TPA that are designated for residential or resort commercial uses, including the existing Tenaya Lodge and Cottages to the south (Exhibit 4.14-5), rural residences (across Highway 41) to the west, the Big Creek Inn, Owl’s Nest Lodging, the Wood Family Cabin, and the Sugar Pine Cabin to the north, and Big Creek and rural residences to the east. The Fish Camp General Store and the Post Office are located on Highway 41 just east of the project site and the Tin Lizzie Inn can be found east of the project site on Laurel Way. As shown in Exhibits 4.14-1 and 4.14-2, these buildings maintain the rustic character of Fish Camp, as described previously.

Viewer Groups, Exposure, and Sensitivity
There is a low level of visual exposure to the project site. The primary viewers of the site would be travelers on Highway 41, such as domestic and international tourists to Yosemite National Park and the Sierra National Forest, as well as permanent and seasonal residents. Neighboring residential and resort commercial properties also have views of the project site, which may be obscured by intervening trees, vegetation, or structures. However, the project site is not visible from the Tenaya Lodge because of the intervening topography between the two sites. Furthermore, there are no public trails or recreation areas on or adjacent to the project site.

As described previously, Fish Camp TPA is a developed area of resort commercial and residential uses. Although the majority of viewers traveling on Highway 41 through Fish Camp would be tourists with a higher sensitivity than commuters, when going through Fish Camp those viewers experience both a forested mountain environment as well as existing development.

Travelers on Highway 41 have foreground views of signs such as at the Tenaya Lodge entry, development such as the Fish Camp General Store, resort commercial lodging, and residences. Mid-range views through Fish Camp include forested lands and the Big Creek riparian corridor. Long-range views are obscured by development in Fish Camp, surrounding forested lands, and topography. Exhibits 4.14-1 through 4.14-5 provide photographs of the existing conditions and views along Highway 41 in Fish Camp. Although recreational travelers may be considered sensitive viewers, because the project site is located with the developed Fish Camp TPA, the viewers are considered to have low- to moderate-sensitivity.
Exhibit 4.14-1a  View Southbound on Highway 41 of the Fish Camp General Store

Exhibit 4.14-1b  View of Big Creek Inn on Highway 41 in Fish Camp
Exhibit 4.14-2a  View of Cabin on Highway 41 in Fish Camp (East Side of Highway)

Exhibit 4.14-2b  View of Cabins on Highway 41 in Fish Camp (West Side of Highway)
Exhibit 4.14-3a  View from Highway 41 Approaching Project Site Entry

Exhibit 4.14-3b  View of Project Entry Road
Exhibit 4.14-4a  View of Big Creek on the Eastern Boundary of the Project Site

Exhibit 4.14-4b  View of the Rainbow Lake from the North End of the Project Site
Exhibit 4.14-5a  View Northbound on Highway 41 of the Entrance to the Tenaya Cottages

Exhibit 4.14-5b  View Northbound on Highway 41 of the Entrance to the Tenaya Lodge
Residents on properties adjacent to the project site, or visitors to neighboring resort commercial lodges, may be affected by visual changes to the project site. However, because they are located in the Fish Camp TPA they likely do not expect a pristine view, but nonetheless value existing views of forested areas as an important contribution to their quality of life. Therefore, neighboring residents and overnight visitors would be considered more sensitive viewers.

### 4.14.4 Environmental Impacts and Recommended Mitigation Measures

#### SIGNIFICANCE CRITERIA

Based on Appendix G of the CEQA Guidelines, the project could have a significant adverse effect related to visual resources if it would:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

#### METHODS AND ASSUMPTIONS

In determining the extent and implications of the anticipated visual changes, consideration was given to:

- existing visual qualities of the affected environment and specific changes in the visual character and qualities of the affected environment;
- the visual context of the affected environment;
- the extent to which the affected environment contains places or features that provide unique visual experiences or that have been designated in plans and policies for protection or special consideration; and
- the sensitivity of viewers, access of viewers, their activities, and the extent to which these activities are related to the aesthetic qualities affected by the project-related changes.

#### ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

**Adverse effect on a scenic vista**

A scenic vista is generally considered to be a location from which the public can experience unique and exemplary high-quality views, including panoramic views of great breadth and depth, often from elevated vantage points. The project site in Fish Camp does not constitute a scenic vista. Although the project site is undeveloped, forested, and adjacent to Big Creek, it is surrounded by the existing Tenaya Lodge to the south; Highway 41, the General Store, and rural residences to the west; the Big Creek Inn, Owl’s Nest Lodging, the Wood Family Cabin, and the Sugar Pine Cabin to the north; and rural residences to the east of Big Creek. Furthermore, the foreground and middleground views from the project site are of coniferous forest, Big Creek, Highway 41, and the surrounding resort commercial and residential development, including signs and limited lighting. The proposed Tenaya Cabins project site does not provide unique and exemplary views, and the proposed development of cabins, a clubhouse, and a future residence would not adversely affect a scenic vista. Therefore, this issue is not discussed further.
IMPACT ANALYSIS AND MITIGATION MEASURES

Impact 4.14-1: Degrade the existing visual character or quality of the site and its surroundings, including scenic resources within a state scenic highway

Project implementation would result in the introduction of human-made structures to a currently undeveloped forested site. The new structures could be visible through filtered views (through trees) from Highway 41 and adjacent resort commercial and residential properties. However, the proposed site plan minimizes grading; minimizes removal of trees, vegetation, and rock formations; and avoids any construction within the Big Creek flood zone or riparian corridor to maintain the natural features of the site and provide a visual buffer between the cabins and clubhouse, Highway 41, and surrounding properties. In addition, the project would comply with Fish Camp TPA Specific Plan development standards and the architectural design and materials of the buildings would blend with the natural environment. The resulting visual character of the developed project site would be consistent with other development in the Fish Camp TPA. Therefore, the project’s impact on the existing visual character and quality of the site and its surroundings would be less than significant.

The Tenaya Cabins Project would result in the introduction of human-made structures to a currently undeveloped forested site. The proposed cabins, clubhouse, and future residence could be visible from Highway 41 or adjacent properties, but would also be partially screened by intervening trees. The utility connections and expanded leach field would be undergrounded lines and would not result in visible structures. The project site is surrounded by resort commercial and residential land uses in the Fish Camp TPA, including the Tenaya Lodge to the south and the Big Creek Inn, Owl’s Nest Lodging, the Wood Family Cabin, and the Sugar Pine Cabin to the north. These properties are privately owned; there are no public recreation areas, trails, or other public vantage points within, adjacent to, or in the immediate vicinity of the project site from which views into the development area are available. In particular, the project site is not visible from the Tenaya Lodge because of intervening topography and vegetation. Views from the General Store in Fish Camp, across Highway 41, are primarily of Rainbow Lake at the northern end of the project site, which would not be disrupted by development of the project; the site plan does not alter Rainbow Lake and provides a buffer of approximately 150 feet or more between the northern extent of project development and Rainbow Lake.

Development of the project would require targeted tree removal and grading for the building pads, utility connections, and roadway. However, the location of the road follows the existing dirt road through the site, and the locations of the cabins and the clubhouse were chosen with consideration of existing rock formations, trees, and vegetation, to minimize disturbance to the natural resources that contribute to the viewshed of Highway 41 and to maintain a rustic outdoor experience for the guests. Nonetheless, it is expected that some portion of the cabins, the clubhouse, or the future residence would be partially visible from Highway 41 or neighboring properties.

The Tenaya Cabins Project would comply with the Fish Camp TPA Specific Plan development standards relating to building setbacks, density, height restrictions, signage, and lighting for resort commercial development as follows:

- **Height Standards**: vertical distance from the uphill side of a building to the highest point of a building shall not exceed 35 feet above the natural grade line
- **Setback Standards**: 15 feet from a residential lot; 10 feet from the easement boundary of Highway 41; 30 feet from the center line of a community street
- **Density Standards**: one lodging unit per 5,000 square feet of net lot area
- **Sign Standards**: be compatible with the mountain resort atmosphere of Fish Camp; less than 32-square feet in area; not extend more than 27 feet above ground level; no flashing, blinking, or moving letters, lights, or characters; shall not move, have lighted outline, or be constructed of plastic
Residential Development Standards: The future residence would be required to comply with the Fish Camp TPA development standards, as applicable to the residential parcel.

The building form, mass, materials, colors, landscaping, and outdoor features of the clubhouse and cabins is designed to blend with the existing natural setting and to be appropriate within the context of the Sierra Mountain environment. The cabins would be approximately 16 feet tall and the clubhouse would not exceed the 35-foot height standard for the Resort Commercial zone per the Fish Camp TPA Specific Plan. Conceptual designs of the cabins are shown in Exhibits 3-5 and 3-6 and conceptual designs of the clubhouse are shown in Exhibits 3-7 and 3-8. The colors would be muted/earth toned-colored to limit glare, and exterior lighting would be limited and shielded to prevent skyglow (see Impact 4.14-2, below). The County would ensure compliance with the Fish Camp TPA Specific Plan development standards through project design review and approval.

Highway 41 in Fish Camp is eligible for designation, but it is not an officially designated State Scenic Highway (Caltrans 2015). As described above, the project has been designed to maintain a visual buffer between the cabins, clubhouse, and residence and Highway 41, leaving limited visibility of proposed structures to travelers on Highway 41. In addition, the project would be located within the developed Fish Camp TPA and would be consistent in character with existing development and would be designed in compliance with Fish Camp TPA Specific Plan development standards through project design review and approval. Therefore, the project would not have an adverse effect on scenic resources within a state scenic highway.

Furthermore, the County may utilize a scenic highway overlay (per Section 17.65.010). The scenic highway overlay zone (SHO) is an overlay district intended to be combined with any other district to protect the scenic qualities of public highways or roadways designated a scenic highway by the State of California and/or the Board of Supervisors. The purpose of this district is to maintain the recreational, social and economic values of the county by protecting and enhancing the designated highway, for the benefit of residents and visitors. This zone will function to promote the overall economic vitality of a district, enhance tourism, and stabilize and increase property values. (Ord. 801 Sec. I, 1991). If the County utilizes a SHO, the applicant would be required to submit an application for scenic highway review to be approved by the Planning Director. In reviewing an application for scenic highway review, the Planning Director must find that the development is harmonious with the scenic quality of the designated highway, complies with all applicable standards (per 17.65.010), and is consistent with the goals, policies, and standards of the General Plan.

Because the proposed cabins, clubhouse, and residence would be partially screened by maintaining the natural features of the site, because utility connections would be undergrounded, and because the resort commercial development would be consistent with the other existing and proposed resort commercial and residential development surrounding the site in the Fish Camp TPA, the change in visual character of the project site and its surroundings would be less than significant.

**Mitigation Measures**

No mitigation is required.

**Impact 4.14-2: Create new sources of light and glare**

The Tenaya Cabins Project would result in new sources of light, including interior and exterior residential lighting, street lighting, clubhouse lighting, and lighting from vehicle traffic. The project would implement measures to limit the intensity and visibility of outdoor lighting, and the cabins and clubhouse would be screened from Highway 41 and surrounding properties by existing vegetation and topography. Therefore, the project’s lighting would be less prominent than existing light sources in Fish Camp, would not create a new source of substantial light that would adversely affect views in the area, and would not contribute substantially to skyglow. This impact would be less than significant.

Implementation of the project would result in 54 cabins, a clubhouse, an internal roadway, and a potential future residence. These project components would result in new sources of light from interior building lights,
and exterior lighting around parking areas, pedestrian areas, and roadways. As described in Chapter 3, to minimize the intensity and visibility of lighting and be compatible with the rural character of the Fish Camp TPA, the project would implement the following measures:

- Consistent with General Plan Policy 11-1d, lighting shall meet the standards established by the International Dark Sky Association and building materials shall have a low reflective index.
- Exterior lighting shall use the lowest possible wattage and energy-efficient luminaire for each application.
- Exterior lighting shall only illuminate the area needed for safety and shall be minimized during non-active hours (11 p.m. – dawn).
- Outdoor light fixtures for the parking areas, roads, cabins, clubhouse, and pedestrian areas shall be shielded and directed down to preserve the night sky, as well as directed away from the cabins or adjacent residential parcels to minimize light and glare effects.
- Exterior lighting fixtures shall be installed and shielded in such a manner that no light rays are emitted from the fixture at angles above the horizontal plane.
- Timers shall be installed on exterior lighting fixtures near buildings, where applicable, to avoid continual lighting of surfaces.

As described in Impact 4.14-1, the proposed site plan was designed to minimize disturbance of the natural features of the project site, including trees, rock formations, and vegetation. These natural features would provide screening of the new structures and associated nighttime lighting to viewers along Highway 41 or from adjacent properties. In addition, the architectural designs and materials of the structures would use muted/earth toned colors to prevent glare and blend with the forested conditions of the site. Large areas of glass would be shaded and reflective materials would be avoided so that the project would not result in a substantial source of daytime glare. Any signage would adhere to the Fish Camp TPA Specific Plan related to size, materials and lighting, as described in Impact 4.14-1.

The project site is within the Fish Camp TPA and surrounded by similar resort commercial and residential land uses, including the Tenaya Lodge to the south and the Big Creek Inn, Owl’s Nest Lodging, the Wood Family Cabin, and the Sugar Pine Cabin to the north, which utilize night lighting. The lighting sources related to the Tenaya Cabins Project would be minimized, shielded, and screened, and would be consistent with and less prominent than existing light sources in Fish Camp. The project would not create a new source of substantial light that would adversely affect views in the area, and would not contribute substantially to skyglow. This impact would be less than significant.

