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Volume 1: Draft EIR

TERRA VI LODGE PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

for Tuolumne County

PLACEWORKS

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PLACEWORKS

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1. Executive Summary

This chapter presents an overview of the proposed Terra Vi Lodge project (project or proposed project). This executive summary also provides a summary of the alternatives to the proposed project, identifies issues to be resolved, areas of concern, and conclusions of the analysis contained in Chapters 4, Environmental Evaluation, and each subchapter (Chapters 4.1 through 4.17) of this Draft Environmental Impact Report (Draft EIR). For a complete description of the proposed project, see Chapter 3, Project Description, of this Draft EIR. For a discussion of alternatives to the proposed project, see Chapter 6, Alternatives, of this Draft EIR.

This Draft EIR addresses the environmental effects associated with approval and implementation of the proposed project. The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide the public, local, and State governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA[1] and the State CEQA Guidelines[2] to determine if approval of the proposed project could have a significant effect on the environment. The County of Tuolumne, as the Lead Agency, has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable County technical personnel and review technical reports. Information for this Draft EIR was obtained from on-site field observations; discussions with public service agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, biological resources, cultural resources, greenhouse gas emissions, noise, and transportation).

1.1 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared to assess the environmental effects associated with approval and development of the proposed project. The main purposes of this document as established by CEQA are:

- To disclose to decision-makers and the public the significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental damage.

[1] The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000 to 21177.
[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 to 15387.

- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To disclose to the public reasons for agency decision of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in the statute and in the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. An EIR is intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts and alternatives, and adopt a Statement of Overriding Considerations if the proposed project would result in significant impacts that cannot be avoided.

1.1.1 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- Chapter 1: Executive Summary. This chapter summarizes the environmental consequences that would result from development of the proposed project, the alternatives to the proposed project, the recommended mitigation measures, and indicates the level of significance of environmental impacts with and without mitigation.
- Chapter 2: Introduction. This chapter provides an overview describing the Draft EIR document.
- Chapter 3: Project Description. This chapter describes the proposed project in detail, including the characteristics, objectives, and the structural and technical elements of the proposed action.
- Chapter 4: Environmental Evaluation. This chapter is divided into 17 sub-chapters corresponding to the environmental resource categories identified in CEQA Guidelines Appendix G, Environmental Checklist. This chapter provides a description of the physical environmental conditions in Tuolumne County as they existed at the time the Notice of Preparation was published, from both a local and regional perspective, as well as an analysis of the potential environmental impacts of the proposed project, and recommended mitigation measures, if required, to reduce their significance. The environmental setting included in each subchapter provides baseline physical conditions from which Tuolumne County acting as the lead agency determines the significance of environmental impacts resulting from the proposed project. Each subchapter also includes a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed project; and the potential cumulative impacts associated with the proposed project.

- **Chapter 5: Significant and Unavoidable Impacts.** This chapter lists the impacts that the project would create that would not be mitigated to a less-than-significant level with the implementation of proposed mitigation measures.
- **Chapter 6: Alternatives.** This chapter includes an evaluation of three alternatives to the proposed project, which are the CEQA-required "No Project" Alternative, the Alternate Location Alternative, and the Reduced Footprint Alternative.
- **Chapter 7: CEQA-Mandated Sections**. This chapter includes a discussion of growth inducement, cumulative impacts, significant unavoidable effects, and significant irreversible changes as a result of approval and development of the proposed project.
- **Chapter 8: Organizations and Persons Consulted.** A list of people and organizations that were contacted during the preparation of this Draft EIR for the proposed project is included in this chapter.
- **Chapter 9: Abbreviations and Acronyms.** A list of the abbreviations and acronyms used through this EIR.
- **Appendices:** The appendices for this Draft EIR (presented in portable document file [PDF] format attached to the back cover) contain the following supporting documents:
  - Appendix A: Notice of Preparation and Comments on the Notice of Preparation
  - Appendix B: Project Site Plans
  - Appendix C: Air Quality and Greenhouse Gas Emissions Study
  - Appendix D: Biological Resources Study
  - Appendix E: Wetland Delineation
  - Appendix F: Geology and Soils
  - Appendix G: Hydrogeology Study
  - Appendix H: Noise Study
  - Appendix I: Fire Impact Analysis
  - Appendix J: Transportation

1.1.2 TYPE AND PURPOSE OF THIS DRAFT EIR

According to Section 15121(a) of the CEQA Guidelines, the purpose of an EIR is to:

> *Inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.*

This Draft EIR has been prepared as a project EIR, pursuant to Section 15161 of the CEQA Guidelines. As a project EIR, the environmental analysis will discuss the changes in the environment that would result from the development of the Terra Vi Lodge project. This project EIR will examine the specific short-term impacts (project construction) and long-term impacts (project operation) that would occur as a result of project approval by the Tuolumne County Planning Commission, as well as cumulative impacts.

1.2 SUMMARY OF THE PROPOSED PROJECT

The proposed project is designed as a hotel lodge comprised of various single, two-, and three-story elements. The building design accommodates a setback, maximizing the distance between taller structures and adjacent residential properties to minimize visibility from both public and private views. Elements of the project include a public market, general lodge with 100 guestrooms, two manager's suites, and multi-purpose uses, indoor and outdoor areas, and seven guest cabins providing 26 guestrooms, as well as five employee apartments with four rooms in each unit, for a total of 20 employee rooms. A total of 40 jobs would be created once the project is operational. The proposed project would develop 18 percent (11.5 acres) of the project site with buildings, roads, and parking. An additional 1.4 acres would be used for the primary septic system. Refer to Figure 3-4 for the proposed project's site plan. Additional project plans are provided in Appendix B of this Draft EIR.

1.3 SUMMARY OF PROJECT ALTERNATIVES

This Draft EIR analyzes alternatives to the proposed project that are designed to reduce the significant environmental impacts of the proposed project and feasibly attain some of the proposed project objectives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves weighing and balancing all of the environmental resource areas by the County. The following alternatives to the proposed project were considered and analyzed in detail:

- No Project Alternative
- Alternate Location Alternative
- Reduced Footprint Alternative

Chapter 6, Alternatives, of this Draft EIR, includes a complete discussion of these alternatives and of alternatives that were considered, but not carried forward for detailed analysis.

1.4 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved. With regard to the proposed project, the major issues to be resolved include decisions by the County of Tuolumne, as Lead Agency, related to:

- whether this Draft EIR adequately describes the environmental impacts of the proposed project;
- whether the benefits of the proposed project override those environmental impacts that cannot be feasibly avoided or mitigated to a level of insignificance;
- whether the identified mitigation measures should be adopted or modified; and
- whether there are any alternatives to the proposed project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic objectives.

1.5 AREAS OF CONCERN

The County issued a Notice of Preparation on May 2, 2019 and held a scoping meeting on May 13, 2019 to receive scoping comments. Due to a clerical issue, the NOP was reissued and submitted to the Office of Planning and Research State Clearinghouse on November 15, 2019 for an additional 30-day review period. During the scoping period for this EIR, responsible agencies and interested members of the public were invited to submit comments as to the scope and content of the EIR. While every environmental concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive; rather, it attempts to capture those concerns that are likely to generate the greatest interest based on the input received during the scoping process. The comments received focused primarily on the following issues and the chapters in which these issues are addressed are indicated in parentheses:

- Lighting impacts because of cumulative projects. (Chapter 4.1, Aesthetics)
- Natural beauty of the area will be compromised. (Chapter 4.1, Aesthetics)
- Impacts on scenic vistas and scenic views (Chapter 4.1, Aesthetics)
- Air quality impacts. (Chapter 4.2, Air Quality)
- Odors created by the proposed use. (Chapter 4.2, Air Quality)
- Potential protected species on-site. (Chapter 4.3, Biology)
- Archaeological resources on-site. (Chapter 4.4, Cultural Resources)
- Presence and capacity of solar. (Chapter 4.5, Energy)
- Increase in electricity demand. (Chapter 4.5, Energy)
- Cause evacuation issues. (Chapter 4.9, Hazards)
- Not enough water. (Chapter 4.10, Hydrology and Water Quality)
- Could reduce water supply of adjacent residential wells. (Chapter 4.10, Hydrology and Water Quality)
- Non-compliant with zoning. (Chapter 4.11, Land Use and Planning)
- Potential noise impacts to neighboring properties. (Chapter 4.12, Noise)
- Not enough housing for employees. (Chapter 4.13, Population and Housing)
- Potential traffic impacts to emergency service vehicles. (Chapter 4.14, Public Services and Recreation and Chapter 4.15, Transportation)
- Potential impacts to availability of emergency services. (Chapter 4.14, Public Services and Recreation and Chapter 4.15, Transportation)
- Impacts to schools. (Chapter 4.14, Public Services and Recreation and Chapter 4.15, Transportation)
- Potential traffic impacts associated with the driveway being located off of Sawmill Mountain Road. (Chapter 4.15, Transportation)
- Increase in overall traffic. (Chapter 4.15, Transportation)
- Need transit services to Yosemite. (Chapter 4.15, Transportation)

- Potential traffic impacts with nearby cumulative projects. (Chapter 4.15, Transportation)
- Solid waste generation. (Chapter 4.16, Utilities and Service Systems)
- Sewage and drainage issues, including sewage contaminating water supply. (Chapter 4.16, Utilities and Service Systems)
- Increased risk of wildfire. (Chapter 4.17, Wildfire)
- Cumulative impacts of neighboring development. (All chapters)
- Requests for project alternatives to consider a different location. (Chapter 6, Alternatives)

1.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant impact on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance.