**Mitigation Measures**

No mitigation is required.
5 CUMULATIVE IMPACTS

5.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project’s incremental effect is cumulatively considerable. Where a project’s incremental effect is not cumulatively considerable, the effect need not be considered significant, but the basis for concluding the incremental effect is not cumulatively considerable must be briefly described. Cumulatively considerable, as defined in State CEQA Guidelines Section 15065(a)(3), means that the “incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

5.2 CUMULATIVE IMPACT APPROACH

State CEQA Guidelines Section 15130 identifies two basic methods for establishing the cumulative environment in which a project is considered: the use of a list of past, present, and probable future projects; or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. The cumulative analyses in this EIR primarily uses the “list” approach, although with some use the “plan” approach (Air Quality and Greenhouse Gas Emissions) to identify the cumulative setting. The “list” approach uses the identification of actual projects that may contribute to a cumulative effect rather than use overall projections contained in an adopted local, regional or statewide plan, or related planning document. The effects of past and present projects on the environment are reflected by the existing conditions in the project area. Probable future projects are those in the project vicinity (Fish Camp and surrounding Sierra National Forest) that have the possibility of interacting with the proposed project to generate a cumulative impact (based on proximity and construction schedule) and either:

- are partially occupied or under construction,
- have received final discretionary approvals,
- have applications accepted as complete by local agencies and are currently undergoing environmental review, or
- are proposed projects that have been discussed publicly by an applicant or that otherwise become known to a local agency and have provided sufficient information about the project to allow at least a general analysis of environmental impacts.

The other criteria used is timing. The cumulative projects considers related projects likely to be constructed in a similar timeframe as the proposed project (around 2017).
5.3 CUMULATIVE SETTING

GEOGRAPHIC SCOPE

The geographic area that could be affected by the project varies depending on the environmental resource topic. When the effects of the project are considered in combination with those other past, present, and probable future projects to identify cumulative impacts, the specific projects considered may also vary depending on the type of environmental effects being assessed. Table 5-1 presents the general geographic areas associated with the different resource topics addressed in this analysis.

<table>
<thead>
<tr>
<th>Resource Topic</th>
<th>Geographic Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use and Forest Resources</td>
<td>Fish Camp Town Planning Area (TPA), Sierra National Forest</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Defined differently for each species, based on species distribution, habitat requirements, and scope of impact from proposed activities</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Merced tribelet of the Southern Sierra Miwok</td>
</tr>
<tr>
<td>Transportation and Circulation</td>
<td>Highway 41 in the project vicinity and local roads where Tenaya Cabins could contribute traffic that could alter traffic conditions</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Regional (pollutant emissions that affect the applicable air basins) Immediate project vicinity (pollutant emissions that are highly localized)</td>
</tr>
<tr>
<td>Greenhouse Gas Emissions and Climate Change</td>
<td>Global/statewide</td>
</tr>
<tr>
<td>Noise</td>
<td>Immediate project vicinity where project-generated noise could be heard concurrently with noise from other sources</td>
</tr>
<tr>
<td>Geology, Soils, and Seismicity</td>
<td>Big Creek watershed</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Big Creek watershed</td>
</tr>
<tr>
<td>Utilities and Public Services</td>
<td>Fish Camp TPA, Mariposa County (water, wastewater, electricity, and solid waste)</td>
</tr>
<tr>
<td>Hazards and Hazardous Materials</td>
<td>Fish Camp</td>
</tr>
<tr>
<td>Visual Resources</td>
<td>Fish Camp TPA, project vicinity where the project site would be visible</td>
</tr>
</tbody>
</table>

Source: Compiled by Ascent Environmental in 2016

PROJECT LIST

Past and current projects in the project vicinity (such as logging in the Sierra National Forest and the new Tenaya Lodge Wastewater Treatment Plant, which is operational as of January 2016) and plans (such as the Fish Camp Town Planning Area [TPA] Specific Plan) were considered as part of the cumulative setting as they contribute to the existing conditions upon which the proposed Tenaya Cabins Project and the probable future project’s environmental effects are compared (see Environmental Setting for each resource topic in Chapter 4). However, continued fuels reduction and other projects such as power transmission lines, and other management actions are anticipated within the Mariposa County portion of the Sierra National Forest which surrounds the Fish Camp area and the project site (USFS 2016).

The Silver Tip Village Resort is the only probable future development project in the Fish Camp TPA that has the possibility of interacting with the Tenaya Cabins Project. Silver Tip is approved for construction in Fish Camp on the west side of Highway 41, just north of the Tenaya Cabins Project site. The approved project elements of the Silver Tip Project are presented in Table 5-2, below. Access to Silver Tip would be from Highway 41 and Fish Camp Lane. Although it is unknown when Silver Tip would be constructed, it is possible that its construction could overlap with construction of the Tenaya Cabins Project.
### Table 5-2  Related Cumulative Project: Silver Tip Village Resort Project

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Description</th>
<th>Square Footage (land area disturbed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel and lodging structures</td>
<td>137 guest rooms</td>
<td>112,560 sq. ft. (28,140 sq. ft. land area)</td>
</tr>
<tr>
<td>Conference Center</td>
<td>1 story</td>
<td>3,616 sq. ft. (3,616 sq. ft. land area)</td>
</tr>
<tr>
<td>30 Cabins</td>
<td>2 stories; 2-3 bedroom units</td>
<td>54,000 sq. ft. (48,880 sq. ft. land area)</td>
</tr>
<tr>
<td>Up to Four (4) Small Conference Centers</td>
<td>1 story</td>
<td>8,000 sq. ft. (8,000 sq. ft. land area)</td>
</tr>
<tr>
<td>Commercial</td>
<td>2 stories; restaurant and retail</td>
<td>14,000 sq. ft. (14,000 sq. ft. land area)</td>
</tr>
<tr>
<td>Residential</td>
<td>Housing for 20 employees above commercial area, within hotel or cabin footprint</td>
<td>Employee housing (0 sq. ft. land area)</td>
</tr>
<tr>
<td>Tennis Court</td>
<td>1 Court</td>
<td>Approximately 4,000 sq. ft. (approximately 4,000 sq. ft. land area)</td>
</tr>
<tr>
<td>Exterior Swimming Pool (including deck area)</td>
<td></td>
<td>Approximately 10,500 sq. ft. (approximately 10,500 sq. ft. land area)</td>
</tr>
<tr>
<td>Three (3) Decorative Ponds</td>
<td></td>
<td>Approximately 15,000 sq. ft. (approximately 15,000 sq. ft. land area)</td>
</tr>
<tr>
<td>On-site waste water disposal system</td>
<td>Wastewater treatment plant, misc. storage ponds, and leachfield area.</td>
<td>Also shown within preliminary wastewater disposal plan and on site plan</td>
</tr>
<tr>
<td>Water tank(s)</td>
<td>Domestic and fire usage</td>
<td>Minimum 410,000 gallons</td>
</tr>
<tr>
<td>Parking, roadways, pathways, utility line extensions, etc.</td>
<td>359 parking spaces</td>
<td>Approximately 202,000 sq. ft. (roadways and parking)</td>
</tr>
<tr>
<td>Associated accessory uses</td>
<td>Pedestrian or bicycle trails, satellite antennae, underground utility lines</td>
<td>May also be located within Residential area</td>
</tr>
</tbody>
</table>

Source: Mariposa County, Conditional Use Permit #267 and Planned Development Permit #99-01, Effective 2011
Uses are subject to applicable conditions of the Planned Development Permit.

### 5.4 ANALYSIS OF CUMULATIVE IMPACTS

Significance criteria, unless otherwise specified, are the same for cumulative impacts as project impacts for each environmental topic area (see Sections 4.3 through 4.14. When considered in relation to other reasonable foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the proposed project alone.

For purposes of this EIR, the project would result in a significant cumulative effect if:

- the cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the Tenaya Cabins project is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or

- the cumulative effects of related projects (past, current, and probable future projects) are already significant and implementation of the Tenaya Cabins project makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.
This cumulative analysis assumes that all mitigation measures identified in Chapter 4 to mitigate project impacts are adopted. The analysis herein analyzes whether, after adoption of project-specific mitigation, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects. Where the project would so contribute, additional mitigation is recommended where feasible.

LAND USE AND FOREST RESOURCES

Cumulative land use impacts
As described in Table 5-2, above, the approved Silver Tip Resort Project would alter land use of approximately 47 acres in the Fish Camp TPA, which are partially undeveloped and contain the former location of the Silver Tip Lodge (destroyed by fire in 1981) and the existing U.S. Post Office. The Silver Tip Resort Project would result in development of a hotel, conference center, cabins, associated amenities, and employee housing. However, growth and development in Fish Camp is guided by the County’s land use and planning documents: the Mariposa County General Plan and the Fish Camp TPA Specific Plan. These documents serve as the blueprint for Fish Camp to achieve its vision of the future. In the course of environmental review, permitting, and approval, the Silver Tip Village Resort was determined to be consistent with the County’s General Plan and the Fish Camp TPA Specific Plan. Therefore, cumulative land use impacts in the Fish Camp TPA are considered less than significant.

As described in Impacts 4.3-1 and 4.3-2 of this Draft EIR, the Tenaya Cabins Project would be consistent with Mariposa County General Plan policies and Fish Camp TPA Specific Plan development standards and planning recommendations. The Tenaya Cabins Project would also be compatible with surrounding land uses, which include single-family residences and resort commercial development, and would not result in the division of an established community. Therefore, the project would result in a less-than-significant cumulative land use impact.

Mitigation Measures
No mitigation is required.

Cumulative impacts to forest resources
The Fish Camp TPA is virtually surrounded by National Forest Land and on the western boundary by large private timber holdings. As stated above, continued fuels reduction and other projects such as power transmission lines, and other management actions are anticipated within the Mariposa County portion of the Sierra National Forest which surrounds Fish Camp (USFS 2016). However, the 280-acre Fish Camp TPA is zoned for single- and multi-family residential and resort commercial uses, not timber harvest. Additionally, the Silver Tip Village Resort is zoned Resort Commercial and Single Family Residential, and development of that project would not result in the rezoning of timberlands or a substantial loss of forest lands. Because the Fish Camp TPA and the related Silver Tip Village Resort would not result in the rezoning of forest or timberlands, the cumulative forest resources impact is less than significant.

Implementation of the Tenaya Cabins Project would not result in the rezoning of timber harvest lands. In addition, after development, Tenaya Cabins Project would retain at least 10 percent tree cover such that the project sites would still be considered forest land per Public Resources Code Section 12220(g). Therefore, the project would not entail a significant removal of trees and the cumulative conversion of forest land would be less than significant.

Mitigation Measures
No mitigation is required.
BIOLOGICAL RESOURCES

The biological resources issues relevant to cumulative impacts, where the project has the potential to contribute to impacts generated by other projects, are effects related to sensitive habitats and special-status wildlife species. Past and present activities have altered biological resources in the Fish Camp TPA. Past, present, and foreseeable future activities that have affected or may affect biological resources include logging, fuels management, recreational and residential development, and right-of-way maintenance and operation activities. The cumulative condition for the biological resources considered below is significant.

Cumulative loss of forest habitat and movement corridors

The Tenaya Cabins Project would convert 25.39 acres from natural habitat to development. In addition, the Silver Tip Project would also convert natural habitat to development. The majority of the Tenaya Cabin development would be within montane coniferous forest, which is a habitat type common in the region. The location of the project site and Silver Tip, within the Fish Camp TPA and existing development, limits their suitability as a wildlife corridor. The development of the project site and Silver Tip would not result in a substantial cumulative loss of forest habitat or substantial interference with wildlife movement. The project’s contribution to the cumulative impact on natural habitat types and movement corridors would be less than significant.

Mitigation Measures

No mitigation is required.

Cumulative impacts to special-status plant species

No special-status plant species are known to occur on the site; however, two watch list (CRPR 4) plant species, which have limited distribution but do not meet the definition of endangered, rare, or threatened, are documented on the project site—Coleman’s rein orchid and oak-leaved nemophila. The mapped population of oak-leaved nemophila would be avoided by project activities. One of two mapped populations of Coleman’s rein orchid would likely be damaged or destroyed during project construction; however this would not be a substantial adverse effect on this species as a whole. Therefore, the project would have a less-than-significant contribution to cumulative special-status plant impacts.

Mitigation Measures

No mitigation is required.

Cumulative impacts to special-status wildlife species

As discussed in Section 4.4 of this Draft EIR the Tenaya Cabins Project would result in potentially significant impacts to special-status bird species (in particular olive-sided flycatcher and Vaux’s swift), fisher, the pallid bat and California mastiff bat, as well as Yosemite toad. Implementation of the Tenaya Cabins Project could result in habitat or nesting disturbance as well as mortality of special status wildlife. The project would be required to implement Mitigation Measures 4.4-3 through 4.4-6 to avoid, minimize, and compensate for impacts to special-status species and their habitat. Therefore, the project is not expected to substantially affect the distribution, breeding productivity, population viability, or the regional population of any special-status species; or cause a change in species diversity locally or regionally. As a result, the project would result in a less-than-significant contribution to the cumulative impact on special-status wildlife species.

Mitigation Measures

No additional mitigation is required.

Cumulative impacts to sensitive habitats, wetlands, and waters

The construction of the Tenaya Cabins Project would result in an estimated 0.01 acres of permanent effects to sensitive habitats, and potentially jurisdictional wetlands or waters, as well as an estimated 0.02 acres of temporary effects that are likely to occur during construction of the clubhouse facilities and the boardwalk.
between the project and the Tenaya Lodge. The project would be required to implement Mitigation Measure 4.4-7 to avoid, reduce, and compensate for these impacts, reducing the project contribution to cumulative sensitive habitat impacts to a less-than-significant level.

**Mitigation Measures**

No additional mitigation is required.

**CULTURAL RESOURCES**

Because the proposed project would result in no impacts on historically significant buildings or structures, the cumulative analysis focuses only on potential cumulative impacts on archaeological resources and human remains.

**Cumulative impacts on unique archaeological resources**

The cumulative context for archaeological resources is the territory of the Merced tribelet of the Southern Sierra Miwok, one of three linguistically and geographically distinct groups of the eastern Miwok that inhabited the western Sierra Nevada from the Cosumnes River to the north down to the Fresno River in the south. In addition, the project location is at the southernmost end of Miwok territory, and is very near the Chukchansi Foothill Yokuts, who held the region immediately south of Oakhurst, located approximately 14 miles to the south. Because all significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide opportunities for increasing our understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving artifacts found. Federal, state, and local laws are also in place, as discussed above, that protect these resources in most instances. Since these laws, regulations, and policies have been in effect (many for over 30 years), the protection and preservation of significant heritage and cultural resources is the typical outcome for most projects. However, instances do occur where full protection of a resource is not feasible, and there has been a net loss or degradation of heritage and cultural resources in the project region. In addition, prior to adoption of current laws, regulations, and policies to protect heritage and cultural resources, little protection was provided to these resources and loss or damage to prehistoric and historic resources was more common.