The proposed project has the potential to generate significant environmental impacts in a number of areas. Pursuant to Section 15126.2(b) of the CEQA Guidelines, an EIR must describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. As shown in Table 1-1, all significant impacts would be reduced to a less-than-significant level if the mitigation measures identified in this Draft EIR are adopted and implemented, with the exception of Impacts GHG-1.1, GHG-1.2, and NOI-3.1. As described in detail in Chapter 7, CEQA-Mandated Sections, the proposed project would have no significant impact on agricultural or mineral resources, due to existing conditions in the project area. Accordingly, these topics have not been analyzed further in this Draft EIR.

Table 1-1 summarizes the conclusions of the environmental analysis contained in this Draft EIR and presents a summary of impacts and mitigation measures identified. It is organized to correspond with the environmental issues discussed in Chapters 4.1 through 4.17. Table 1-1 is arranged in four columns: 1) environmental impact; 2) significance without mitigation; 3) mitigation measures; and 4) significance with mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapters 4.1 through 4.17.

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
AESTHETICS			
AES-1: The project would not have a substantial adverse effect on a scenic vista.	LTS	N/A	N/A
AES-2: The project would not substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.	NI	N/A	N/A
AES-3: The project would change but would not degrade the existing visual character or quality of public views of the site and its surroundings.	LTS	N/A	N/A
AES-4: The proposed project includes the installation of photovoltaic panels to generate solar energy. Because the location and materials for the panels is not yet known, the panels have the potential to become sources of glare, which would be a *significant* impact.	S	AES-4: Proposed photovoltaic panels shall be designed to ensure the following: ▪ The angle at which panels are installed precludes, or minimizes to the maximum extent practicable, glare observed by viewers on the ground. ▪ The reflectivity of materials used shall not be greater than the reflectivity of standard materials used in residential and commercial developments. ▪ Panels shall be sited to minimize their visibility from Highway 120.	LTS
AES-5: The proposed project would not contribute to significant cumulative aesthetics impacts.	LTS	N/A	N/A
AIR QUALITY			
AQ-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	N/A	N/A
AQ-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or State ambient air quality standards.	LTS	N/A	N/A
AQ-3: The project would not expose sensitive receptors to substantial pollutant concentrations.	LTS	N/A	N/A
AQ-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	N/A	N/A

N/A = Not Applicable; NI = No Impact; LTS = Less than Significant; S = Significant; SU = Significant and Unavdoiable

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
AQ-5: The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant impacts regarding air quality.	LTS	N/A	N/A
BIOLOGICAL RESOURCES			
BIO-1.1: The project has the potential, through habitat modification, to adversely affect the Crotch bumble bee, a species identified as a candidate for listing as endangered under the CESA.	S	BIO-1.1a: Preconstruction Bee Surveys. Prior to issuance of grading permits for any staging, construction, or ground disturbing activities between February 1 and November 30th of the construction year, a qualified biologist shall survey the project boundaries for active Crotch bumble bee nests. If identified, CDFW shall be consulted for guidance on buffer distances to avoid colony disturbance (e.g., buffer surrounding the nest itself, entry/exits, and avoiding direct disturbance). If full avoidance cannot be achieved through buffers, no construction shall occur until the nest is no longer occupied. No pesticides or herbicides shall be used so long as the species occupies the site. This measure shall be incorporated into the project bid package and contract. The measure is the responsibility of the qualified biologist under contract to either the County or construction contractor.	LTS
		BIO -1.1b: Environmental Awareness Training. All contractors involved in site development, applicable County department staff, and environmental specialists (e.g., biologist) shall attend a mandatory Environmental Awareness Training prior to any site disturbances. The program shall address proper implementation of mitigation measures contained herein. This measure shall be incorporated into the project bid package and contract and implemented throughout project construction. The project biologist shall have the authority to stop work or remove any construction worker on-site that has not completed training. The measure is the responsibility of the qualified biologist under contract to either the County or construction contractor.	

N/A = Not Applicable; NI = No Impact; LTS = Less than Significant; S = Significant; SU = Significant and Unavdoiable

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
BIO-1.2: The project has the potential, through habitat modification, to adversely affect the Fisher, a species state-listed as threatened under the CESA.	S	**BIO-1.2a:** Implement Mitigation Measure BIO -1.1b.	LTS
		BIO -1.2b: Avoid Inadvertent Animal Trapping During Construction. To avoid inadvertently trapping special-status or common animal species during construction, all excavated steep-walled holes or trenches more than two feet deep shall be covered at the end of each working day with plywood or similar material, or provided with one or more escape ramps constructed of earth fill or wooden planks, or equivalent, at each end of the trench. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped animal is discovered, the contractor shall place an escape ramp or other appropriate structure to allow the animal to escape. Alternatively, the contractor shall contact the project biologist or California Department of Fish and Wildlife for assistance. Similarly, stored pipes or other materials providing potential cover for animals shall be inspected prior to installation or use to ensure that they are unoccupied.	
		BIO -1.2c: Food and Trash Disposal. All food and food-related trash shall be enclosed in sealed trash containers at the end of each workday and removed completely from the construction site every day to avoid attracting wildlife. This measure shall be implemented throughout project construction. The measure is the responsibility of the construction contractor.	
		BIO -1.2d: Construction Hours. Project construction shall be limited to 7:00 a.m. to 7:00 p.m. unless an emergency exists.	
BIO-1.3: The project has the potential, through habitat modification, to adversely affect the spotted bat (*Euderma maculatum*).	S	**BIO-1.3:** Implement Mitigation Measure BIO-1.2d.	LTS
BIO-1.4: The project has the potential, through habitat modification, to adversely affect the Western mastiff bat (*Eumops perotis californicus*).	S	**BIO-1.4:** Implement Mitigation Measure BIO-1.2d.	LTS

N/A = Not Applicable; NI = No Impact; LTS = Less than Significant; S = Significant; SU = Significant and Unavdoiable