Project construction could encounter previously undiscovered or unrecorded archaeological sites and materials during project-related preconstruction or construction-related ground disturbing activities. These activities could damage or destroy these archaeological resources. However, implementation of Mitigation Measures 4.5-1a and 4.5-1b would reduce potentially significant impacts to archaeological resources because mitigation would be developed in coordination with the appropriate federal, state, and/or local agency(ies) to avoid, move, record, or otherwise treat the resource appropriately, in accordance with pertinent laws and regulations. By providing an opportunity to avoid disturbance, disruption, or destruction of archaeological resources, implementation of the project would result in a less-than-significant contribution to the cumulative impact.

**Mitigation Measures**

No additional mitigation is required.
Cumulative impacts on human remains
Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or unmarked human interments are present within or in the immediate vicinity of the project. However, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the project area, and could be uncovered by project-related construction activities. The location of grave sites and Native American remains are potentially not known in advance, and can occur outside of identified cemeteries or burial sites. As with archaeological resources, disturbance of human remains are more likely to occur in previously undisturbed and undeveloped areas, where excavation and ground-disturbing activities have not already resulted in discovery. However, human remains may be discovered in developed and disturbed areas, as well, and may also be of recent origin.

With implementation of Mitigation Measure 4.5-2, adverse effects on undiscovered or unknown human remains would be avoided. With implementation of these measures the proposed project would not contribute to a cumulative loss of undiscovered or unknown human remains, and the project’s contribution to the cumulative impact would be less than significant.

Mitigation Measures
No additional mitigation is required.

Change in the significance of a tribal cultural resource
The Picayune Rancheria of the Chukchansi Indians has stated that the tribe considers the Fish Camp area to be a “tribal cultural resource” (TCR) as described under AB 52. The Picayune Rancheria tribe is concerned that construction and operation of the Tenaya Cabins Project as well as Silver Tip and other cumulative projects would cause changes to the cultural landscape. However, as addressed in Impact 4.5-4 of this Draft EIR, there is a lack of substantial evidence that the TCR needs to meet the criteria under PRC §21074 for cultural significance. Therefore, the cumulative condition is considered less than significant.

The project area was a shared place of many uses that served many tribes and archaeological evidence indicates Native American use of the area. In addition, the Picayune Rancheria of the Chukchansi Indians has stated that the area holds cultural value to the Tribe. The County recognizes that the historic use of the region and the value of its resources are important to the Tribe’s ongoing cultural integrity. Therefore, the County requires implementation of Mitigation Measure 4.5-4 to plan, design, and implement at Cultural Resource Interpretive Program for the Tenaya Cabins Project. Implementation of Mitigation Measures 4.5-4 would provide for ongoing education regarding the cultural values of the project site, in accordance with the tribe’s wishes, and would support the ongoing cultural history of the Chukchansi Indians through education and environmental protection. Thus, this is considered a less-than-significant cumulative impact.

Mitigation Measures
No additional mitigation is required.

TRANSPORTATION AND CIRCULATION
Cumulative operational impacts to intersections
The only future development planned for the Fish Camp area is the Silver Tip Resort. Trips generated from the Silver Tip Village Resort Development were used to generate Cumulative Year 2040 (No Project) AM and PM peak hour turning movement volumes in Section 4.6 of this Draft EIR. As shown in Table 4.6-7, the Highway 41 / Summit Camp Road intersection would operate at acceptable levels of service during the AM peak hour (LOS A), PM peak hour (LOS B), and weekend peak hours (LOS B) under the Cumulative Year 2040 (No Project) scenario. Thus, the cumulative operational impact to intersections is less than significant.

As shown in Table 4.6-7, under the Cumulative Year 2040 (Plus Project) conditions, both project study intersections would operate at acceptable levels of service during the AM and PM peak hours (LOS B).
Additionally, the Highway 41 / Project Driveway would operate at LOS C during the weekend peak. The left turn lane at the Highway 41 / Summit Camp Road intersection would not experience any queuing. Thus, this is considered a less-than-significant cumulative impact.

**Mitigation Measures**
No mitigation is required.

**Cumulative operational impacts to roadway segments**
The Silver Tip Resort is the only planned project for the Fish Camp area. Under the Cumulative 2040 (No Project) traffic conditions, as shown in Table 4.6-8 of this Draft EIR, both northbound and southbound traffic on the segments of Highway 41 from Jackson Road to the Project Entry, and from the Project Entry to Fish Camp Lane, would operate at acceptable levels of service (LOS C) during the weekday a.m., p.m., and weekend peak hours. Thus, the cumulative operational impact to roadway segments is less than significant.

Northbound and southbound traffic on the project roadway study segments would operate at acceptable levels of service (LOS C) during the weekday a.m., p.m., and weekend peak hours under Cumulative Year 2040 (Plus Project) conditions. None of the roadway segments would fall below acceptable levels of service through the year 2040. Thus, this is considered a less-than-significant impact.

**Mitigation Measures**
No mitigation is required.

**Cumulative safety impacts**
The Silver Tip Resort, the only planned project for the Fish Camp area in the cumulative time frame, would be subject to the same design standards as detailed for the Tenaya Cabins project above. Therefore, the safety impacts under Cumulative 2040 (No Project) traffic conditions would be less than significant.

As detailed in Impact 4.6-5, the Tenaya Cabins project would be designed to conform to Caltrans’ *Highway Design Manual* (2015) and the AASHTO *A Policy on Geometric Design of Highways and Streets* (2001) standards. Thus, safety impacts in the Cumulative 2040 (Plus Project) would be considered a less-than-significant impact.

**Mitigation Measures**
No mitigation is required.

**AIR QUALITY**

**Short-Term Construction-Related Impacts**
MCAPCD acknowledges that the County is a nonattainment area for the 1-hour and 8-hour CAAQS for ozone. The County is considered an unclassified/attainment area under the NAAQS for ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀), and PM with an aerodynamic diameter of 2.5 micrometers or less (PM₂.₅) due to the combined levels of emissions generated by sources throughout the Mountain Counties Air Basin (MCAB). Construction-generated emissions of ozone precursors (reactive organic gases [ROG] and oxides of nitrogen [NOₓ]) from related projects could violate or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. Additionally, because the County is currently designated as a nonattainment area for ozone, construction-generated emissions of ROG and NOₓ could contribute on a cumulative basis to pollutant concentrations that exceed the ambient air quality standards because of growth in the area.

Construction-related emissions of ROG and NOₓ (both ozone precursors), PM₁₀, and PM₂.₅ from project implementation were determined to be less than significant because project-related construction emissions
would not exceed the applicable mass emission thresholds, which are considered to represent the allowable incremental contribution of emissions-generating activity while still progressing toward overall attainment within the MCAB. Thus, construction-related emissions of ROG, NO\textsubscript{x}, PM\textsubscript{10}, and PM\textsubscript{2.5} would not have a considerable contribution to a significant cumulative-related impact with respect to ozone, PM\textsubscript{10}, and PM\textsubscript{2.5}. This would be a less-than-significant cumulative impact.

**Mitigation Measures**

No mitigation is required.

**Long-Term Operational-Related Impacts**

Because Mariposa County is currently designated as a nonattainment zone for the 1-hour and 8-hour state standard for ozone, stationary- and mobile-source emissions could contribute on a cumulative basis to pollutant concentrations that exceed the ambient air quality standards because of growth in the area. This is considered to be a significant cumulative impact. As discussed in Section 4.7-3, “Environmental Impacts and Recommended Mitigation Measures,” MCAPCD does not have established thresholds of significance for project-level air pollutants; therefore, the thresholds set by the San Joaquin Valley Air Pollution Control District (SJVAPCD) were applied. Projects that exceed these thresholds are considered to have substantial contribution to air quality impacts MCAB-wide.

Operational-related emissions of ROG and NO\textsubscript{x} (both ozone precursors), PM\textsubscript{10}, and PM\textsubscript{2.5} from project implementation were deemed to less than significant because project-related operation emissions would not exceed the applicable mass emission thresholds, which are considered to represent the allowable incremental contribution of emissions-generating activity while still progressing toward overall attainment within the MCAB. Therefore, operational-related emissions of ROG, NO\textsubscript{x}, PM\textsubscript{10}, and PM\textsubscript{2.5} would not have a considerable contribution to a significant cumulative-related impact with respect to ozone, PM\textsubscript{10}, and PM\textsubscript{2.5}. This would be a less-than-significant cumulative impact.

**Mitigation Measures**

No mitigation is required.

**GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE**

The discussion of greenhouse gas (GHG) emissions generated by project construction and operation under Impacts 4.8-1 through 4.8-3 of this Draft EIR are inherently cumulative. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions. GHG emissions resulting from the project would not exceed the threshold of 1,100 metric tons (MT) of carbon dioxide-equivalent emissions per year (CO\textsubscript{2}e/year). Thus, the project would not result in a considerable contribution to a significant cumulative GHG impact. Furthermore, implementation of Mitigation Measure 4.8-2 would ensure that the project implements measures to support the statewide GHG reduction goals. Therefore, the project’s contribution to the cumulative climate change impact would be less than significant.

**Mitigation Measures**

No additional mitigation is required.

**NOISE**

**Cumulative short-term construction-generated noise**

Cumulative impacts from construction-generated noise could result if other future planned construction activities were to take place in close proximity to the project and cumulatively combine with construction noise from the project. The Silver Tip Resort has been approved by Mariposa County and would be
constructed on the west side of Highway 41 in Fish Camp. Construction of Silver Tip could overlap with construction of the Tenaya Cabins Project.

Project-related construction equipment would be the only source of construction noise and project construction activities would be temporary (i.e., approximately 6 months). The temporary project construction noise would be limited by implementation of Mitigation Measure 4.9-4, which limits the use of construction equipment to the hours of 7:00 a.m. to 7:00 p.m. for Monday through Friday and 9:00 a.m. to 8 p.m. on weekends and legal holidays. It also requires that all construction equipment be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturer recommendations. Because construction activities would be isolated to the Tenaya Cabins Project site, and because construction equipment would utilize muffling equipment, construction-generated noise would not combine with other proposed construction noise in Fish Camp. The project would have a less-than-significant cumulative construction noise impact.

**Mitigation Measures**

No additional mitigation is required.

**Cumulative long-term ambient noise levels**

Long-term ambient noise levels in Fish Camp would be affected by buildout/operation of the approved Silver Tip Resort, potential future residential units, and activities in the Sierra National Forest. These uses would also contribute to vehicular traffic on Highway 41. The long-term ambient noise levels in Fish Camp would be anticipated to increase and therefore are considered to represent a cumulative noise impact.

The proposed project would result in additional noise sources from stationary equipment, primarily a speaker system and a back-up diesel generator (to be operated when needed) at the proposed clubhouse. As discussed in Section 4.9, “Noise,” the additional project-generated noise would exceed applicable Mariposa County noise standards and could result in an increase in ambient noise levels at nearby residences and other land uses. Implementation of the project would produce additional emissions of noise that could have a cumulatively considerable contribution to ambient levels of noise in the project area; however, as discussed in Section 4.9, “Noise,” Mitigation Measure 4.9-2 is designed to minimize operational-emissions from the clubhouse speaker system and back-up diesel generator, if applied, would reduce ambient noise levels such that the project would not exceed the applicable Mariposa County noise standards. Implementation of mitigation would reduce this impact to a less-than-significant cumulative impact.

Future project-related traffic noise levels were modeled based on the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model, the findings of onsite noise level measurements and traffic data from VRPA Technologies, Inc. (Appendix G), and Caltrans. As shown in Section 4.9, “Noise,” traffic levels would not result in a substantial increase in noise levels (i.e., less than 1 decibel [dB]) on Highway 41. A 3 dB increase would be considered an audible change. At less than 1 dB, noise increases would not be noticeable. Although the Silver Tip Project would also result in vehicular trips and additional traffic noise on Highway 41, the project’s contribution to this increase would not be considerable. The project’s contribution would be less than significant.

**Mitigation Measures**

No additional mitigation is required.

**GEOLOGY, SOILS, AND SEISMICITY**

**Cumulative, long-term exposure of people or property to strong seismic shaking**

The proposed project and the approved Silver Tip Resort would not be located within an area with known faults; however, seismically active areas in the region could subject persons or property to seismic shaking. Ground shaking could result in the damage or destruction of buildings and other structures, and injury or
death to people. The development of the Tenaya Cabins and Silver Tip Resort could create an additive increase in the number of persons or properties exposed to seismic shaking.

Overall, the potential cumulative impact is minimized through compliance with the California Building Code (CBC), which contains protective provisions for structure placement and design, and a geotechnical investigation. Additionally, geotechnical investigations required for projects in Mariposa County would be carried out that would provide the means to address any heretofore unknown seismic hazards in engineering designs. Therefore, the potential for the proposed project or Silver Tip to contribute to the cumulative exposure of people or property to seismic impacts would be fully addressed through adherence to CBC building standards and site specific geotechnical engineering recommendations. Because the proposed project would comply with existing seismic regulations and CBC building standards, the project contribution to the cumulative impact would be less than significant.

Mitigation Measures
No mitigation is required.

Cumulative, long-term exposure of people or property to seismically-induced hazards
The proposed project and the approved Silver Tip Resort described above would not be located within an area with known faults; however, an infrequent, strong earthquake in the region could subject the project site to seismic ground shaking that could expose people or structures to seismically-induced hazards including liquefaction, lateral spreading, subsidence, landslides or rockfalls. Because the two properties are physically separate, the development of the Tenaya Cabins and Silver Tip Resort would not create additive stresses on the same soil or geologic units. Effects from seismically-induced hazards would likely be minimal; furthermore, the potential for the proposed project to contribute to the cumulative exposure of people or property to seismically-induced hazards would be fully addressed through adherence to CBC building standards and site specific geotechnical engineering recommendations. Given the existing natural conditions of the site and surrounding area and compliance with building standards, development of the Tenaya Cabins and Silver Tip projects would be a less-than-significant cumulative impact related to exposure of people or property to seismically-induced hazards.

Mitigation Measures
No mitigation is required.

Cumulative impacts of erosion or loss of topsoil
The proposed project and the approved Silver Tip Resort would create ground disturbance and expose soils to erosion by wind and water. Increased erosion could lead to the loss of top soil and a decrease in vegetative productivity within the Big Creek watershed. Invasive species could colonize disturbed areas and replace native vegetation. Additionally, sediments carried in stormwater can be deposited into surface waters and can negatively impact water quality. The Tenaya Cabins Project in combination with the Silver Tip Resort Project could have an additive or cumulative adverse effect on the ecosystem of the watershed and on Big Creek itself.

The proposed project and Silver Tip would be subject to the same regulatory measures and permit conditions that require the stabilization and revegetation of disturbed areas, erosion control features, and water quality BMPs, namely the stormwater plan and monitoring required for building permits from the Mariposa County Building Department, and the stormwater pollution prevention plan (SWPPP) required as a condition of the SWRCB’s Statewide Construction General Permit. Furthermore, the CBC contains standards for soil compaction, sediment control during construction, and re-vegetation following construction, as well as other standards. These measures, required to be implemented for the project per Mitigation Measure 4.11-2 would ensure that impacts related to erosion or loss of topsoil would be minimized through adherence to best management practices and permit requirements. Compliance with the protective provisions of existing regulations and permit conditions in the Tenaya Cabins and Silver Tip projects would
minimize erosion and its adverse consequences so that the project’s contribution to the cumulative erosion impact would be less than significant.

**Mitigation Measures**
No additional mitigation is required.

**HYDROLOGY AND WATER QUALITY**

**Cumulative impacts of water quality degradation: construction and operation**
Overall water quality in the region is very high quality. The project is located in an area with little development, and therefore there are few sources of pollution in the area.

Construction of the proposed project, as well as construction of the Silver Tip Project, would result in surface disturbance through grading, trenching, and compaction associated with typical development activities. Existing vegetation would be removed, thereby increasing the potential for erosion. Operational activities and proposed land uses (e.g., roadways, driveways) would reduce stormwater infiltration and generate atmospheric pollution, tire-wear residues, petroleum products, and oil and grease that would be carried in stormwater runoff. These constituents could enter the storm drainage system and adversely affect water quality.

Both the Tenaya Cabins Project and Silver Tip would be required to comply with federal and state water quality regulations and prepare project-specific Stormwater Pollution Prevention (SWPPP) that would include site-specific BMPs and any other necessary site-specific Waste Discharge Requirements issued by the Central Valley RWQCB. In accordance with federal and state stormwater regulations, new construction and significant redevelopment must maintain pre-project hydrology and incorporate pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through post-construction BMPs when source control or exposure protection are insufficient. Moreover, implementation of Mitigation Measures 4.11-1 and 4.11-2 would reduce the project’s contribution to the cumulative effect on water quality. Therefore, project construction and operation would mitigate site-specific water quality impacts such that the project would result in a less-than-significant cumulative impact.

**Mitigation Measures**
No additional mitigation is required.

**Cumulative impacts of depletion of groundwater supplies or interference with groundwater recharge**
The existing and planned future water demands in the Fish Camp area would rely on local groundwater, with use of some recycled water at the Tenaya Lodge, Cottages, and proposed Tenaya Cabins Project. As discussed in the groundwater supply report (Appendix I), cumulative future water demand including the project and planned Silvertip Resort is estimated to be 147.9 afy, 54.1 afy more than the existing demand. The Silvertip Resort water demand is most of this increase, at 50 afy.

In the cumulative condition, the increased water demand associated with the Tenaya Cabins project is offset by reductions in the Tenaya Lodge water uses associated with conversion of landscape irrigation to recycled water sources from the recently upgraded Tenaya Lodge wastewater treatment plant. This modification reduces Tenaya Lodge water demand by an estimated 5.6 afy, which is approximately 58 percent of the estimated project water demand. Therefore, the cumulative net increase in water demand associated with the project is 4.1 afy; 7.5 percent of the cumulative increase in demand.

The cumulative drawdown of groundwater in the fractured groundwater basin has the potential to affect groundwater elevations in existing wells. The pumping test performed for the Tenaya Cabins Project showed an apparent pumping effect on only one well, FCMWC Well 1, and therefore the project is required to
implement a well monitoring program to detect and offset any reductions in water supply availability by existing well users, specifically FCMWC Well 1. Implementation of Mitigation Measure 4.11-4 would reduce the project contribution to cumulative groundwater drawdown to a less-than-significant level.

The water budget described in Section 4.11 and Appendix I estimates a historical average annual recharge to the groundwater system of approximately 190 afy. This conservative estimate indicates that there is sufficient annual recharge to meet cumulative groundwater demands in the Fish Camp area. The cumulative impact to groundwater recharge is therefore considered less than significant.

**Mitigation Measures**

No additional mitigation is required.

**Cumulative impacts of increased surface water runoff and modification of drainage patterns**

Development of the proposed project in combination with development of the related projects would result in additional impervious surfaces, which would increase stormwater runoff. However, in accordance with federal, state, and local stormwater regulations and Mitigation Measure 4.11-3, new construction and significant redevelopment must maintain pre-project hydrology and incorporate pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through post-construction BMPs when source control or exposure protection are insufficient for reducing pollutant loads. Therefore, before any construction-related ground disturbance, final drainage plans would be required to demonstrate that all runoff would be appropriately conveyed and would not leave the project site at rates exceeding pre-project runoff conditions. Implementation of Mitigation Measure 4.11-3 would reduce the project’s contribution to cumulative stormwater runoff in the project vicinity. Therefore, the proposed project would result in a less-than-significant cumulative impact.

**Mitigation Measures**

No additional mitigation is required.

**UTILITIES AND PUBLIC SERVICES**

**Cumulative demand for water**

Existing water demand for all users in the Fish Camp area is estimated to be 93.8 afy. Water supply to meet this demand is supplied from local groundwater produced from wells owned and operated by a current total of eight individual entities, which includes water service agencies, resort and hotel operators, an educational camp, and individual domestic pumpers. There are also some properties in Fish Camp that are outside of any known water supplier service area that are also assumed to be supplied from individual domestic wells. In total, there are 15 known wells and two springs currently supplying water in Fish Camp. The estimated existing demands include all users in Fish Camp, including those users whose exact source of supply is unknown.

Cumulative groundwater demands in Fish Camp include all the existing demands (93.8 afy), plus the proposed project and the previously approved Silvertip Resort. The proposed project would add 9.7 afy and the average annual water demand for the Silvertip Resort project would be 50 afy. The conversion to recycled water for landscaping at the Tenaya Lodge would reduce water demand by 5.6 afy. Therefore, the total future cumulative demands for water in the Fish Camp area are estimated to be 147.9 afy.

In the cumulative condition, the Tenaya Cabins Project–plus–Tenaya Lodge average daily and peak day demands are slightly less than in the existing–plus–project condition due to the change to recycled water for landscape irrigation at the Lodge. The cumulative combined average daily demand for the Project and Lodge is estimated to be 49,813 gallons per day and the combined peak day demand is estimated to be 99,627 gallons per day. With pumping at a combined rate of 120 gpm, the cumulative combined average daily demand can be met by pumping for just under seven hours per day while the cumulative combined peak day
Cumulative Impacts

Ascent Environmental

Mariposa County

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Cumulative demand requires just less than 14 hours of pumping per day. This indicates that the existing Tenaya Lodge wells should be able to meet the combined demands of the Project and the Tenaya Lodge in the existing–plus–project and cumulative conditions (Appendix I). The project contribution to water demand would be less than significant.

Mitigation Measures

No mitigation is required.

Cumulative demand for wastewater treatment

The Silvertip Resort development would include onsite wastewater treatment facilities which would treat wastewater to tertiary treatment level, allowing for use of recycled water for above-ground irrigation. The project-related effluent that would be treated at the Tenaya WWTP, which has sufficient capacity to treat wastewater from the project in addition to flows from the Lodge and Cottages. In addition, the Tenaya Cabins Project would increase leach field capacity for the Tenaya WWTP to allow for appropriate disposal of treated effluent during all months of the year (Appendix J). Waste Discharge Requirements (WDRs) currently apply to the Tenaya Lodge WWTP through RWQCB Order No. 99-086. A summary of these requirements is show in Table 4.11-1 in Section 4.11, “Hydrology and Water Quality.” The Tenaya Lodge implements a testing plan to monitor onsite disposal and groundwater quality. The testing must demonstrate compliance with RWQCB WDRs. Therefore, the effluent discharge from the Tenaya WWTP is not expected to negatively impact the groundwater at the site or the surrounding areas. The wastewater from the Tenaya WWTP is of a quality standard consistent with the recycled water standards of Title 22.

The separate wastewater treatment systems at Tenaya Lodge and Silver Tip would not affect each other and would not prevent compliance with Central Valley RWQCB requirements. Further, the Fish Camp TPA does not contain a community sewer and wastewater treatment system; residents and businesses rely on septic systems. Increased levels of effluent from the Silvertip Resort and the project would not require an expansion of existing septic systems such that residents or businesses in Fish Camp would be affected. Cumulative impacts related to wastewater would be less than significant.

Mitigation Measures

No additional mitigation is required.

Cumulative demand for solid waste disposal

The Mariposa County Landfill provides county-wide solid waste services, including Fish Camp and all future developments such as the Silvertip Resort. The landfill has available capacity. Although the project and the Silvertip Resort would be responsible for an incremental contribution to overall capacity, this impact would be less-than-significant cumulative impact.

Mitigation Measures

No mitigation is required.

HAZARDOUS AND HAZARDOUS MATERIALS

Cumulative hazardous materials effects

Although some hazardous materials releases can cover a large area and interact with other releases (e.g., atmospheric contamination, contamination of groundwater aquifers), incidents of hazardous materials contamination are more typically isolated to a small geographic area. These relatively isolated areas of contamination typically do not combine in a cumulative manner with other sites of hazardous materials contamination. There are no identified incidents of widespread hazardous materials contamination or different sources of contamination interacting on a cumulative basis in the Fish Camp TPA. The Silver Tip Village Project, which would include construct new resort commercial and residential uses, similar to those identified for the proposed project, would use, transport, and store, hazardous materials. However, it would
be subject to existing federal, state, and local hazardous materials regulations, limiting the potential for releases and contamination and requiring clean-up when such events occurred. Given these conditions, there is not a significant cumulative impact related to hazardous materials.

The proposed project would result in the transport, storage, and use of hazardous materials as part of the construction and operation of the proposed project. The project would be required to comply with existing federal, state, and local hazardous materials regulations would apply, limiting the potential for releases and contamination and requiring clean-up when releases/contamination do occur. Also, as described above, interactions among multiple hazardous materials releases on a cumulative basis often require close proximity between the releases. In addition, the potential for the Tenaya Cabins Project to expose people or the environment to hazardous materials would be reduced through proper safety precautions and compliance with applicable regulations as described in Impact 4.13-1. Therefore, the project would result in a less-than-significant cumulative impact related to release or exposure to hazardous materials.

**Mitigation Measures**

No mitigation is required.

### Cumulative Impacts to Emergency Access

The geographic area for cumulative impacts related to emergency evacuation would be the Fish Camp TPA, which includes the approved Silver Tip Village Project. Highway 41 provides the emergency evacuation route for Fish Camp as well as the vehicular access route for both the approved Silver Tip Resort Project and the proposed Tenaya Cabins Project. While conditions on Highway 41 during an emergency evacuation could be congested, no known element of the Silver Tip Project or the Tenaya Cabins Project would prevent or impede evacuation, or result in physical interference with the evacuation plan such that evacuation could not occur. The cumulative impact with regard to emergency evacuation would be less than significant.

Construction of Silver Tip could overlap with construction of the Tenaya Cabins. However, traffic flow on Highway 41 during construction of the Tenaya Cabins would be maintained through implementation of a Construction Traffic Management Plan, developed in coordination with Mariposa County and Caltrans. Furthermore, construction staging would occur on the project site and the site plan includes a primary access road and secondary emergency access, providing sufficient egress in the event of an emergency evacuation. Therefore, the Tenaya Cabins Project would result in a less-than-significant cumulative impact on emergency evacuation.

**Mitigation Measures**

No mitigation is required.

### Cumulative Wildfire Hazard

The Fish Camp TPA, including the Tenaya Cabins project site, is within a very high fire hazard severity zone (CAL FIRE 2007). Past fires in Mariposa County have resulted in loss of life, substantial losses of property, and significant damage to habitat and environmental resources. Historic fire suppression and other forest land management practices have caused fuels to accumulate in many areas, contributing to the severity of wildfire when they do occur. Additionally, past development in the forested landscape has increased the risk of life and property when fires do occur, as well as increased the potential for ignition of wildland fires through increased human presence and activity. Development pursuant to the Fish Camp TPA Specific Plan and the approved Silver Tip Village Resort could result in additional risk of fire and the placement of additional people and structures in a very high fire hazard area. Therefore, the cumulative wildfire hazard is considered significant.

Construction and operation of the Tenaya Cabins Project would adhere to fire protection policies to reduce the risk of wildfire; however, the project would introduce people and structures to an area with a very high risk of wildland fire and level of service by the Mariposa County Fire Department could be a concern. As required by Mitigation Measure 4.13-3, Delaware North would provide additional fire protection through
supplementing the existing staff of the Company 33 Station in Fish Camp. Therefore, with the planned onsite fire hydrants, fire water storage, emergency access, and implementation of Mitigation Measure 4.13-3, the project’s contribution to the cumulative wildfire hazard would be reduced to a **less-than-significant** level.