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
BIO-1-5: The project has the potential, through habitat modification, to adversely affect the Silver-haired bat (*Lasionycteris noctivagans*).	S	BIO-1.5a: Preconstruction Surveys Suitable Bat Roosting (or Nursery) Areas and Provisions for Protection, if Identified. The project sponsor or contractor shall implement the following measures: ▪ 15 days or fewer before commencing ground-disturbing activities between April and September of the construction year, a qualified biologist shall survey snags, trees, rock crevices and other suitable cavities and structures on the site for roosting bats or bat nurseries. ▪ If bats are not found and there is no evidence of bat use, construction may proceed. ▪ If bats are found or evidence of use by bats is present, CDFW shall be consulted for guidance on measures to avoid or minimize disturbance to the colony or nursery. Subject to CDFW approval, measures may include excluding bats from roosts before construction begins. If nurseries are discovered, no work shall occur within buffer areas as established by CDFW until all young are self-sufficient and have left the nursery. ▪ This mitigation measure shall be incorporated into the project bid package and contract. Surveys shall occur within 15 days of commencing construction that occurs between April and September.	LTS
		BIO-1.5b: Implement Mitigation Measure BIO-1.2d.	
BIO-1.6: The project has the potential, through habitat modification, to adversely affect the Hoary bat (*Lasiurus cinereus*).	S	BIO-1.6: Implement Mitigation Measures BIO-1.5a and BIO-1.2b.	LTS
BIO-1.7: The project has the potential, through habitat modification, to adversely affect the Long eared myotis (*Myotis evotis*).	S	BIO-1.7: Implement Mitigation Measures BIO-1.2d and BIO-1.5a.	LTS
BIO-1.8: The project has the potential, through habitat modification, to adversely affect the special-status olive-sided flycatcher (*Contopus cooperi*).	S	BIO-1.8: Pre-Construction Bird/Raptor Survey. Prior to issuance of grading permits for construction occurring between February 1st and August 30th (e.g., excavation, ground disturbance, or vegetation removal) a preconstruction survey for nesting birds shall be	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		conducted in accordance with the CDFW guidelines and a no-disturbance buffer shall be established, if necessary. If equipment staging, site preparation, vegetation removal, grading, excavation or other project-related construction activities are scheduled during the avian nesting season (generally February 1 through August 30), a focused survey for active nests would be conducted by a qualified biologist within 15 days prior to the beginning of project-related activities. Following initial pre-construction surveys in year one of project construction, bird surveys shall be repeated annually so long as outside construction continues. Surveys shall be repeated within 15 days prior to resuming outdoor construction activities for the first time between February 1st and August 30th whenever outdoor construction activities have ceased for more than one month (e.g., if outdoor construction shuts down for the season due to winter rains in late November, preconstruction bird surveys would occur again within 15 days prior to recommencing outdoor site work between February 1st and August 30th. If work recommences in January and continues without interruption through August 30th, then no additional preconstruction survey is required). Surveys shall be conducted in all suitable habitat in the BSA. If an active nest is found, the bird shall be identified to species and the approximate distance from the closest work site to the nest estimated. No additional measures need be implemented if active nests are more than the following distances from the nearest work site: (a) 300± feet for raptors; or (b) 75± feet for other non-special-status bird species. Disturbance of active nests shall be avoided to the extent possible until it is determined that nesting is complete and the young have fledged. For species protected under the California Fish and Game Code (CFGC), if active nests are closer than those distances to the nearest work site and there is the potential	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		for bird disturbance, CDFW shall be contacted for approval to work within 300± feet of raptors, or 75± feet of other non-special-status bird species. This measure shall be incorporated into the project bid package and contract. Surveys shall occur within 15 days of commencing construction that occurs between February 1st and August 30th.	
BIO-1.9: The project has the potential, through habitat modification, to adversely affect the special-status American peregrine falcon (*Falco peregrinus anatum*).	S	BIO-1.9: Implement Mitigation Measure BIO-1.8.	LTS
BIO-1.10: The project has the potential, through habitat modification, to adversely affect the special-status California spotted owl (*Strix occidentalis occidentalis*).	S	BIO-1.10: Implement Mitigation Measure BIO-1.8.	LTS
BIO-1.11: The project has the potential, through habitat modification, to adversely affect protected bird species.	S	BIO-1.11: Implement Mitigation Measure BIO-1.8.	LTS
BIO-1.12: The project has the potential to interfere substantially with the movement of native resident wildlife species.	S	BIO-1.12: Implement Mitigation Measures BIO -1.2b, BIO -1.2c, and BIO -1.2d.	LTS
BIO-1.13: The project has the potential, through habitat modification, to adversely affect the special-status Small's southern clarkia (*Clarkia australis*).	S	BIO-1.13: Pre-Construction Botanical Survey. Surveys shall occur the bloom season prior to issuance of grading permits during the bloom period for *Clarkia australis* (May through August) and *Erythranthe filicaulis* (April through August). If found, the location of special-status plant populations shall be clearly identified in the field by staking, flagging, or fencing prior to the commencement of activities that may cause disturbance. A buffer surrounding the populations shall be established by a qualified botanist based on the plant species, its habitat, and the nature of the proposed project activity. No activity shall occur within the buffer area. If sensitive plant species cannot be avoided, transplanting (perennial species), seed collection and dispersal (annual species) may be undertaken by a qualified botanist. If transplanting or seed collection/dispersal is employed, ongoing monitoring for 5 years shall be conducted to assess the effectiveness of mitigation. The performance standard for mitigation is no net reduction in the size or viability of the local plant population. Prior to salvaging plants, written permission shall be	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		obtained from the landowner and CDFW shall be notified 10 days prior to salvage activities or, for emergency situations, CDFW shall be notified within 14 days following salvage activities consistent with the provisions of the California Native Plant Protection Act (California Fish and Game Code Sections 1912 and 1913) and California Penal Code Section 384a. Salvage shall be in accordance with California Fish and Game Code Sections 1912 and 1913(c) including CDFW notification. The performance standard for this mitigation measure is no net reduction in the size or viability of local sensitive plant populations. This measure shall be incorporated into the project bid package and contract. Surveys shall occur the bloom season prior to commencing construction during the bloom period for *Clarkia australis* (May through August) and *Erythranthe filicaulis* (April through August).	
BIO-1.14: The project has the potential, through habitat modification, to adversely affect the special-status Slender-stemmed monkeyflower (*Erythranthe filicaulis*).	S	BIO-1.14: Implement Mitigation Measure BIO-1.13.	LTS
BIO-1.15: The project has the potential to interfere substantially with the movement of native resident wildlife species.	S	BIO -1.15: Food and Trash Enclosures. Trash shall be stored in an animal-resistant enclosure, or bear shed throughout the life of the project. Trash enclosure design shall be approved by the project biologist prior to installation. The project proponents are encouraged to visit http://www.waste101.com/bear-aware/ or contact the Tahoe Truckee Sierra Disposal or similar entity, for appropriate designs. This measure shall be implemented prior to issuance of an occupancy permit. The measure is the responsibility of the construction contractor. A Notice of Action shall be filed with the County Clerk on the project parcels including the project conditions specifying that this measure shall be continued throughout the life of the project.	LTS
BIO-2: The project has the potential to spread invasive plant species.	S	BIO-2: Minimize the spread of invasive plant species through the following:	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		▪ The project landscaping planting palette shall be revised to ensure that all plantings are non-invasive species. ▪ All hay, straw, hay bales, straw bales, seed, mulch or other material used for erosion control on the project site shall be free of noxious weed seeds and propagules (Food and Agriculture Code Sections 6305, 6341 and 6461). ▪ All equipment brought to the project site shall be thoroughly cleaned of all dirt and vegetation prior to entering the site to prevent importing noxious weeds and shall be cleaned of all dirt and vegetation prior to exiting the site to prevent exporting noxious weeds. (Food and Agriculture Code Section 5401). ▪ All material brought to the site, including rock, gravel, road base, sand, and topsoil, shall be free of noxious weeds and propagules. (Food and Agriculture Code Sections 6305, 6341 and 6461).	
BIO-3.1: The project has the potential to degrade waters of the U.S. indirectly by degrading water quality through construction activities.	S	BIO-3.1: Install Temporary Environmentally Sensitive Area (ESA) Fencing to Protect Sensitive Drainages during Construction Activities that Disturb Soils. Prior to issuance of grading permits, the project contractor shall implement the following: ▪ Install high-visibility/ESA fencing (e.g., orange construction safety fencing) a minimum of 50 feet from the centerline of both sides of Ephemeral Channel-1 (Northwest corner of the project site) during any time when disturbing soils within 50 feet of the drainage channel (fencing is not required when soil disturbances are not occurring so long as erosion control from any prior soil disturbances within 50 feet has been installed). Fencing shall be of flexible material that allows for deer passage. Install silt fencing, fiber rolls, or equivalent erosion and sediment control devices on the project side of the ESA fencing to prevent disturbances and erosion into the adjacent drainage. Silt fencing or other materials, as required, shall be installed consistent with the applicable water quality requirements specified in the project's Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP). Fencing or other erosion	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		control materials or devices shall be shown on the final construction documents. ▪ No construction-related materials, equipment, trash or other related debris shall be allowed, stored or staged within the fenced area. ESA Fencing shall remain in place until soil disturbances within 50 feet have been completed and erosion control measures have been installed in accordance with approved plans. Fallen fencing shall immediately be repaired as necessary to remain visible during all construction activities. ▪ Fenced areas shall be avoided throughout project construction (i.e., active soil disturbing activities) and shall be monitored by the project manager throughout construction. ▪ This measure shall be incorporated into the project bid package and contract. ▪ All ESA Fencing shall be removed from the site after construction activities are completed.	
BIO-3.2: The project has the potential to fill waters of the U.S. totaling 0.001 acre.	S	BIO-3.2: Comply with Section 404 of the federal Clean Water Act. Within the Caltrans right-of-way, the applicant shall secure an encroachment permit from Caltrans and comply with all conditions of the Caltrans encroachment permit including the following as it applies to Ephemeral Channel-2: ▪ Prior to issuance of grading permits, comply with Section 404 and Section 401 of the Clean Water Act and comply with all current regulations (i.e., at the time of disturbance) pertaining to fill of Ephemeral Channel-2 (0.001 acre). ▪ If regulations in place at the time of site disturbance require permits from the USACE for filling an ephemeral drainage: the acreage, location, and method(s) for compensation for fill shall be determined during the permitting process in accordance with USACE standards. The project shall adhere to a "no net loss" standard for waters of the U.S. and waters of the State. Suitable habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods approved by the USACE and Central Valley Regional Water Quality Control Board, as	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		jurisdictionally appropriate. The replacement of waters will be equivalent to the nature of the habitat lost and will be provided at a suitable ratio to ensure that, at a minimum, there is no net loss of habitat acreage or value. The replacement habitat will be set aside in perpetuity for habitat use. ▪ Compensation may also include purchasing credits from a Corps and/or state or federally approved mitigation bank at a ratio prescribed in the applicable Section 404 Permit as necessary to achieve no net loss of waters of the U.S. For waters of the state, compensation may be through the National Fish and Wildlife Foundation Sacramento District California In-Lieu Fee Program. ▪ Alternatively, if final project plans allow for full avoidance and no fill of Ephemeral Channel 2 pursuant to the determination of the project's wetlands biologist; Mitigation Measures BIO-3.1 and BIO-3.2 may be substituted to ensure avoidance. ▪ This measure shall occur prior to issuance of grading permits. All permit provisions shall be implemented and maintained in accordance with the applicable permits.	
BIO-3.3: The project has the potential to adversely impact waters of the U.S. indirectly by degrading water quality through construction activities.	S	BIO-3.4: Best Management Practices (BMPs) to Protect Water Quality (Including NOI/NPDES/SWPPP). Prior to issuance of grading permits, the project contractor shall implement the following: ▪ Prepare an Erosion Control Plan for implementation for any construction to take place between October 15 and May 15 of any year. In the absence of such an approved plan, all construction shall cease on or before October 15, except that necessary to implement erosion control measures. If necessary, the plan shall be submitted to the County Public Works Department for review and approval. ▪ Submit to the State Water Resources Control Board Storm Water Permitting Unit, a Notice of Intent (NOI) to obtain coverage under the General Construction Activity Storm Water Permit - California's National Pollution Discharge Elimination System (NPDES) general permit for construction related storm water discharges for the disturbance of one acre or more. Disturbances	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		of less than one acre may also require an NOI for coverage under the NPDES General Permit for construction-related storm water discharge and the State Water Resources Control Board Permitting Unit shall be contacted for determination of permit requirements. Commercial and Industrial developments may require an NOI even if less than one acre is to be disturbed. Obtain coverage or an exemption from these requirements. [Federal Water Pollution Control Act, Section 401, California Clean Water Act]. The permit may include preparation of a Stormwater Pollution Prevention Plan (SWPPP). ▪ This measure shall be incorporated into the project bid package and contract.	
BIO-4.1: The project has the potential to indirectly interfere with the movement of native resident mule deer traveling to and from winter range through the introduction of additional people, pets and traffic.	S	BIO-4.1a: Enhance Rim Fire Burned Deer Winter Range and/or Data. Prior to issuance of a certificate of occupancy, the project proponents shall contribute $1,100 per acre for approximately 43.4 acres to a non-profit (e.g., Yosemite Stanislaus Solutions) to be used for activities associated with either enhancing deer winter range or providing updated research data to support herd management within the footprint of the Rim Fire.	LTS
		BIO-4.1b: Keep Dogs Leashed. The project sponsor shall implement the following: ▪ Dogs shall be kept on leash or otherwise prohibited from running free outdoors. Signs shall be posted along all project trails stating that dogs shall be kept on leash. ▪ The project website, booking site, and/or brochures shall advise visitors of this requirement. A Notice of Action shall be filed with the County Clerk on the project parcels including the project conditions specifying that this measure shall be continued throughout the life of the project.	
		BIO-4.1c: Stay on Trails/Education. The project sponsor shall implement the following: ▪ Visitors shall be required to stay on designated trails at the project site when hiking within the project boundaries to minimize wintering deer/human interactions. Signs shall be	