**Mitigation Measures**
No additional mitigation is required.

**VISUAL RESOURCES**
The cumulative context for the evaluation of visual resource impacts is the existing Fish Camp TPA and potential future development within the TPA: the approved Silver Tip Resort Village on the western side of Highway 41. Since adoption of the Fish Camp TPA Specific plan in 1983, the 280-acre TPA area has experienced conversion from strictly forested area to mixed residential and resort area. However, the rural rustic aesthetic character of the area is valued by residents and visitors. The TPA includes resort commercial and residential development, which are visible from travelers on Highway 41. The Silver Tip Project would result in additional resort commercial development within the TPA, some of which will involve buildings up to 45-feet in height. Although the project area has experienced development and alteration of forested lands, development has occurred consistent with the Fish Camp TPA Specific Plan and County General Plan. Therefore, the existing cumulative visual resource impact in the Fish Camp TPA is considered to be less than significant.

As described in Impacts 4.14-1 and 4.14-2, the addition of the Tenaya Cabins Project to the Fish Camp TPA would somewhat increase the built elements of the environment as observed from Highway 41 and surrounding properties. However, the cabins, clubhouse, and residence would be mostly screened by the existing natural features of the site; would be designed with materials to blend with the site and reduce glare; would be consistent with the Fish Camp TPA development standards; and would minimize and shield night lighting. Furthermore, the resort commercial and residential project would be consistent with the existing character of Fish Camp. While the project would change the visual character of site, the overall view of the project site in the context of views available along Highway 41 would not substantially differ from the other residential and resort development in the area. Therefore, the project’s cumulative visual impact would be **less than significant**.

**Mitigation Measures**
No mitigation is required.
6 ALTERNATIVES ANALYSIS

6.1 INTRODUCTION

The California Code of Regulations (CCR) Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe “...a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.” This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the “no project” alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR “...shall also identify an environmentally superior alternative among the other alternatives.” (CCR Section 15126[e][2]).

In defining “feasibility” (e.g., “...feasibly attain most of the basic objectives of the project ...”), CCR Section 15126.6(f) (1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project’s significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of “potentially feasible” alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency’s decision-making body, here the Mariposa County Board of Supervisors (Board). (See PRC Sections 21081.5, 21081[a] [3].)
6.2 CONSIDERATION FOR SELECTION OF ALTERNATIVES

6.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objective(s) of the project (CCR Section 15126.6[a]). Chapter 3, “Project Description,” articulates the following Tenaya Cabin Project objectives:

The objectives of the proposed Tenaya Cabins Project are (1) to provide a more rustic lodging option for guests with the conveniences of a resort while allowing them to experience the natural beauty of the Sierra National Forest area in a minimally-developed setting and (2) to subdivide the project site to allow for a potential future residence for the property owner.

6.2.2 Environmental Impacts of the Tenaya Cabins Project

Chapter 4 of this Draft EIR addresses the environmental impacts of implementation of the Tenaya Cabins Project. Potentially feasible alternatives were developed with consideration of avoiding or lessening the significant adverse impacts of the project, as identified in Chapter 4 of this Draft EIR, and summarized below. No significant and unavoidable environmental impacts have been identified.

- **Biological Resources:** Project construction could result in adverse effects on nesting special-status bird species (five special-status bird species that have a moderate or higher potential to forage within the project site; of these, only olive-sided flycatcher and Vaux’s swift are likely to nest on the project site); mortality or disturbance of den sites for fisher; disturbance or destruction of roosts for special-status bat species; or adverse effects on Yosemite toad. In addition, the project could have adverse effects on sensitive habitats (jurisdictional wetlands and aquatic habitat). Mitigation has been recommended to avoid, reduce, and compensate for these impacts (Mitigation Measures 4.4-3 through 4.4-7), thereby reducing biological resources impacts to a *less-than-significant* level.

- **Cultural Resources:** Construction-related ground-disturbing activities could cause a substantial change in the significance of an as-yet-undiscovered archaeological resource, could unearth previously undiscovered or unrecorded human remains, or could adversely affect a tribal cultural resource identified by the Picayune Rancheria of the Chukchansi Indians. Mitigation Measures 4.5-1, 4.5-2, and 4.5-4 have been recommended to reduce these impacts to a *less-than-significant* level.

- **Greenhouse Gas Emissions and Climate Change:** The project as proposed would not be supportive of some of the state’s Scoping Plan goals of reducing GHG emissions to 1990 levels by 2020. Mitigation Measure 4.8-2 has been recommended to implement project specific measures to support the statewide Scoping Plan goals, which would reduce this impact to a *less-than-significant* level.

- **Noise:** Construction of the project would involve the use of heavy-duty construction equipment, which could increase ambient noise levels for off-site receptors. Operation of the Tenaya Cabins Project includes the use of amplified sound for events at the clubhouse as well as an emergency generator (to be used during power outages), which could result in exposure of sensitive receptors to noise that exceeds the County’s standards. Mitigation Measures 4.9-2 and 4.9-4 have been recommended to ensure that the project complies with noise standards and restricts construction noise to daytime hours, which would reduce these impacts to a *less-than-significant* level.

- **Geology, Soils, and Seismicity:** Project construction would involve grading and trenching activities that could increase the potential for soil erosion because of vegetation removal, soil disturbance, and soil compaction. Mitigation Measure 4.11-1 (in Hydrology and Water Quality) would ensure that a stormwater pollution prevention plan (SWPPP) is implemented to implement stormwater controls and water quality BMPs, which would reduce this impact to *less than significant*.
Hydrology and Water Quality: Project construction would involve grading and trenching activities that could increase the potential for soil erosion because of vegetation removal, soil disturbance, and soil compaction. Mitigation Measure 4.11-1 would ensure that a stormwater pollution prevention plan (SWPPP) is implemented to implement stormwater controls and water quality BMPs, which would reduce this impact to less than significant.

Conversion of undeveloped land to developed resort commercial and residential use for the Tenaya Cabins Project would alter the types, quantities, and timing of contaminant discharges in stormwater runoff. This could contribute to the long-term degradation of local surface and groundwater if the project is not properly designed and implemented. Mitigation Measure 4.11-2 has been proposed to reduce the project’s operational water quality impacts to a less-than-significant level through implementation of permanent stormwater controls and water quality BMPs.

Implementation of the Tenaya Cabins Project would result in the development of new impervious surfaces such as structures and roadways, leading to an increased potential for stormwater runoff. In addition, the project may decrease in the permeability of uncovered surfaces as a result of compaction. Therefore, the project could reduce infiltration and increase the peak flow and volume of surface runoff. Mitigation Measure 4.11-3 has been proposed to reduce post-project runoff to pre-project conditions and ensure that the project would not result in an increase in surface runoff that would result in erosion, siltation, or offsite flooding, or cause the capacity of stormwater drainage systems to be exceeded. This would reduce post-project runoff impacts to a less-than-significant level.

The water supply for the project would draw additional groundwater from the existing Tenaya Cabins wells to serve the Tenaya Cabins, which could result in drawdown of in neighboring wells, in particular FCMWC Well 1. Mitigation Measure 4.11-4 requires monitoring to identify potential drawdown of FCMWC Well 1. If triggered as a result of the FCMWC Well 1 monitoring program, DN shall implement water demand management measures at the Tenaya Cabins, Tenaya Lodge, and Tenaya Cottages to allow for recovery of the production capacity of FCMWC Well 1. These measures would reduce the potential impact to productivity of the FCMWC Well 1 to a less-than-significant level.

Hazards and Hazardous Materials: Although construction and operation of the project would adhere to CAL FIRE and Mariposa County fire protection policies, the project would introduce people and structures to an area with a very high risk of wildland fire and level of service by the Mariposa County Fire Department could be a concern. Mitigation Measure 4.13-3 would reduce this impact to less than significant by providing supplementary staff at Fish Camp fire station to ensure responders are present.

6.3 ALTERNATIVES CONSIDERED AND NOT EVALUATED FURTHER

State CEQA Guidelines Section 15126.6(c) provides the following guidance in selecting a range of reasonable alternatives for the project. The range of potential alternatives for the project shall include those that could feasibly accomplish the project objective, and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR. (In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143, 1165-1167.)

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project’s significant environmental effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a).

Although, as noted above, EIRs must contain a discussion of “potentially feasible” alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency’s decision-making body. (See Pub. Resources Code, § 21081(a)(3).) At the time of action on the project, the decision-making body may consider evidence beyond that found in this EIR in addressing such determinations. The decision-making body, for example, may conclude that a particular alternative is infeasible (i.e., undesirable)
from a policy standpoint, and may reject an alternative on that ground provided that the decision-making body adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence. (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 998.)

The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency’s determination.

**ALTERNATIVE VEHICULAR ACCESS**

The applicant considered alternative vehicular access from the existing Tenaya Lodge, which would avoid an additional intersection with Highway 41. However, this was determined to be infeasible due to the steep topography between the existing Lodge and the project site. In addition, potentially jurisdictional wetlands have been identified between the Lodge and the project site; constructing a roadway to County requirements would result in greater impacts to sensitive wetland habitats and water quality than the proposed project. Furthermore, this alternative would not reduce traffic on Highway 41, and all project-related traffic and roadway safety impacts would be less than significant (no mitigation required). Therefore, vehicular access through the Tenaya Lodge was removed from consideration.

**ALTERNATIVE PROJECT SITE**

The applicant did not consider an alternative project site because the project objective is to provide Tenaya Lodge guests with a more rustic lodging option. The project would therefore need to be associated with the Tenaya Lodge and be owned by Delaware North. There are no other properties adjacent to the Tenaya Lodge and within the Fish Camp TPA that are owned by Delaware North or that would be available for purchase.

**6.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS**

Alternatives evaluated in this Draft EIR are:

- **Alternative 1: No Project – No Development Alternative**, which assumes no new development occurs on the project site.

- **Alternative 2: No Project – Fish Camp Town Planning Area Specific Plan Alternative, 1-acre Lots**, which assumes development in accordance with existing land use designations and zoning under the Fish Camp Specific Plan (single family residential with one-acre lots). With consideration of environmental site constraints, this would include up to 20 single-family residential lots with up to 20 secondary units, and associated infrastructure.

- **Alternative 3: No Project – Fish Camp Town Planning Area Specific Plan Alternative, 1/2-acre Lots**, which assumes an amendment to the General Plan and Fish Camp TPA Specific Plan to change the land use designation for the project site from single-family residential with one acre lots to single-family residential with half-acre lots. This alternative then assumes development of residential on the half-acre lots in accordance with the Fish Camp TPA Specific Plan. With consideration of environmental site constraints, this would include up to 40 single-family residential lots with up to 40 secondary units and associated infrastructure.

- **Alternative 4: Reduced Density Alternative (34 Units)**, which assumes the same project as proposed, with resort commercial on Parcel 1 and a half-acre residential parcel; however, this alternative would have a reduced number of cabins.
When considering the number of alternatives in this EIR, the discussion included at the beginning of the alternatives section is revisited here:

An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. (CEQA Guidelines Section 15126.6(a))

The analysis in Chapters 4 and 5 of this Draft EIR thoroughly consider the impacts of the project and the project plus cumulative development. All of the impacts of the project can be reduced to a level that is less-than-significant via mitigation, as discussed in Section 6.2.2. None of the significant impacts are uniquely controversial; all issues raised effectively address the specific location of the site and avoidance of significant impacts. Thus, there is not a wide range of potential alternatives to the project that would reduce impacts that are already reduced through mitigation. Consequently, three alternatives are considered here, and this is considered a reasonable range given the locational requirements for the project (see Section 6.3), CEQA requirements, and the lack of unmitigable effects. These alternatives are described in comparison to the proposed Tenaya Cabins Project. Where construction, operation, physical characteristics, phasing, and other features would remain the same as the proposed project, the reader is directed to the details in Chapter 3, “Project Description.” The alternatives then focus on describing the elements that differ from the proposed project.

With regard to the no project alternatives, the State CEQA Guidelines provide specific requirements. CCR Section 15126.6(e) (1) requires that the no project alternative be described and analyzed “to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project.” The no project analysis is required to discuss “the existing conditions at the time the notice of preparation is published...as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” (Section 15126.6[e][2]). “If the project is... a development project on identifiable property, the ‘no project’ alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this ‘no project’ consequence should be discussed. In certain instances, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.” (Section 15126[e][3][B].) For purposes of this analysis, therefore, two “no project” alternatives described above were analyzed consistent with the two potential “no project” scenarios described in State CEQA Guidelines Section 15126.6[e][3][B].

6.4.1 Alternative 1: No Project – No Development Alternative

Under Alternative 1, the No Project – No Development Alternative, no actions would be taken and the project site would remain unchanged from current conditions, undeveloped forested land. Although the existing Fish Camp Town Planning Area Specific Plan allows for development of residential uses on the project site, this alternative assumes that no development would occur and the site would remain undeveloped forested land. The No Project – No Development Alternative would not meet the project objective. However, as required by CEQA, the No Project – No Development Alternative is evaluated in this Draft EIR.

LAND USE AND FOREST RESOURCES

Alternative 1, the No Project – No Development Alternative, would not alter the present or planned land use of the project site. As undeveloped forested land, it would not divide the established community of Fish
Camp, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the Fish Camp TPA Specific Plan and Mariposa County General Plan). Compatibility with adjacent land uses (Tenaya Lodge and single-family residential parcels) would not change. The No Project – No Development Alternative would not result in conversion of forest land or loss of trees. Overall, Alternative 1 would avoid the less-than-significant land use and forestry impacts of the project and impacts under this alternative would be less than those that would occur with the project. (Less)

**BIOLOGICAL RESOURCES**

Under Alternative 1, the No Project – No Development Alternative, no ground-disturbing activities would occur. Therefore, existing biological communities on the project site would be preserved in their current undeveloped condition and removal of special-status animal species and sensitive biological communities would not occur. The mitigable significant impacts identified for the proposed project would not occur, and no mitigation would be required under Alternative 1. Overall, biological resource impacts under this alternative would be less than those that would occur with the project. (Less)

**CULTURAL RESOURCES**

Under Alternative 1, the No Project – No Development Alternative, no earthwork or ground-disturbing activities would occur. There would be no potential for disturbance to undiscovered human remains or archaeological resources. This alternative would avoid the project’s potentially significant impacts to these resources, and no mitigation would be required under Alternative 1. Cultural resource impacts under this alternative would be less than those that would occur with the project. (Less)

**TRANSPORTATION AND CIRCULATION**

Alternative 1, the No Project – No Development Alternative, would not generate new visitors, residents, or jobs in Fish Camp. As such, traffic on Highway 41 would not increase above existing levels. This alternative would have no temporary construction impacts or operational impacts to roadway safety or capacity and would avoid the project’s less-than-significant traffic impacts. Impacts under this alternative would be less than those that would occur with the project. (Less)

**AIR QUALITY**

Under Alternative 1, the No Project – No Development Alternative, no earthwork or ground-disturbing activities would occur, nor would any associated vehicle trips or operation of stationary sources of emissions. The project site would remain undeveloped forest and would not increase emissions in the air basin. The less-than-significant construction and operation-related impacts identified for the proposed project would not occur. Air quality impacts under this alternative would be less than those that would occur with the project. (Less)

**GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE**

Under Alternative 1, the No Project – No Development Alternative, the project site would remain undeveloped forested land. Because no construction or operation of development would occur, this alternative would avoid the mitigable project-related emissions of GHGs and would not contribute to climate change. (Less)

**NOISE**

Under Alternative 1, the No Project – No Development Alternative, no construction activities would take place and there would be no increases in short-term construction-related noise. No increase in traffic noise or operational noise would occur, and no new sensitive receptors would be placed in proximity of Highway 41.
or new stationary noise sources. This alternative would avoid the mitigable impacts related to construction and stationary noise sources, and no mitigation would be required. (Less)

GEOLOGY, SOILS, AND SEISMICITY

Because no development would occur under Alternative 1, it would have no impact associated with geological hazards or soil erosion. Existing seismic hazards would remain, but this alternative would not create any conditions that would increase the risks to people, structures, or the environment. The mitigable erosion impact identified for the proposed project would not occur, and no mitigation would be required under Alternative 1. The geology, soils, and seismicity impacts under this alternative would be less than those that would occur with the project. (Less)

HYDROLOGY AND WATER QUALITY

Under Alternative 1, no construction or soil disturbance would occur; therefore, there would be no change in runoff conditions and soil erosion. This alternative would not require additional groundwater from existing Tenaya Lodge wells, which would access the fractured groundwater basin and result in potentially significant impacts. While mitigation is available to reduce this impact to a less-than-significant level under the proposed project, the impact would be avoided under the No Project – No Development Alternative. The No Project – No Development would avoid all changes to site hydrology and associated water quality impacts, and no mitigation would be required. (Less)

UTILITIES AND PUBLIC SERVICES

Under Alternative 1, the No Project – No Development Alternative, no construction of new utility lines would be necessary and there would be no new demand for utility capacity. In particular, this alternative would avoid additional demands for groundwater and wastewater treatment. Furthermore, because there would be no new population and the project site would remain undeveloped forested land, this alternative would have no impact on demand for public services. This alternative would avoid the project’s potentially significant but mitigable impact related to an increase demand for fire protection and emergency medical services. Overall, the No Project – No Development Alternative would result in less utility and public service impacts compared to the project. (Less)

HAZARDS AND HAZARDOUS MATERIALS

Under Alternative 1, the No Project – No Development Alternative, there would be no use of hazardous materials onsite for construction or operations, as the site would remain undeveloped forested land. This alternative would avoid placing people and structures in an area with very high wildfire risk. Although the project would be designed to be protective of human health and would include mitigation measures to reduce these impacts to less-than-significant levels, the No Project – No Development Alternative would avoid any potential impacts to public health and safety related to hazardous materials or hazards, and no mitigation would be required. (Less)

VISUAL RESOURCES

Under Alternative 1, the No Project – No Development Alternative, there would be no alteration of the visual quality or character of the project site. Views of the project site from surrounding vantage points would not change, and no new sources of light and glare would be created. The No Project – No Development Alternative would avoid the less-than-significant impacts associated with the visual character of the site and sources of new light and glare. Overall, impacts under this alternative would be less than those that would occur with the project. (Less)
6.4.2 Alternative 2: No Project - Fish Camp Town Planning Area Specific Plan
Alternative, 1-acre Lots

Alternative 2 would involve development in accordance with the existing Fish Camp TPA Specific Plan land use designations for the project site. The site is zoned single family residential with one acre lots (SRF – 1 acre), which would allow for up to 26 units on Assessor’s parcel number 010-350-008. However, the development of residential units would be constrained by the identified environmental site constraints: Rainbow Lake, the Big Creek flood zone, and the wetlands at the southern end of the project site. Based on Table 4.4-1 and Exhibit 4.4-1 in Section 4.4, “Biological Resources of this Draft EIR, streams, wetlands, and other sensitive habitats account for 3.73 acres and the majority of the project site (22.52 acres) is currently undeveloped forest lands. Assuming that residential development would be focused on the undeveloped forested lands, it is assumed that approximately 20 one-acre residential lots would be possible, as shown on Exhibit 6-1. In addition, each of those residences could have a secondary unit, resulting in a maximum buildout of 40 units, although given typical development patterns, second units would be expected to be few. The remaining upland acreage would be required to develop associated infrastructure, including roads, utility connections and capacity, and public services. It is assumed that a single entry to/from Highway 41 would be constructed with a roadway looping through the site to provide access to the lots, as well as a secondary emergency access connection to Highway 41.

LAND USE AND FOREST RESOURCES

Alternative 2, the No Project – Fish Camp Specific Plan Alternative, would not alter the present or planned land use of the project site. Development of residential units consistent with the existing zoning and Fish Camp TPA Specific Plan would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the Fish Camp Specific Plan and Mariposa County General Plan). Compatibility with adjacent land uses would not change. Alternative 2 would result in conversion of forest land or loss of trees, similar to what would occur with the proposed project; however, clearing and roadway connections for 20 lots and up to 40 units may require greater tree removal than the proposed project. Therefore, Alternative 2 may not maintain at least 10 percent forest cover, as would remain under the project. Overall, land use impacts under this alternative would be less than those that would occur with the project because no land use designations would be changed, but tree loss and forest impacts may be greater. (Less-Land use, Greater-Forestry)

BIOLOGICAL RESOURCES

Construction and operation of Alternative 2, would affect the same development site as the proposed project, affecting the same habitat types and species as the project. Alternative 2 would alter undeveloped forested land, and would result in similar biological resources impacts to special-status bird species, special-status bat species, Yosemite toad, and sensitive habitats (jurisdictional wetlands and aquatic habitat). Similar to the proposed project, mitigation would be recommended to avoid, reduce, and compensate for these impacts, thereby reducing biological resources impacts to a less-than-significant level. (Similar)

CULTURAL RESOURCES

Implementation of Alternative 2 would affect the same development site as the proposed project, and the footprint of ground disturbance would be similar or possibly greater to provide clearing and roadway connections for all lots and units. Construction and excavation activities associated with this alternative could unearth previously undiscovered or unrecorded human remains or archaeological resources, if they are present. Like the proposed project, mitigation would be available to reduce this impact. Therefore, the impacts of this alternative on cultural resources would be similar to the proposed project. (Similar)
Exhibit 6-1  
Alternative 2: No Project - Fish Camp Town Planning Area Specific Plan Alternative, 1-acre Lots
TRANSPORTATION AND CIRCULATION

Alternative 2, would generate new residents in Fish Camp. Based on the ITE trip rate of 9.52 utilized for the project’s single family residence (ITE 210, see Table 4.6-6), the estimated daily trip generation for 20 to 40 units would be 190 to 380 daily trips. However, second units may be limited and many of the residences could be second (vacation) homes. Alternative 2’s trip generation would be less than the project’s generation of 451 daily trips. As with the project, the vehicle trips under Alternative 2 would utilize Highway 41, necessitating the same intersection improvements as the proposed project to address safety concerns at the ingress/egress from Highway 41 and resulting in the same additional less-than-significant traffic volumes on Highway 41. Traffic impacts under Alternative 2 would be less than those that would occur with the project and would not require mitigation. (Less)

AIR QUALITY

Alternative 2 would require construction activities similar to the proposed project to develop residential units and infrastructure. Alternative 2 would result in fewer units than the proposed project, which would result in lesser long-term energy usage and lesser associated emissions. In addition, Alternative 2 would result in an estimated 190 to 380 daily trips vehicle trips associated with new residential units, which is less than the proposed project. Therefore, Alternative 2 would result in similar less-than-significant short-term air emissions, and lesser long-term air emissions, due to reduced energy usage and vehicle trips, without the need for mitigation. (Less)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Alternative 2 would require earthwork and ground-disturbing activities similar to the proposed project to construct residential units and infrastructure. Alternative 2 would result in fewer units than the proposed project, which would result in lesser long-term energy usage and lesser associated emissions. Alternative 2 would also result in an estimated 190 to 380 daily trips vehicle trips associated with new residential units, which would be less than the proposed project. Therefore, Alternative 2 would result in less GHG emissions, with no mitigation required. (Less)

NOISE

The development of residential units under Alternative 2 would result in lesser traffic and operational noise than the proposed project. However, Alternative 2 may place new sensitive receptors in closer proximity of Highway 41. However, Alternative 2 would not introduce the use of amplified sound for events, as would occur at the clubhouse under the proposed project, and would avoid that mitigable project impact. Construction activities for Alternative 2 would result in similar construction noise impacts, and could result in construction noise closer to sensitive receptors as residential units are built-out across the project site. Alternative 2 would therefore implement the same mitigation to reduce construction noise to a less-than-significant level. Because Alternative 2 would not involve amplified sound, it would be expected to result in less operational noise than the proposed project. (Less)

GEOLOGY, SOILS, AND SEISMICITY

Like the proposed project Alternative 2 would result in grading and trenching that could result in soil erosion due to vegetation removal, soil disturbance, and soil compaction. Like the proposed project, mitigation would reduce the erosion impacts to a less than significant level. Existing seismic hazards would be the same for the residential units as for the project’s proposed cabins, but like the project, residences would be built according to building codes and would not increase the risks to people, structures, or the environment. The geology, soils, and seismicity impacts under this alternative would be similar than those that would occur with the project. (Similar)
HYDROLOGY AND WATER QUALITY

Similar to the proposed project, development under Alternative 2 would alter runoff conditions and soil erosion. Alternative 2 would be required to implement a SWPPP during construction as well as operational stormwater facilities and water quality BMPs to reduce potentially significant drainage, erosion, and water quality impacts to less-than-significant levels. This alternative would also require water to serve the residences, which would be expected to come from groundwater from the fractured groundwater basin. Because the residences may not be served by existing groundwater wells, and may be served by a number of individual wells, Alternative 2 could result in greater impacts associated with groundwater drawdown and appropriate siting of groundwater wells. Additional mitigation may be required to ensure proper siting of wells, while mitigation to monitor surrounding wells for potential drawdown may also be required, similar to the proposed project. Alternative 2 could also result in greater water quality impacts due to wastewater treatment and disposal. The residential units in Alternative 2 would either need septic systems (which are likely infeasible due to lot size restrictions) or a new wastewater treatment plant unless private agreements could be made with the Tenaya Lodge for sewer connections and treatment at the Tenaya Lodge WWTP. The potential for development of septic systems or new treatment facilities would result in greater impacts due to additional construction, ground disturbance, and possible effluent discharge water quality concerns, particularly with septic systems located adjacent to Big Creek as well as the fractured groundwater basin, which is the source of potable water for the region. Mitigation would be imposed requiring sufficient wastewater treatment capacity and disposal in compliance with Central Valley RWQCB requirements. Overall, Alternative 2 could potentially result in greater hydrology and water quality impacts than the proposed project. (Greater)

UTILITIES AND PUBLIC SERVICES

Like the proposed project, it is assumed that groundwater would be used to serve water for residences under Alternative 2. Because the unit count would be similar to the proposed project, the demand for water may be similar to the project. However, because the residences may not be served by existing groundwater wells, Alternative 2 could result in greater impacts associated with groundwater drawdown and appropriate siting of groundwater wells. Additional mitigation may be required to ensure proper siting of wells, while mitigation to monitor surrounding wells for potential drawdown may also be required. Impacts related to water demand would be greater than the proposed project. (Greater)

Septic systems or a new wastewater treatment facility would be necessary to serve the residences, unless private agreements could be made with the Tenaya Lodge for sewer connections and treatment at the Tenaya Lodge WWTP. The potential for development of septic systems or new treatment facilities would result in greater impacts due to additional construction, ground disturbance, and possible effluent discharge water quality concerns, particularly with septic systems located adjacent to Big Creek as well as the fractured groundwater basin, which is the source of potable water for the region. Mitigation would be imposed requiring sufficient wastewater treatment capacity and disposal in compliance with Central Valley RWQCB requirements. (Greater)

Demand for public services would be greater than the proposed project. Although the total unit count would be less (up to 40 units versus 54 units), the units could support permanent residences rather than resort-commercial lodging. This would result in greater population growth in Fish Camp and demand on schools and public services that would not occur with the project. Furthermore, police and fire protection services may be greater for residential units because the private security and additional volunteer fire staff that the project would receive from the Tenaya Loge would not be available for the private homes. (Greater)

HAZARDS AND HAZARDOUS MATERIALS

Alternative 2, the No Project – Fish Camp Specific Plan Alternative, would result in development of residential units in the same location as the proposed project. The existing seismic, flood, and wildfire hazards would be the same as the proposed project. In addition, residential units would utilize the same
potential hazardous household materials as the proposed cabins and clubhouse. As with the proposed project, hazardous materials regulations would be followed, fire safe measures would be implemented, development would not be allowed in the floodplain (100-year flood zone), and development would be built according to applicable building standards and county regulations. Alternative 2 would be required to mitigate fire protection response with additional staff at the Fish Camp fire station, similar to the proposed project. (Similar)

VISUAL RESOURCES

Alternative 2 would introduce development on the currently undeveloped project site, similar to the proposed project. Residential units would not have the same consistent architectural design or treatments as the proposed project. The location of residences on multiple lots on the project site would also require tree and vegetation removal. Alternative 2 would therefore alter the visual quality and character of the project site. The residences would also introduce new sources of light and glare. Views of the project site from surrounding vantage points and Highway 41 would change, but development would be similar in scale to the residential and resort commercial development present in Fish Camp. Overall, visual impacts under this alternative would be similar to the less-than-significant visual impacts due to the project. (Similar)

6.4.3 Alternative 3: No Project - Fish Camp Town Planning Area Specific Plan
Alternative, 1/2-acre Lots

Alternative 3 would include an amendment to the General Plan and Fish Camp TPA Specific Plan to change the land use designation for the project site from single-family residential with one-acre lots to single-family residential with half-acre lots, which would allow for up to 52 units on Assessor’s parcel number 010-350-008. However, the development of residential units would be constrained by the identified environmental site constraints: Rainbow Lake, the Big Creek flood zone, and the wetlands at the southern end of the project site. Based on Table 4.4-1 and Exhibit 4.4-1 in Section 4.4, “Biological Resources of this Draft EIR, streams, wetlands, and other sensitive habitats account for 3.73 acres and the majority of the project site (22.52 acres) is currently undeveloped forest lands. Assuming that residential development would be focused on the undeveloped forested lands, it is assumed that 37 half-acre residential lots would be possible, as shown on Exhibit 6-2. In addition, each of those residences could have a secondary unit, resulting in a maximum buildout of 74 units, although given typical development patterns, second units would be expected to be few. The remaining upland acreage would be required to develop associated infrastructure, including roads, utility connections and capacity, and public services. It is assumed that a single entry to/from Highway 41 would be constructed with a roadway looping through the site to provide access to the lots, as well as a secondary emergency access connection to Highway 41.