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		posted along all project trails stating that visitors shall stay on trails and shall not approach deer (in particular between November 30 and April 30 when deer are expected to be migrating to and from their wintering grounds). In consultation with the project biologist, the project proponents shall prepare an interpretive trail sign/plaque or signs/plaques describing the life history of the Yosemite Deer Herd, the area's importance as wintering deer habitat and as a migratory corridor, and the necessity to avoid approaching non-resident deer during their winter migrations. ▪ The project website, booking site, and/or brochures shall advise visitors of the requirement to avoid approaching non-resident deer during winter migrations.	
BIO-4.2: If there is fencing associated with the project, it has the potential to trap, injure, or impede deer movements, resulting in deer injuries or fatalities. This would indirectly interfere with the movement of native resident mule deer traveling to and from winter range.	S	BIO-4.2a: Deer-Friendly Fencing. Prior to issuance of a final certificate of occupancy, the project contractor shall implement the following: ▪ To prevent trapping, injuring, or impeding deer movement; barbed wire fencing is prohibited. Non barb-wired fencing immediately surrounding structures (e.g., storage facilities, swimming pools) where deer are less likely to travel is permitted. Additional Fencing design shall be subject to review and approval by the project biologist following one of the recommended designs found in a Landowner's Guide to Wildlife Friendly Fences: How to Build a Fence with Wildlife in Mind. 2nd edition, 2012 (or as may be updated) by the Montana Dpt. of Fish Wildlife and Parks. Alternative fencing designs shall be approved by CDFW prior to installation. ▪ A Notice of Action shall be filed with the County Clerk on the project parcels including the project conditions specifying that this measure shall be continued throughout the life of the project.	LTS
		BIO-4.2b: Implement Mitigation Measures BIO-4.1b and BIO-4.1c.	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
BIO-5.1: The project has the potential to conflict with Public Resources Code 21083.4 related to oak tree protection.	S	BIO-5.1a: Implement Mitigation Measure BIO -1.1b.	LTS
		BIO-5.1b: Native Oak Tree Protection. Throughout project construction, for native oak trees greater than 5 inches diameter at breast height (DBH), to be retained, to the maximum extent feasible: ▪ Limit ground-disturbing activities to outside the dripline of native oaks and preferably outside 1-1/2 times the dripline. ▪ No storage equipment, supplies, vehicles, debris, construction wastewater, paint, stucco, concrete or any other clean-up waste, and temporary or permanent structures shall be placed within the driplines. ▪ Avoid cutting oak roots. ▪ Use boring, rather than trenching, within driplines. ▪ Avoid equipment damage to limbs, trunks, and roots of oaks trees. ▪ Do not attach signs, ropes, cables or other items to trees.	
BIO-5.2: Although not planned to do so, construction activities have the potential encroach within open space boundaries intended to protect wildlife habitat.	S	BIO-5.2: Install ESA Fencing along the existing Open Space Zoning District boundaries where active construction will occur within 50 feet of the boundaries. The project contractor shall install ESA fencing along existing open space boundaries where active construction will occur within 50 feet of existing open space boundaries. Fencing shall be shown on the final construction documents. This measure shall be incorporated into the project bid package and contract and implemented prior to issuance of grading permits.	LTS
BIO-6: 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.	NI	N/A	N/A
BIO-7: Increased traffic from the proposed project in combination with proposed adjacent projects could	S	BIO-7: Implement Mitigation Measures BIO-4.1a and BIO-4.2a.	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
increase deer fatalities along Highway 120 within the project vicinity, interfering with migrating native mule deer.			
CULTURAL AND TRIBAL CULTURAL RESOURCES			
CULT-1: Ground disturbing activities may result in unanticipated discoveries of cultural resources. Construction activities as part of the proposed project could impair or destroy previously undiscovered prehistoric or historical resources extracted during earth disturbing activities.	S	CULT-1a: Prior to the issuance of grading permits, the County shall confirm the applicant has required all construction crews to undergo adequate training for the identification of federal- or State-eligible cultural resources, and that the construction crews are aware of the potential for previously undiscovered archaeological or paleontological resources on-site, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work. Examples of prehistoric resources may include: stone tools and manufacturing debris; milling equipment such as bedrock mortars, portable mortars, and pestles; darkened or stained soils (midden) that may contain dietary remains such as shell and bone; as well as human remains. Historic resources may include: burial plots; structural foundations; mining spoils piles and prospecting pits; cabin pads; and trash scatters consisting of cans with soldered seams or tops, bottles, cut (square) nails, and ceramics.	LTS
		CULT-1b: In the event that unanticipated discoveries of potentially sensitive cultural resources are encountered during the construction period, all activity should cease within 100 feet of the find until a qualified archaeologist or paleontologist, who meets federal criteria under 36 CFR 61, can determine the significance of the find and determine the appropriate mitigation. If the deposits are determined to be non-significant by a qualified archaeologist or paleontologist, avoidance is not necessary. If the deposits are determined to be potentially significant by the qualified archaeologist or paleontologist, the resources shall be avoided if feasible. If avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the archaeologist and paleontologist, in coordination with the County,	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		local tribes, and the CEQA Guidelines Section 15126.4 (b)(3)(C), which requires implementation of a data recovery plan. The data recovery plan shall include provisions for adequately recovering all scientifically consequential information from and about any discovered archaeological or paleontological materials and include recommendations for the treatment of these resources. In-place preservation of the archaeological or paleontological resources is the preferred manner of mitigating potential impacts, as it maintains the relationship between the resource and the archaeological or paleontological context. In-place preservation also reduces the potential for conflicts with the religious or cultural values of groups associated with the resource. Other mitigation options include, but are not limited to, the full or partial removal and curation of the resource. The County shall confirm that the project applicant has retained a qualified archeologist and paleontologist for the preparation and implementation of the data recovery plan. The recovery plan shall be submitted to the project applicant, the County, and the Central California Information Center. A data recovery plan shall not be required for resources that have been deemed by the Central California Information Center as adequately recorded and recovered by studies already completed. Once the recovery plan is reviewed and approved by the County and any appropriate resource recovery completed, project construction activity within the area of the find may resume.	
CULT-2: Ground disturbing activities may result in unanticipated discoveries of archaeological resources.	S	CULT-2: Implement Mitigation Measures CULT-1a and CULT-1b.	LTS
CULT-3: Construction activities may result in unanticipated discovery of human remains interred outside of dedicated cemeteries.	S	CULT-3: If human remains are encountered during ground-disturbing activities within the project site, the project contractor and/or on-site supervisor shall immediately halt all work within 100 feet of the discovery and the project contractor shall immediately notify the Tuolumne County Coroner (Coroner), and the Tuolumne County Community Development Department. In coordination with the	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		County, the project applicant and contractor shall contact a qualified archaeologist meeting federal criteria under 36 CFR 61 to assess the situation and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner shall notify the NAHC within 24 hours of this identification. The NAHC will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment or disposition, with proper dignity, of the remains and any associated grave goods. Upon completion of the assessment, the qualified archaeologist shall prepare a report documenting the background to the finds and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the project applicant, the County, and the Central California Information Center. Once the report is reviewed and approved by the County, and any appropriate treatment completed, project construction activity within the area of the find may resume.	
CULT-4: Implementation of the proposed project may cause a substantial adverse change in the significance of a TCR, as defined in Public Resources Code Section 21074.	S	**CULT-4a:** Implement Mitigation Measures CULT-1a and CULT-1b.	LTS
		CULT-4b: Prior to the initiation of any construction activities, the project applicant shall provide one-time site access to a Tuolumne Band representative(s) to remove native plants for the purpose of transplanting them to the Four Seasons Native Plan Nursery on the Tuolumne Rancheria.	
		CULT-4c: The project site plan shall be amended to identify a 50-foot buffer around the top of the knoll (see Figure 4.4-1 of this Draft EIR) as a Me-Wuk Open Space area. This area will be available for quiet enjoyment for the following uses: guest/visitor recreational activities, guest/visitor assembly, and guest/visitor programs. The project developer shall not construct or otherwise place any permanent structures or improvements within the 50-foot buffer.	

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		CULT-4d: Prior to the initiation of any construction activities, the project applicant shall provide one-time site access to a Tuolumne Band representative(s) to gather firewood on the project site.	
CULT-5: The project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to cultural resources and Tribal Cultural Resources.	LTS	N/A	N/A
ENERGY			
ENE-1: The project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.	LTS	N/A	N/A
ENE-2: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	N/A	N/A
ENE-3: The project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to energy conservation and renewable energy.	LTS	N/A	N/A
FORESTRY RESOURCES			
FOR-1: The project would not conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).	NI	N/A	N/A
FOR-2: The project would not result in an adverse effect associated with the loss of forest land or conversion of forest land to non-forest land.	LTS	N/A	N/A
FOR-3: The project would not 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.	NI	N/A	N/A

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Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
FOR-4: The proposed project would result in less-than-significant cumulative impacts with respect to forestry resources.	LTS	N/A	N/A
GEOLOGY AND SOILS			
GEO-1: The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; iv) landslides, mudslides, or other similar hazards.	LTS	N/A	N/A
GEO-2: The project would not result in substantial soil erosion or the loss of topsoil.	LTS	N/A	N/A
GEO-3: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	LTS	N/A	N/A
GEO-4: The project site contains small quantities of expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), but would not create substantial direct or indirect risks to life or property.	LTS	N/A	N/A
GEO-5: The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	LTS	N/A	N/A
GEO-6: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	LTS	N/A	N/A
GEO-7: Project impacts are not cumulatively significant with other development projects in the vicinity.	LTS	N/A	N/A

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Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
GREENHOUSE GAS EMISSIONS			
GHG-1.1: Construction of the proposed project would result in a net increase in GHG emissions.	S	**GHG -1.1a:** The proposed project shall use electrically powered construction equipment, where feasible.	SU
		GHG-1.1b: The net increase in GHG emissions associated with the Terra Vi Lodge Project could be further reduced by the applicant purchasing carbon credits to offset GHG emissions. Carbon credits, however, are market-based. The availability, amount, and price of carbon credits fluctuate over time. As a result, it is unknown if local carbon credit offsets would be available at the time the project is implemented. Additional carbon credit offsets are available on a statewide or national level. However, even though the impact of GHG emissions is considered to be global in scale, the CEQA legal adequacy of applying statewide or national offsets to individual local projects has been questioned. In addition, while the County considered application of carbon credits to offset GHG emissions due to the proposed project, the County General Plan places a higher priority on implementing local mitigation measures before application of offsets. As a result of the unknown availability of local carbon credits, mitigation measures needed to eliminate any net increase in GHG emissions are considered to be not available, application of this mitigation measure is not considered to reduce the GHG emissions impacts of the project to a less-than-significant level, and this impact is considered to be significant and unavoidable.	
GHG-1.2: Operation of the proposed project would result in a net increase in GHG emissions.	S	**GHG-1.2a:** The proposed project shall use electrically powered landscape equipment during outdoor landscaping and maintenance activities.	SU
		GHG-1.2b: As noted in the description of Mitigation Measure GHG-1.1b, because of the unknown availability of local carbon credits, mitigation measures needed to eliminate any net increase in GHG emissions are considered to be not available, application of this mitigation measure is not considered to reduce the GHG emissions impacts of the project to a less-than-significant level, and this impact is considered to be significant and unavoidable.	

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
GHG-2: The project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	N/A	N/A
HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.	LTS	N/A	N/A
HAZ-2: The project would not 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.	LTS	N/A	N/A
HAZ-3: The project would not emit hazardous emissions or handle hazardous materials, substances or waste within ¼-mile of an existing or proposed school.	NI	N/A	N/A
HAZ-4: The project would not be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.	NI	N/A	N/A
HAZ-5: Operation of an emergency helipad on the proposed project could result in safety hazard impacts to people working or residing within the project area.	S	HAZ-5: Prior to the start of any helipad operations on the project site, the project shall receive airspace determination approvals from the Federal Aviation Administration, a building permit from the Tuolumne County Building Division, and a Letter of Land Use Consistency from the Tuolumne County Airport Land Use Commission.	LTS
HAZ-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	N/A	N/A
HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	LTS	N/A	N/A
HAZ-8: The proposed project would result in less-than-significant cumulative impacts with respect to hazards and hazardous materials.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
HYDROLOGY AND WATER QUALITY			
HYD-1: The proposed project may increase post-project runoff thus violating water quality standards.	S	HYD-1a: A Drainage Plan for the site shall be prepared that specifies how runoff on the site will be managed in order to protect water quality. The plans will include detailed runoff calculations to appropriately size culverts, bridges, retention ponds/areas, and roadside ditches to meet the drainage requirements of the project site. The purpose of the plan will be to prevent the creation of localized on- or off-site flooding and to prevent any negative water quality effects off-site. If necessary, the plan shall be submitted to the Engineering Development Division of the Tuolumne County Public Works Department for review and approval.	LTS
		HYD-1b: Detention and/or retention facilities shall be designed to the satisfaction of the Tuolumne County Engineering Development Department staff and shall be included in the drainage report as described in Mitigation Measure HYD-1. These facilities shall capture surface runoff and retain flows such that the rate of surface runoff does not exceed existing flows. Maintenance of retention facilities shall be required by Tuolumne County.	
HYD-2: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	LTS	N/A	N/A
HYD-3: The proposed project would increase impervious surfaces and post-project stormwater volumes which could exceed pre-project development volumes thus requiring the expansion of existing stormwater facilities or the construction of new facilities.	S	HYD-3: Implement Mitigation Measures HYD-1a and HYD-1b.	LTS
HYD-4: The proposed site is not located in a 100-year floodplain, dam inundation, tsunami, or seiche zone and would not release pollutants due to inundation from a flood hazard.	NI	N/A	N/A
HYD-5: The proposed project would not obstruct or conflict with the implementation of a water quality	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
control plan or sustainable groundwater management plan.			
HYD-6: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to hydrology and water quality.	LTS	N/A	N/A
LAND USE AND PLANNING			
LU-1: The project would not physically divide an established community.	LTS	N/A	N/A
LU-2: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	N/A	N/A
LU-3: The proposed project would not result in significant cumulative impacts with respect to land use and planning.	LTS	N/A	N/A
NOISE			
NOI-1.1: The project would generate a substantial permanent increase in maintenance yard noise in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards.	S	NOI-1.1: In order to satisfy applicable Tuolumne County General Plan daytime and nighttime noise level limits at the nearest existing sensitive use to the project, and subsequently result in maintenance yard noise levels at or below ambient noise conditions at that use, the following noise mitigation measures shall be implemented: ▪ Construct a solid noise barrier measuring 8-feet in height along the north, east and west sides of the maintenance yard boundary, as depicted in Figure 4.12-2. The barrier could be constructed of either masonry or precast concrete panels. A noise barrier constructed of wood (or wood composite) fence material with overlapping slat construction would also be sufficient. The purpose of overlapping slats and using screws rather than nails is to ensure that prolonged exposure to the elements does not result in visible gaps through the slats which would result in reduced noise barrier effectiveness.	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		▪ Ensure that the generator selected for the maintenance yard have a reference noise level not to exceed 70 dB at a distance of 50 feet.	
NOI-1.2: The project would generate combined on-site operational noise in the vicinity of the project in excess of standards established in the Tuolumne General Plan daytime and nighttime hourly average noise level standards.	S	NOI-1.2a: To satisfy applicable Tuolumne County General Plan noise level increase criteria at the nearest existing sensitive use to the project, the project shall limit on-site truck deliveries to daytime hours only (7:00 a.m. to 10:00 p.m.) and limit refuse collection activities to daytime hours only (7:00 a.m. to 10:00 p.m.).	LTS
		NOI-1.2b: Implement Mitigation Measure NOI-1.1.	
NOI-2: The project would not result in generation of excessive groundborne vibration or groundborne noise levels.	LTS	N/A	N/A
NOI-3.1: Noise levels associated with use of the proposed emergency helipad could result in substantial temporary increases in ambient daytime and/or nighttime noise levels at nearby existing sensitive uses.	S	NOI-3.1: While mitigation measures related to flight path design and helipad location could potentially be effective in reducing noise levels at the existing residences nearest to the project emergency helipad, it is also possible that noise exposure associated with the selected flight path could impact other sensitive uses along the route. In addition, due to the nature of the operations associated with the proposed helipad (emergency situations), mitigation measures such as limitations on aircraft models and frequency of flights per day (i.e., number per day and time of day) are generally considered to be infeasible in application. Because there are no identified feasible mitigation measures that would ensure noise levels generated by emergency flight operations at the project emergency helipad would not result in substantial increases in ambient noise levels, this impact is considered to be significant and unavoidable.	SU
NOI-3.2: Noise levels associated with use of the proposed emergency helipad could exceed the Tuolumne County General Plan 40 dB L_{max} interior noise level standard within the sensitive interior areas of the proposed development.	S	NOI-3.2a: Window and door assemblies of all lodging within the proposed development should be upgraded to a minimum STC rating of 32.	LTS
		NOI-3.2b: Disclosure statements should be provided to inform guests of the potential for elevated interior noise levels during	