LAND USE AND FOREST RESOURCES

Alternative 3 would alter the land use of the project site, changing the designation from single-family residential on one-acre lots to single-family residential on half-acre lots. Development of residential units consistent with the Fish Camp TPA Specific Plan would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the Fish Camp Specific Plan and Mariposa County General Plan). Compatibility with adjacent land uses would not change. Alternative 3 would result in conversion of forest land or loss of trees, similar to what would occur with the proposed project; however, clearing and roadway connections for 37 lots and up to 74 units may require greater tree removal than the proposed project. Therefore, Alternative 3 may not maintain at least 10 percent forest cover, as would remain under the project. Overall, land use impacts under this alternative would be less than those that would occur with the project because no land use designations would be changed, but tree loss and forest impacts may be greater. (Less-Land use, Greater-Forestry)
Exhibit 6-2

Alternative 3: No Project - Fish Camp Town Planning Area Specific Plan Alternative, 1/2-acre Lots
BIOLGICAL RESOURCES

Construction and operation of Alternative 3 would affect the same development site as the proposed project, affecting the same habitat types and species as the project. Alternative 3 would alter undeveloped forested land, would result in similar biological resources impacts to special-status bird species, special-status bat species, Yosemite toad, and sensitive habitats (jurisdictional wetlands and aquatic habitat). Similar to the proposed project, mitigation would be recommended to avoid, reduce, and compensate for these impacts, thereby reducing biological resources impacts to a less-than-significant level. (Similar)

CULTURAL RESOURCES

Implementation of Alternative 3 would affect the same development site as the proposed project, and the footprint of ground disturbance would be similar or possibly greater to provide clearing and roadway connections for all lots and units. Construction and excavation activities associated with this alternative could unearth previously undiscovered or unrecorded human remains or archaeological resources, if they are present. Like the proposed project, mitigation would be available to reduce this impact. Therefore, the impacts of this alternative on cultural resources would be similar to the proposed project. (Similar)

TRANSPORTATION AND CIRCULATION

Alternative 3, would generate new residents in Fish Camp. Based on the ITE trip rate of 9.52 utilized for the project’s single family residence (ITE 210, see Table 4.6-6), the estimated daily trip generation for 37 to 74 units would be 352 to 704 daily trips. However, second units may be limited and many of the residences could be second (vacation) homes. Depending on the number of secondary units, Alternative 3’s trip generation would be similar or greater than the project’s generation of 451 daily trips. As with the project, the vehicle trips under Alternative 3 would utilize Highway 41, necessitating the same intersection improvements as the proposed project to address safety concerns at the ingress/egress from Highway 41 and resulting in the same additional less-than-significant traffic volumes on Highway 41. Traffic impacts under Alternative 3 would be similar to those that would occur with the project and would not require mitigation. (Similar)

AIR QUALITY

Alternative 3 would require construction activities similar to the proposed project to develop residential units and infrastructure. Alternative 3 would result in a similar or greater number units than the proposed project, depending on the number of secondary units constructed, which would result in similar or greater long-term energy usage and associated emissions. In addition, Alternative 3 would result in an estimated 352 to 704 daily trips vehicle trips associated with new residential units, which is similar or greater than the proposed project. Therefore, Alternative 3 would result in similar less-than-significant short-term air emissions, and similar long-term air emissions. Although the emissions could be greater due to the possibility for up to 74 units, it is anticipated that the emissions would remain below thresholds without the need for mitigation. (Similar/Greater)

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Alternative 3 would require earthwork and ground-disturbing activities similar to the proposed project to construct residential units and infrastructure. Alternative 3 would result in a similar or greater number units than the proposed project, depending on the number of secondary units constructed, which would result in similar or greater long-term energy usage and associated emissions. Alternative 3 would also result in an estimated 352 to 704 daily trips vehicle trips associated with new residential units, similar or greater than the proposed project. Therefore, Alternative 3 would result in similar or greater GHG emissions; however, it is anticipated that the emissions would remain below thresholds without the need for mitigation. (Similar/Greater)
NOISE

The development of residential units under Alternative 3 would increase traffic and operational noise in the area and new sensitive receptors would be placed in proximity of Highway 41. However, Alternative 3 would not introduce the use of amplified sound for events, as would occur at the clubhouse under the proposed project and would avoid that mitigable impact. Construction activities for Alternative 3 would result in similar construction noise impacts, and could result in construction noise closer to sensitive receptors as residential units are built-out across the project site. Alternative 3 would therefore implement the same mitigation to reduce construction noise to a less-than-significant level. Because Alternative 3 would not involve amplified sound, it would be expected to result in less operational noise than the proposed project. (Less)

GEOLOGY, SOILS, AND SEISMICITY

Like the proposed project, Alternative 3 would result in grading and trenching that could result in soil erosion due to vegetation removal, soil disturbance, and soil compaction. Like the proposed project, mitigation would reduce the erosion impacts to a less than significant level. Existing seismic hazards would be the same for the residential units as for the project’s proposed cabins, but like the project, residences would be built according to building codes and would not increase the risks to people, structures, or the environment. The geology, soils, and seismicity impacts under this alternative would be similar than those that would occur with the project. (Similar)

HYDROLOGY AND WATER QUALITY

Similar to the proposed project, development under Alternative 3 would alter runoff conditions and soil erosion. Alternative 3 would be required to implement a SWPPP during construction as well as operational stormwater facilities and water quality BMPs to reduce potentially significant drainage, erosion, and water quality impacts to less-than-significant levels. This alternative would also require water to serve the residences, which would be expected to come from groundwater from the fractured groundwater basin. Because the residences may not be served by existing groundwater wells, and may be served by a number of individual wells, Alternative 3 could result in greater impacts associated with groundwater drawdown and appropriate siting of groundwater wells. Additional mitigation may be required to ensure proper siting of wells, while mitigation to monitor surrounding wells for potential drawdown may also be required, similar to the proposed project. Alternative 3 could also result in greater water quality impacts due to wastewater treatment and disposal. The residential units in Alternative 3 would either need septic systems (which are likely infeasible due to lot size restrictions) or a new wastewater treatment plant unless private agreements could be made with the Tenaya Lodge for sewer connections and treatment at the Tenaya Lodge WWTP. The potential for development of septic systems or new treatment facilities would result in greater impacts due to additional construction, ground disturbance, and possible effluent discharge water quality concerns, particularly with septic systems located adjacent to Big Creek as well as the fractured groundwater basin, which is the source of potable water for the region. Mitigation would be imposed requiring sufficient wastewater treatment capacity and disposal in compliance with Central Valley RWQCB requirements. Overall, Alternative 3 could potentially result in greater hydrology and water quality impacts than the proposed project. (Greater)

UTILITIES AND PUBLIC SERVICES

Like the proposed project, it is assumed that groundwater would be used to serve water for residences under Alternative 3. Because the unit count would be similar or greater than the proposed project, the demand for water could be greater than the project. However, because the residences may not be served by existing groundwater wells, Alternative 3 could result in greater impacts associated with groundwater drawdown and appropriate siting of groundwater wells. Additional mitigation may be required to ensure proper siting of wells, while mitigation to monitor surrounding wells for potential drawdown may also be required. Impacts related to water demand would be greater than the proposed project. (Greater)
Septic systems or a new wastewater treatment facility would be necessary to serve the residences, unless private agreements could be made with the Tenaya Lodge for sewer connections and treatment at the Tenaya Lodge WWTP. The potential for development of septic systems or new treatment facilities would result in greater impacts due to additional construction, ground disturbance, and possible effluent discharge water quality concerns, particularly with septic systems located adjacent to Big Creek as well as the fractured groundwater basin, which is the source of potable water for the region. Mitigation would be imposed requiring sufficient wastewater treatment capacity and disposal in compliance with Central Valley RWQCB requirements. (Greater)

Demand for public services would be greater than the proposed project. The units would support permanent residences rather than resort-commercial lodging. This would result in greater population growth in Fish Camp and demand on schools and public services that would not occur with the project. Furthermore, police and fire protection services may be greater for residential units because the private security and additional volunteer fire staff that the project would receive from the Tenaya Lodge would not be available for the private homes. (Greater)

HAZARDS AND HAZARDOUS MATERIALS

Alternative 3 would result in development of residential units in the same location as the proposed project. The existing seismic, flood, and wildfire hazards would be the same as the proposed project. In addition, residential units would utilize the same potential hazardous household materials as the proposed cabins and clubhouse. As with the proposed project, hazardous materials regulations would be followed, fire safe measures would be implemented, development would not be allowed in the floodplain (100-year flood zone), and development would be built according to applicable building standards and county regulations. Alternative 3 would be required to mitigate fire protection response with additional staff at the Fish Camp fire station, similar to the proposed project. (Similar)

VISUAL RESOURCES

Alternative 3 would introduce development on the currently undeveloped project site, similar to the proposed project. Residential units would not have the same consistent architectural design or treatments as the proposed project. The location of residences across the lots on the project would also require tree and vegetation removal. Alternative 3 would therefore alter the visual quality and character of the project site. The residences would also introduce new sources of light and glare. Views of the project site from surrounding vantage points and Highway 41 would change, but development would be similar in scale to the residential and resort commercial development present in Fish Camp. Overall, visual impacts under this alternative would be similar to the less-than-significant visual impacts due to the project. (Similar)

6.4.4 Alternative 4: Reduced Density Alternative (34 Cabins)

The original Tenaya Cabins Project application proposed the same land division of APN 010-350-008 into “Parcel 1” for the Tenaya Cabins, and “Parcel 2” for a single-family residential home. Parcel 1 would be rezoned from Single Family Residential 1-acre to Resort Commercial. Parcel 2 would be rezoned from Single Family Residential 1-acre to Single Family Residential ½ -acre per Fish Camp TPA Specific Plan and Mariposa County requirements. As shown on the conceptual site plan in Exhibit 6-3, the project entry, roadways, and utility connections would be very similar to the current project proposal (as described in Chapter 3 of this Draft EIR) but proposed a total of 34 cabins, rather than 54. Although the disturbance footprint would be slightly smaller, the vehicular trips to and from the site would be reduced, and the utility demands would be reduced, the overall environmental impacts of 34 cabins would be similar to the impacts of the 54 cabin proposal, as summarized below. The Reduced Density Alternative would not avoid the significant impacts of the project as proposed, all of which are mitigable to less than significant. However, it would further reduce impacts when compared to the proposed project.
Exhibit 6-3

Alternative 4: Reduced Density Alternative
LAND USE AND FOREST RESOURCES

Alternative 4, the Reduced Density Alternative, would include the same land division of APN 010-350-008, rezoning of Parcels 1 and 2, and amendment to the General Plan and Fish Camp TPA Specific Plan. Like the proposed project, Alternative 4 would not divide an existing community or be inconsistent with surrounding land uses and land use impacts would be less than significant. Because Alternative 4 would reduce the number of cabins, the aggregated footprint of disturbance would be reduced and fewer trees would be removed than under the proposed project, although the forest resource impacts of both alternatives would be less than significant. (Similar)

BIOLOGICAL RESOURCES

Construction and operation of Alternative 4, the Reduced Density Alternative, would affect the same development site as the proposed project, affecting the same habitat types and species as the project. Although the development footprint would be reduced, as with the project, Alternative 4 would alter currently undeveloped forested land, would result in similar biological resources impacts to special-status bird species, special-status bat species, Yosemite toad, and sensitive habitats (jurisdictional wetlands and aquatic habitat). Similar to the proposed project, mitigation would be recommended to avoid, reduce, and compensate for these impacts, thereby reducing biological resources impacts to a less-than-significant level. (Similar)

CULTURAL RESOURCES

Implementation of Alternative 4, the Reduced Density Alternative, would affect the same development site as the proposed project, although the footprint of ground disturbance would be slightly less. Construction and excavation activities associated with this alternative could unearth previously undiscovered or unrecorded human remains or archaeological resources, if they are present. Like the proposed project, mitigation would be available to reduce this impact. Therefore, the impacts of this alternative on cultural resources would be similar to the proposed project. (Similar)