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		emergency operations at the helipad, especially during nighttime hours.	
NOI-4: The proposed project would result in a less-than-significant cumulative impact with respect to noise.	LTS	N/A	N/A
POPULATION AND HOUSING			
POP-1: The project would not induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	LTS	N/A	N/A
POP-2: The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	NI	N/A	N/A
POP-3: The project would not contribute to significant cumulative population and housing impacts.	LTS	N/A	N/A
PUBLIC SERVICES AND RECREATION			
PS-1: The proposed project has the potential to increase demand for fire protection services to the project site. The construction or alteration of fire protection facilities to meet the increase in demand could cause significant environmental impacts.	S	PS-1: Prior to issuance of the certificate of occupancy, the project sponsor shall provide trained and certified emergency staff. The project shall provide enough staff to ensure that two emergency staff are on premises and available to respond to emergencies at all times. The emergency staff shall be trained to meet Tuolumne County Fire Department volunteer fire service standards. Staffing may be provided by Terra Vi employees who have completed the required training. The Terra Vi project shall provide personal protection equipment (PPE) and positive communication equipment for all emergency staff. 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	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
		within the property. In addition, there shall be 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 Tuolumne County and maintained per manufacturer and National Fire Protection Association (NFPA) standards by the Terra Vi project sponsor.	
PS-2: The proposed project, in combination with cumulative projects, has the potential to increase demand for fire protection services in the service area. The construction or alteration of fire protection facilities to meet the increase in demand could cause significant environmental impacts.	S	**PS-2:** Implement Mitigation Measure PS-1.	LTS
PS-3: The proposed project has the potential to increase demand for police services to the project site. The construction or alteration of police facilities to meet the increase in demand could cause significant environmental impacts.	S	**PS-3:** The Terra Vi Lodge shall include private security personnel on staff (Manager on Duty) to provide security, complaint resolution, and interfaces with law enforcement/emergency personnel in case of an incident, emergency, or evacuation. These personnel shall be on-site 24 hours a day, seven days a week. The security personnel shall make regular rounds of the Terra Vi Lodge and employee housing and report internally any incidences, as well as report to local authorities if the situation warrants it.	LTS
PS-4: The proposed project, in combination with cumulative projects, has the potential to increase demand for police services in the service area. The construction or alteration of police facilities to meet the increase in demand could cause significant environmental impacts.	S	**PS-4:** Implement Mitigation Measure PS-3.	LTS
PS-5: The proposed project would not result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.	NI	N/A	N/A
PS-6: The proposed project would not result in cumulative impacts with respect to school services.	NI	N/A	N/A
PS-7: The proposed project would not result in the need for new or physically altered public facilities, the	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.			
PS-8: The proposed project would result in less-than-significant cumulative impacts with respect to the construction of other public facilities.	LTS	N/A	N/A
PS-9: The project would not result in the need for new or physically altered park facilities or other recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.	LTS	N/A	N/A
PS-10: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated.	LTS	N/A	N/A
PS-11: The project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	LTS	N/A	N/A
PS-12: The project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to parks.	LTS	N/A	N/A
TRANSPORTATION			
TRANS-1.1: The project has the potential to generate transit ridership in excess of available capacity on the YARTS line serving the SR 120 corridor, during the peak usage period (May 27 to September 2).	S	TRANS-1.1: The project applicant shall provide an on-site transit coordinator to coordinate guest transit use to help ensure smooth operations at the project site bus stop. The on-site transit coordinator would also serve as a point of contact between Terra Vi Lodge, YARTS, and the County to assist in identifying and responding to issues related to transit services that may arise at the project site.	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
TRANS -1.2: The project would result in construction automobile and truck traffic that accesses the site from SR 120 and, in combination with necessary lane closures, this activity would temporarily disrupt background traffic flow. The project's construction truck traffic could result in deterioration of the condition of Sawmill Mountain Road.	S	TRANS-1.2a: The project applicant or contractor shall prepare a Construction Traffic Control Plan as part of the Caltrans encroachment permit application for all work within the state right of way on SR 120.	LTS
		TRANS-1.2b: Prior to the start of any construction activity on-site or in the SR 120/Sawmill Mountain Road intersection, the applicant shall coordinate with the Tuolumne County Public Works Department for an on-site inspection of Sawmill Mountain Road to assess the road surface conditions. Following completion of project construction, but prior to issuance of an occupancy permit, the applicant shall schedule a post-construction inspection to determine if deterioration of the road surface occurred, and if so, the applicant/contractor shall restore the road to pre-construction conditions.	
TRANS-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	LTS	N/A	N/A
TRANS-3: The site distance for project-generated traffic turning right (westerly) from Sawmill Mountain Road onto SR 120 is 400 feet, which does not meet the minimum site distance requirements of 500 feet.	S	TRANS-3: Construction of the proposed left turn lane from SR 120 to Sawmill Mountain to accommodate project-generated traffic will require cutting the hillside and vegetation removal in conformance with Caltrans standards, which will open the line of site to an acceptable distance, as determined by Caltrans.	LTS
TRANS-4: The project would not result in inadequate emergency access.	LTS	N/A	N/A
TRANS-5: The project, in combination with past, present, and reasonably foreseeable projects, would not in significant cumulative impacts with respect to transportation and traffic, including mass transit, non-motorized transit.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
UTILITIES AND SERVICE SYSTEMS			
UTIL-1: The proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.	LTS	N/A	N/A
UTIL-2: The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	LTS	N/A	N/A
UTIL-3: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to water service.	LTS	N/A	N/A
UTIL-4: The proposed project would result in the construction of new wastewater treatment facilities, the construction of which would not cause significant environmental effects.	LTS	N/A	N/A
UTIL-5: The proposed project would not connect to the public sewer system and would not impact the wastewater treatment provider.	NI	N/A	N/A
UTIL-6: The proposed project, in combination with past, present, and reasonably foreseeable projects would result in less-than-significant cumulative impacts with respect to wastewater service.	LTS	N/A	N/A
UTIL-7: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs.	LTS	N/A	N/A
UTIL-8: The proposed project would comply with federal, State, and local statutes and regulations related to solid waste.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
UTIL-9: The proposed project, in combination with past, present, and reasonably foreseeable development, would not result in significant impacts with respect to solid waste.	LTS	N/A	N/A
UTIL-10: The proposed project would increase post-project runoff and may result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	S	UTIL-10: Implement Mitigation Measures HYD-1a and HYD-1b.	LTS
UTIL-11: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to stormwater infrastructure.	LTS	N/A	N/A
UTIL-12: The proposed project would not result in a substantial increase in electrical service demands and would not require new energy supply facilities and transmission infrastructure or capacity enhancing alterations to existing facilities.	LTS	N/A	N/A
UTIL-13: The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to energy conservation.	LTS	N/A	N/A
WILDFIRE			
WF-1: The project would be located in a State Responsibility Area, but it would not substantially impair an adopted emergency response plan or emergency evacuation plan.	LTS	N/A	N/A
WF-2: The project includes several project features that would address and reduce wildfire hazards. However, project landscaping plans are not consistent with these measures. Therefore, the project has the potential to, due to the increase of people and vehicles on the project site, exacerbate wildfire risks and expose project occupants to	S	WF-2: Prior to issuance of building permits, the applicant shall submit a Wildland Fire Prevention Plan and Vegetation Management Plan to the Tuolumne County Fire Prevention Bureau for review and approval. The project site plan and landscaping documents shall be revised to conform to the Vegetation Management Plan. These revisions shall include, but are not limited to, the following measures:	LTS

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
pollutant concentrations from a wildfire or uncontrolled spread of wildfire.		▪ The perimeter of all structures shall be surrounded by a 5-foot non-combustible zone. ▪ Project landscaping shall be fire resistant, with a planting palette consisting of native hardwoods and other fire-resistant native vegetation. ▪ Landscape plantings shall be installed in a way that strategically staggers placement and planting heights to provide effective screening of the proposed project from adjacent roadways. ▪ Areas within 200 feet of all structures shall be managed as defensible space (in compliance with the California Fire Code and Public Resources Code Section 4291, with vegetative fuels that would produce 2-foot or shorter flames. ▪ The entire project site, including open all undeveloped areas, shall be managed as fire-resistant landscaping that adheres to CAL FIRE's firescaping requirements, with widely spaced trees and shrubs. ▪ Any new plantings in the undeveloped areas of the site shall include a greater proportion of oaks. ▪ Undeveloped areas of the project site shall be managed so that they do not grow back in as high a density as existed before the 2013 Rim Fire. Brush and grass in these areas shall be maintained and managed so that continuous groupings do not exceed 120 square feet in area.	
WF-3: The project would be located in a State Responsibility Area and would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) but would not exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	LTS	N/A	N/A

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TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Significance without Mitigation	Mitigation Measures	Significance with Mitigation
WF-4: The project would be located in a State Responsibility Area and would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	LTS	N/A	N/A
WF-5: The project would not contribute to significant cumulative wildfire impacts.	LTS	N/A	N/A

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2. *Introduction*

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Chapter 14 California Code of Regulations, Section 15378[a], the Terra Vi Lodge Project is considered a "project" subject to environmental review as its implementation is "an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment." This Draft Environmental Impact Report (Draft EIR) provides an assessment of the potential environmental consequences of implementation of the project, herein referred to as the "proposed project." Additionally, this Draft EIR identifies mitigation measures and alternatives to the proposed project that would avoid or reduce significant impacts. This Draft EIR compares the development of the proposed project with the existing baseline condition, described in detail in Chapter 4, Environmental Evaluation, and each subchapter (Chapters 4.1 through 4.17). Tuolumne County (County) is the lead agency for the proposed project. This assessment is intended to inform the County's decision-makers, other responsible agencies, and the public-at-large of the nature of the proposed project and its effect on the environment.

2.1 PROPOSED PROJECT

The proposed project is designed as a hotel lodge comprised of various single, two-, and three-story elements. The building design accommodates a setback, maximizing the distance between taller structures and adjacent residential properties to minimize visibility from both public and private views. Elements of the project include a public market, general lodge with 100 guestrooms, two manager's suites, and multi-purpose uses, indoor and outdoor areas, 26 cabin rooms, as well as five employee apartments with four rooms in each unit, for a total of 20 employee rooms. A total of 40 jobs would be created once the project is operational. The proposed project would develop 18 percent (11.5 acres) of the project site with buildings, roads, and parking. An additional 1.4 acres would be used for the primary septic system. Refer to Figure 3-4 for the proposed project's site plan.

2.2 EIR SCOPE

This Draft EIR is a project-level EIR that identifies and analyzes site specific potential impacts of the project. This is in contrast to programmatic EIRs, which are used to assess the impact of land use plans where specific uses and plans for construction have not yet been determined. As a project-level EIR or project EIR, the environmental analysis primarily focuses on the changes in the environment that would result from the development of the proposed project. This project EIR examines the specific short-term impacts (construction) and long-term impacts (operation) that would occur as a result of project approval and implementation. For a complete listing of environmental topics covered in this Draft EIR, see Chapter 4, Environmental Evaluation.

2.3 ENVIRONMENTAL REVIEW PROCESS

2.3.1 DRAFT EIR

Pursuant to CEQA Section 21080(d)[1] and CEQA Guidelines Section 15063,[2] the County determined that the proposed project could result in potentially significant environmental impacts and that an EIR would be required. In compliance with CEQA Section 21080.4, the County circulated the Notice of Preparation (NOP) of an EIR for the proposed project to and interested agencies and persons on May 2, 2019 for a 30-day review period. Due to a clerical issue, the NOP was reissued and submitted to the Office of Planning and Research State Clearinghouse on November 15, 2019 for an additional 30-day review period. A public Scoping Meeting was held on May 13, 2019 at 6:00 p.m. in the Groveland Community Hall located at 18720 Main Street in the Town of Groveland. The NOP and scoping process solicited comments from responsible and trustee agencies, as well as interested parties regarding the scope of the Draft EIR. Appendix A of this Draft EIR contains the NOP, as well as the comments received by the County in response to the NOP.

The scope of this EIR was established by the County of Tuolumne through the EIR scoping process and includes an analysis of both the proposed project's impacts and cumulative impacts in the following issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Forestry Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Parks and Recreation
- Population and Housing
- Public Services
- Transportation
- Utilities and Service Systems
- Wildfire
- CEQA-Mandated Assessment Conclusions:
  - Significant Unavoidable Impacts
  - Impacts Found Not To Be Significant
  - Significant Irreversible Changes
  - Growth-Inducing Impacts

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 45-day comment period starting on June 16, 2020 and ending on July 30, 2020. During the comment period, the public is invited to submit written comments via mail or e-mails on the Draft EIR to the Tuolumne County Community Development Department. Written comments (electronic communication preferred) should be submitted to:

[1] The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000 to 21177.
[2] The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 to 15387.

Quincy Yaley, Community Development Department Director
County of Tuolumne
2 South Green Street
Sonora, CA 95370
Phone: (209) 533-5633
Email: QYaley@co.tuolumne.ca.us

2.3.2 FINAL EIR

Upon completion of the 45-day review period for the Draft EIR, the County will review all comments received and prepare written responses for each comment on the adequacy of the Draft EIR. A Final EIR will then be prepared, which contains all of the comments received, responses to comments raising environmental issues, and any changes to the Draft EIR. A public hearing will then be scheduled to concurrently consider a decision on the project and certification of the Final EIR. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing. All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to the public hearing.

If the Tuolumne County Planning Commission determines that the project may be approved, it will certify the Final EIR and adopt and incorporate into the project all feasible mitigation measures identified in the EIR and may also require other feasible mitigation measures as conditions of approval.

However, the Planning Commission may also find that the project does not satisfy the required findings for approval and decide to reject the project on that basis. In that case, the Planning Commission is not required to certify the Draft EIR.

The decisions regarding the Draft EIR and project approval would be appealable to the Tuolumne County Board of Supervisors, an elected body, which would then decide on both the EIR and project.

2.3.3 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that the lead agency adopt a monitoring or reporting program for any project for which it has made mitigation findings pursuant to Public Resources Code 21081. Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR. The Mitigation Monitoring and Reporting Program for the proposed project will be completed and available to the public prior to certification of this EIR.

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3. *Project Description*

This chapter describes the Terra Vi Lodge project, herein referred to as the "proposed project." This chapter describes the project site, the planning process, and the components of the proposed project, and provides a description of required approvals.

3.1 PROJECT LOCATION AND SITE CHARACTERISTICS

The project site consists of two parcels, assigned Assessor Parcel Numbers (APN) 068-120-060 (28.08 acres in area) and 068-120-061 (35.96 acres in area). The western parcel, APN 068-120-060, is located on the northern side of Highway 120. Most of it is east of Sawmill Mountain Road (also designated as Forest Road 1S03) but a portion of it lies on the west side of Sawmill Mountain Road. Sawmill Mountain Road is located within a 66-foot roadway easement on the project site. A materials storage and roadway easement is also located on the project site to allow the California Department of Transportation (Caltrans) to access a storage building directly to the west of the project site.

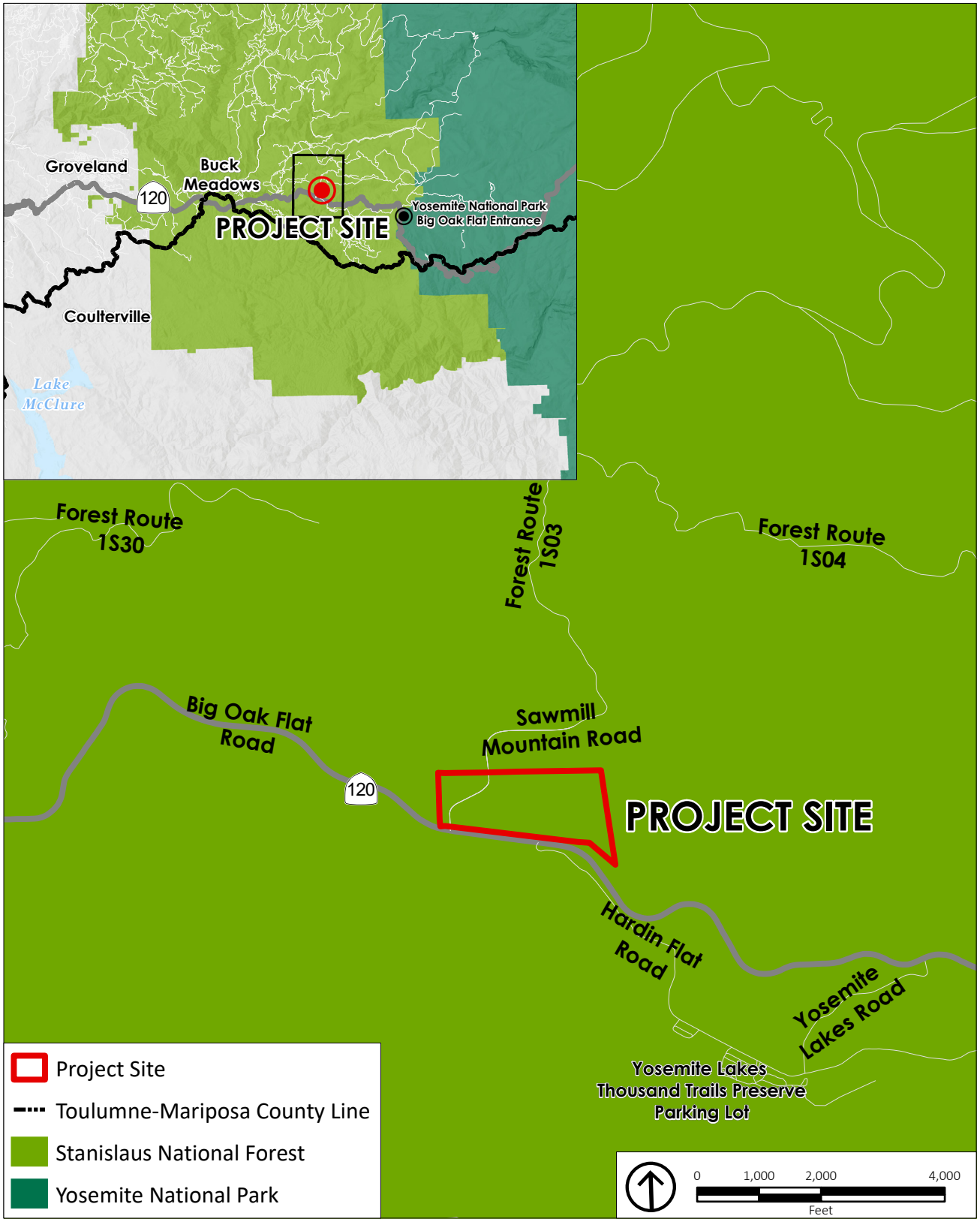
The eastern parcel, APN 068-120-061, is on the northern side of Highway 120 entirely east of Sawmill Mountain Road.