TRANSPORTATION AND CIRCULATION

Under Alternative 4, the Reduced Density Alternative, land use and development would be similar in character to the proposed project, but the alternative would include 20 fewer cabins, which would result in reduced trip generation. As with the project, the vehicle trips under Alternative 4 would utilize Highway 41, necessitating the same intersection improvements as the proposed project to address safety concerns at the ingress/egress from Highway 41. The decrease in trip generation would result in less traffic on Highway 41, but overall, the traffic from Alternative 4 would affect the same intersections and roadway segments as the proposed project, and would result in the same less-than-significant impacts. (Similar/Less)

AIR QUALITY

Alternative 4 would require construction activities similar to the proposed project to develop the clubhouse, cabins, and residential unit and associated infrastructure. A reduction in the footprint of development and number of cabins would reduce construction emissions related to ground disturbance and construction equipment. Alternative 4 would result vehicular trips, but less than the proposed project due to 20 fewer cabins, reducing the project’s less-than-significant mobile source emissions. Therefore, Alternative 4 would lessen, but result in the same less-than-significant short- and long-term air emissions (without the need for mitigation) due to construction and operation resort commercial development. (Similar/Less)
GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE
Alternative 4 would require earthwork and ground-disturbing activities similar to the proposed project to construct the clubhouse, cabins, and residential unit and associated infrastructure. Alternative 4 would result in vehicular trips, but less than the project due to 20 fewer cabins. Therefore, Alternative 4 would result in similar, but reduced, GHG emissions as the project. Further, as with the project, Alternative 4 would be required to implement measures to support the statewide Scoping Plan goals to reduce GHGs to 1990 levels by 2020. (Similar/Less)

NOISE
Development of Alternative 4 would increase traffic and operational noise in the area and new sensitive receptors would be placed in proximity of Highway 41. Alternative 4 would introduce the same use of amplified sound for events, as would occur at the clubhouse under the proposed project. Construction activities for Alternative 4 would result in similar construction noise impacts. Alternative 4 would therefore implement the same mitigation to reduce construction noise and operational noise to less-than-significant levels. (Similar)

GEOLOGY, SOILS, AND SEISMICITY
Like the proposed project Alternative 4 would result in grading and trenching that could result in soil erosion due to vegetation removal, soil disturbance, and soil compaction. Like the proposed project, mitigation would reduce the erosion impacts to a less than significant level. Existing seismic hazards would be the same as for the project, but like the project, the clubhouse, cabins, and future residence would be built according to building codes and would not increase the risks to people, structures, or the environment. The geology, soils, and seismicity impacts under this alternative would be similar than those that would occur with the project. (Similar)

HYDROLOGY AND WATER QUALITY
Similar to the proposed project, development under Alternative 4 would alter runoff conditions and soil erosion. Alternative 4 would be required to implement a SWPPP during construction as well as operational stormwater facilities and water quality BMPs to reduce potentially significant drainage, erosion, and water quality impacts to less-than-significant levels. This alternative would also require water to serve the residences, which would be served by the existing Tenaya Lodge groundwater wells. Due to the reduced number of cabins, Alternative 4 would demand less water and result in less drawdown of groundwater, although monitoring of nearby wells, in particular FCMWA Well 1 would still be warranted. Overall, Alternative 4 would result in similar hydrology and water quality impacts to the proposed project. (Similar/Less)

UTILITIES AND PUBLIC SERVICES
Like the proposed project, groundwater from the existing Tenaya Lodge wells would be used to serve water to Alternative 4. Because there would be 20 fewer cabins, the demand for water would be reduced and no additional wells or water rights would be necessary. Alternative 4 would reduce wastewater treatment and disposal demands; however, it is anticipated that Alternative 4 would require additional leach field capacity to provide sufficient disposal of treated effluent, similar to the proposed project. Demand for public services would be similar to the proposed project, because both would provide resort commercial units with only one permanent residence and the applicant would provide private security to the project site and additional volunteer fire staff to address police and fire response. (Similar/Less)

HAZARDS AND HAZARDOUS MATERIALS
Under Alternative 4, the Reduced Density Alternative, the use and handling of hazardous materials would be consistent with federal, state, and local regulations that would minimize the potential for upset or accident
conditions or exposure to nearby receptors. Like the proposed project, this alternative would expose people and structures to an area with high to very high risk of wildfire. Overall impacts related to hazards and hazardous materials would be similar to the proposed project and could be mitigated to a less-than-significant level by providing additional staffing of the Fish Camp fire station. However, the reduced development and reduced visitor population would lessen the overall use and handling of hazardous materials and would reduce the exposure to wildfire and other hazards. (Similar/Less)

VISUAL RESOURCES

Alternative 4, the Reduced Density Alternative, would result in development of the same site as the proposed project, with buildings and infrastructure that are of a similar type, design, and scale as those in the proposed project. The alternative would result in 20 fewer cabins, which would reduce the overall visual effects. Similar to the proposed project, this alternative would result in the conversion of a forested site that is dominated by native vegetation to a developed site that would be characterized by human-made features. Alternative 4, like the proposed project, would not result in significant impacts to scenic vistas or visual character as viewed from areas outside the project site; furthermore the decreased number of units would require less tree removal. This alternative would also result in fewer new light sources. Overall, the alternative’s visual impacts would be similar to the proposed project. (Similar/Less)

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CCR Section 15126.6 suggests that an EIR should identify the “environmentally superior” alternative. Alternative 1, the No Project – No Development Alternative, is the environmentally superior alternative, as all of the significant impacts of the project would be avoided. CCR Section 15126.6 suggests that “If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

Of the development alternatives, Alternative 4, the Reduced Density Alternative, would be the environmentally superior alternative. This alternative would meet the project objectives and would result in similar impacts to the proposed project, but the reduction in development footprint, cabins, and visitor and employee population would reduce the severity of the impacts for multiple resources. Nonetheless, Alternative 4 would not avoid the significant mitigable impacts of the proposed project and would require implementation of the same mitigation measures.
7 OTHER CEQA-MANDATED SECTIONS

7.1 GROWTH-INDUCING IMPACTS

The California Environmental Quality Act (CEQA) specifies that growth-inducing impacts of a project must be addressed in an environmental impact report (EIR) (CCR Section 21100(b)(5)). Specifically, Section 15126.2(d) of the State CEQA Guidelines states that the EIR shall:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth inducement would result if a project involved construction of new housing, which would facilitate new population to an area. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

The State CEQA Guidelines do not distinguish between planned and unplanned growth for purposes of considering whether a project would foster additional growth. Therefore, for purposes of this EIR, to reach the conclusion that a project is growth inducing as defined by CEQA, the EIR must find that it would foster (i.e., promote, encourage, allow) additional growth in economic activity, population, or housing, regardless of whether the growth is already approved by and consistent with local plans. The conclusion does not determine that induced growth is beneficial or detrimental, consistent with Section 15126.2(d) of the State CEQA Guidelines.

If the analysis conducted for the EIR results in a determination that a project is growth-inducing, the next question is whether that growth may cause adverse effects on the environment. Environmental effects resulting from induced growth (i.e., growth-induced effects) fit the CEQA definition of “indirect” effects in Section 15358(a)(2) of the State CEQA Guidelines. These indirect or secondary effects of growth may result in significant environmental impacts. CEQA does not require that the EIR speculate unduly about the precise location and site-specific characteristics of significant, indirect effects caused by induced growth, but a good-faith effort is required to disclose what is feasible to assess. Potential secondary effects of growth could include consequences – such as conversion of open space to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of air and water quality, or degradation or loss of plant and wildlife habitat – that are the result of growth fostered by the project.
The decision to allow those projects that result from induced growth is the subject of separate discretionary processes by the lead agency(ies) responsible for considering such projects. Because the decision to allow growth is subject to separate discretionary decision making, and such decision making is itself subject to CEQA, the analysis of growth-inducing effects is not intended to determine site-specific environmental impacts and specific mitigation for the potentially induced growth. Rather, the discussion is intended to disclose the potential for environmental effects to occur more generally, such that decision makers are aware that additional environmental effects are a possibility if growth-inducing projects are approved. The decision of whether impacts do occur, their extent, and the ability to mitigate them is appropriately left to consideration by the agency responsible for approving such projects at such times as complete applications for development are submitted.

7.1.1 Growth Variables

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Because the General Plan of a community defines the location, type, and intensity of growth, it is the primary means of regulating development and growth in California.

7.1.2 Growth-Inducing Impacts of the Project

POPULATION GROWTH

Population growth itself generally falls into two categories: direct and indirect. Direct growth inducement would result if a project involved the construction of new housing, which would facilitate new population to an area. As described in Chapter 3, “Project Description,” of this Draft EIR, the Tenaya Cabins Project would a parcel division allowing for development of 54 pre-manufactured cabins and a clubhouse on Parcel 1, as well as a future single-family residence on Parcel 2. Because of the nature of resort commercial development, the 54 cabins would be transient lodging for visitors to the area. Unlike permanent residents, visitors would not generate demand for schools, libraries, and other uses more geared toward a permanent residential population. The future single-family home could support a full-time permanent resident/family; however, a single family would not constitute substantial direct population growth and would not generate demand on public services resulting in the need for new or expanded facilities.

There are single family residential parcels within Fish Camp to the east, north and west of the project site. The majority of the residences in Fish Camp are utilized as second or vacation homes and are occupied on a seasonal basis only. The 2009 - 2013 American Community Survey 5-Year Estimate for the population of Fish Camp (a Census-Designated Place) was approximately 40 people (U.S. Census Bureau).

The project’s proposed amendment to the General Plan and Fish Camp Town Planning Area (TPA) Specific Plan would convert approximately 26 acres designated Single Family Residential 1-Acre Minimum to Resort Commercial and 0.5 acre from Single Family Residential 1-Acre Minimum to Single Family Residential ½ Acre Minimum. These actions would reduce the number of potential housing units on the project site from 26 units to 1 unit. However, as discussed in Chapter 6, “Alternatives, the development of residential units would be constrained by the identified environmental site constraints: Rainbow Lake, the Big Creek flood zone, and the wetlands at the southern end of the project site. Assuming that residential development would be focused on the undeveloped forested lands, it is assumed that approximately 20 acre-residential lots would be possible (see Exhibit 6-1 in Chapter 6, “Alternative”). According to the Housing Element of the Mariposa County General Plan, the availability of land for future single family residential development in the Fish Camp TPA exceeds housing needs, as there is land available for an additional 104 housing units. Even with a reduction of 25 possible residential units due to the Tenaya Cabins Project, and a reduction of
29 possible units due to the approved SilverTip Resort Village Project, there would still be residential parcels available in Fish Camp TPA for 50 additional single-family units. Considering a population of 40 persons in Fish Camp, an additional 50 potential single-family residences is reasonable to continue to support population and housing growth in the Fish Camp TPA.

EMPERLOYMENT GROWTH AND OTHER ECONOMIC-RELATED GROWTH EFFECTS

During construction of the Tenaya Cabins, approximately 43 total construction workers would be temporarily employed. However, over the approximately 6 month construction period, only the necessary workers would be onsite for each phase, so that it is unlikely a full 43 workers would be needed at any given time. Rather the peak number of construction workers during building construction or paving would be approximately 12 or 13 workers. Once constructed, operation of the Tenaya Cabins is estimated to increase the overall employment at Tenaya Lodge by 18 employees. Currently, the majority of Tenaya’s employees commute approximately 14 miles from Oakhurst to work at the lodge. It is expected that temporary construction workers and future Tenaya Cabins’ employees would also come primarily from the Oakhurst area.

Of Oakhurst’s estimated 2,282 population, it is estimated that the available labor force is 1,000 people. As of October 16, 2015, Oakhurst had an unemployment rate of 7.4 percent (Employment Development Department [EDD] 2015a), meaning that approximately 74 people would be unemployed. Furthermore, Mariposa County had an estimated a labor force of 8,560 persons, with an unemployment rate of 4.9 percent and Madera County had an estimated labor force of 63,100 with an unemployment rate of 7.7 percent (EDD 2015a and b). It is assumed that the temporary construction workers and 18 permanent employees would be able to be met by local/regional residents and would not necessitate the construction of additional housing. Furthermore, as discussed in Section 4.2 of this Draft EIR, consistent with General Plan Land Use Element Section 5.3.03.D(1), DN is completing a housing market analysis and exploring additional housing opportunities in Fish Camp and other locations for seasonal housing. However, the provision of employee housing for the Tenaya Cabins Project would not require construction of additional housing units. Compliance with County requirements for employee housing would be resolved through the project’s Conditional Use Permit.

CONCLUSION

The population and employment growth expected with project implementation would be minor, and would not exceed the projections of the Fish Camp TPA Specific Plan. Additionally, the project would not extend infrastructure (water, sewer, electricity, propane) or public services to serve areas outside of the Tenaya Cabins Project site.

The project has the potential to stimulate the economy directly through providing job opportunities in the region. Because of the general availability in the labor market and current unemployment rates, there would be an opportunity to fill positions with local hires, or by new employees that would commute to or relocate to the region. Potential in-migration would not substantially affect housing growth because new housing demands generated by the project would account for only a small percentage of existing housing. Therefore, the project would not contribute to substantial population growth, and there is no need to analyze impacts of growth beyond those included and evaluated in Chapter 5, “Cumulative Impacts.”

7.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS OF THE PROPOSED PROJECT

Section 21100(b)(2)(A) of the State CEQA Guidelines provides that an EIR shall include a detailed statement setting forth “in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented.” As documented in Sections 4.3 through 4.14 of this Draft EIR, no significant and unavoidable impacts were identified for the Tenaya Cabins Project.
7.3 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the project. Specifically, the State CEQA Guidelines section 15126.2(c) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- construction materials, including such resources as soil, rocks, wood, concrete, glass, roof shingles, and steel;
- land area committed to new project facilities;
- water supply for project operation; and
- energy expended in the form of electricity, propane, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The use of these nonrenewable resources is expected to account for a minimal portion of the region’s resources and would not affect the availability of these resources for other needs within the region. Construction activities would not result in inefficient use of energy or natural resources. Construction contractors selected would use best available engineering techniques, construction and design practices, and equipment operating procedures. Long-term project operation would not result in substantial long-term consumption of energy and natural resources.
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