3.1.1 REGIONAL LOCATION

Tuolumne County is bordered to the north by Alpine and Calaveras Counties, to the west by Calaveras and Stanislaus Counties, to the south by Merced and Mariposa Counties, and to the east by Mono County. The 64-acre project site is located just north of the border between Tuolumne and Mariposa Counties. As shown on Figure 3-1, the site is located in the southern portion of unincorporated Tuolumne County, in the Stanislaus National Forest, and west of Yosemite National Park. The project site is approximately 25 miles southeast of Sonora, which is the County seat and only incorporated city in Tuolumne County. Regional access to the project site is provided via Highway 120, alternatively called Big Oak Flat Road.

3.1.2 LOCAL SETTING

As shown on Figure 3-1, the project site is located in a rural portion of unincorporated Tuolumne County at the intersection of Highway 120 and Sawmill Mountain Road. Local development includes rural residential homes to the north and walking and hiking trails in the surrounding vicinity. Nearby development also includes several campsites, resorts, and recreational vehicle sites. The nearest resort development sites are the Yosemite Lakes RV Resort located approximately 1 mile to the southeast and Sweetwater Campground located approximately 2.25 miles to the west.



Source: ESRI, 2019; National Park Service, 2019; Toulumne County, 2019; PlaceWorks, 2019.

Figure 3-1
Regional and Vicinity Map

3.1.3 EXISTING SITE CHARACTER

The project site is located at the base of a mountain at an elevation of 4,000 feet; from the project site, there are unobstructed views of ridgelines to the south. Existing site character is rural in nature, and no structures exist on-site. The project site was heavily burned in the 2013 Rim Fire, resulting in a significant burn scar that extends several acres into the site from Highway 120, and which destroyed most of the mature trees on-site.

3.1.4 LAND USE DESIGNATION AND ZONING

3.1.4.1 GENERAL PLAN

The project site is under the Parks and Recreation (R/P) General Plan land use designation, as shown below on Figure 3-2.[1] The R/P land use designation is described in the General Plan as intended for recreational uses of commercial nature to serve the tourist industry, while also providing leisure activities for county residents. Typical land uses allowed in this designation include parks, camping facilities, recreational vehicle parks, ski and other resort facilities, marinas, and commercial uses in support of such facilities and public utility and safety facilities. Surrounding General Plan land use designations include Rural Residential (RR) and Estate Residential (ER) to the north, Public (P) to the east and west, and Parks and Recreation (R/P) to the south.[2]

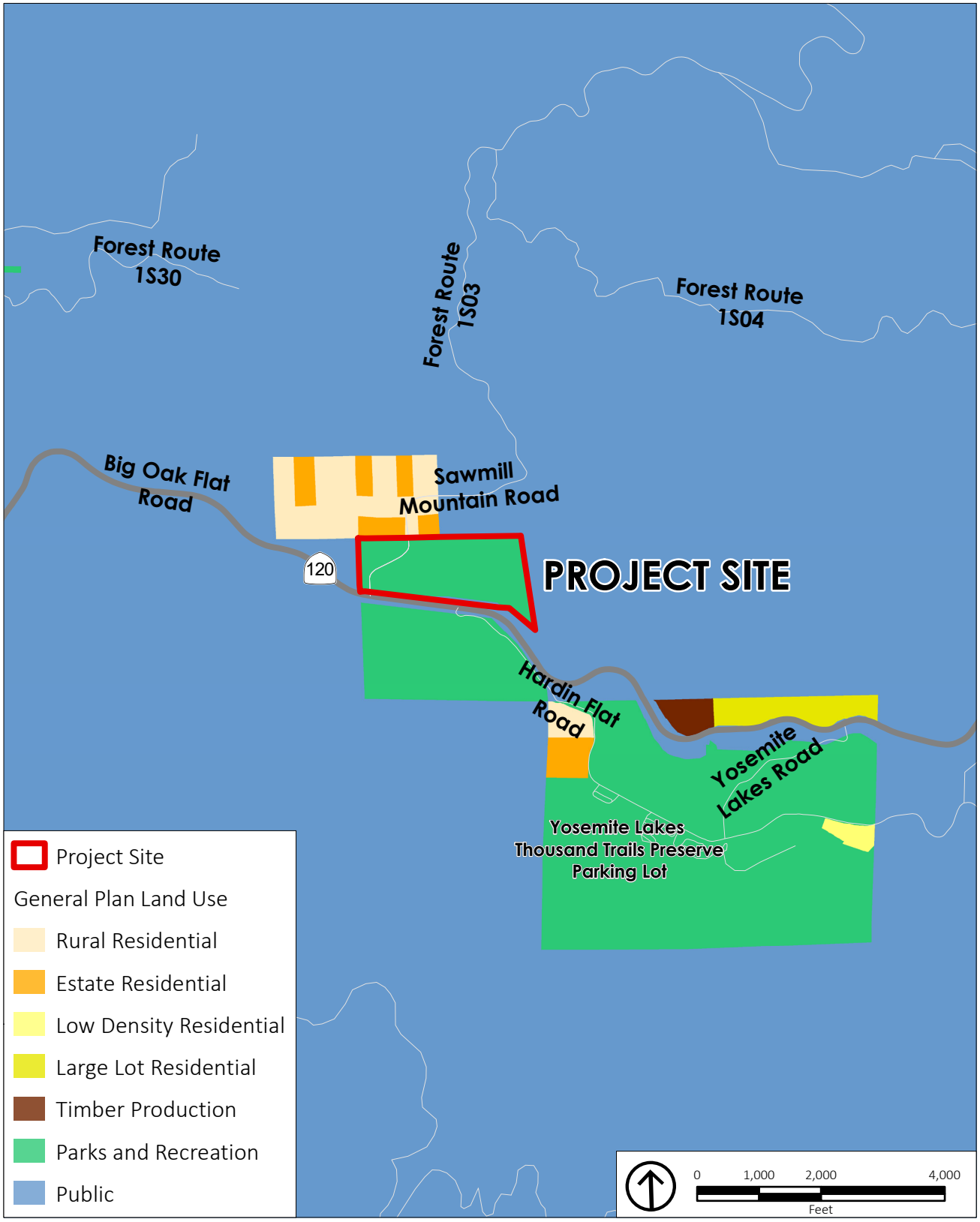
3.1.4.2 ZONING

The proposed project is located within two zoning districts: the C-K (Commercial Recreation) and O (Open Space) Zones, as shown below on Figure 3-3. Approximately 21 acres of the eastern parcel (APN 068-120-061) are within the O Zoning District. All proposed buildings and related structures would be located within the C-K district. Title 17 of the Tuolumne County Ordinance Code is the Tuolumne County Uniform Zoning Code. Permitted uses in the C-K Zoning District include, but are not limited to, recreational structures and developments, hotels and motels, indoor retail sales and services under 25,000 square feet of gross floor area, restaurants with or without outdoor seating, and accessory uses and structures appurtenant to permitted uses. The maximum floor area ratio (FAR) for the C-K District is 0.5.[3]

[1] Tuolumne County, Tuolumne County General Plan Land Use Designation Map with Zoning and Supervisor Districts, http://gis.co.tuolumne.ca.us:8093/flexviewers/General%20Plan%20And%20Zoning/, accessed on March 19, 2019.

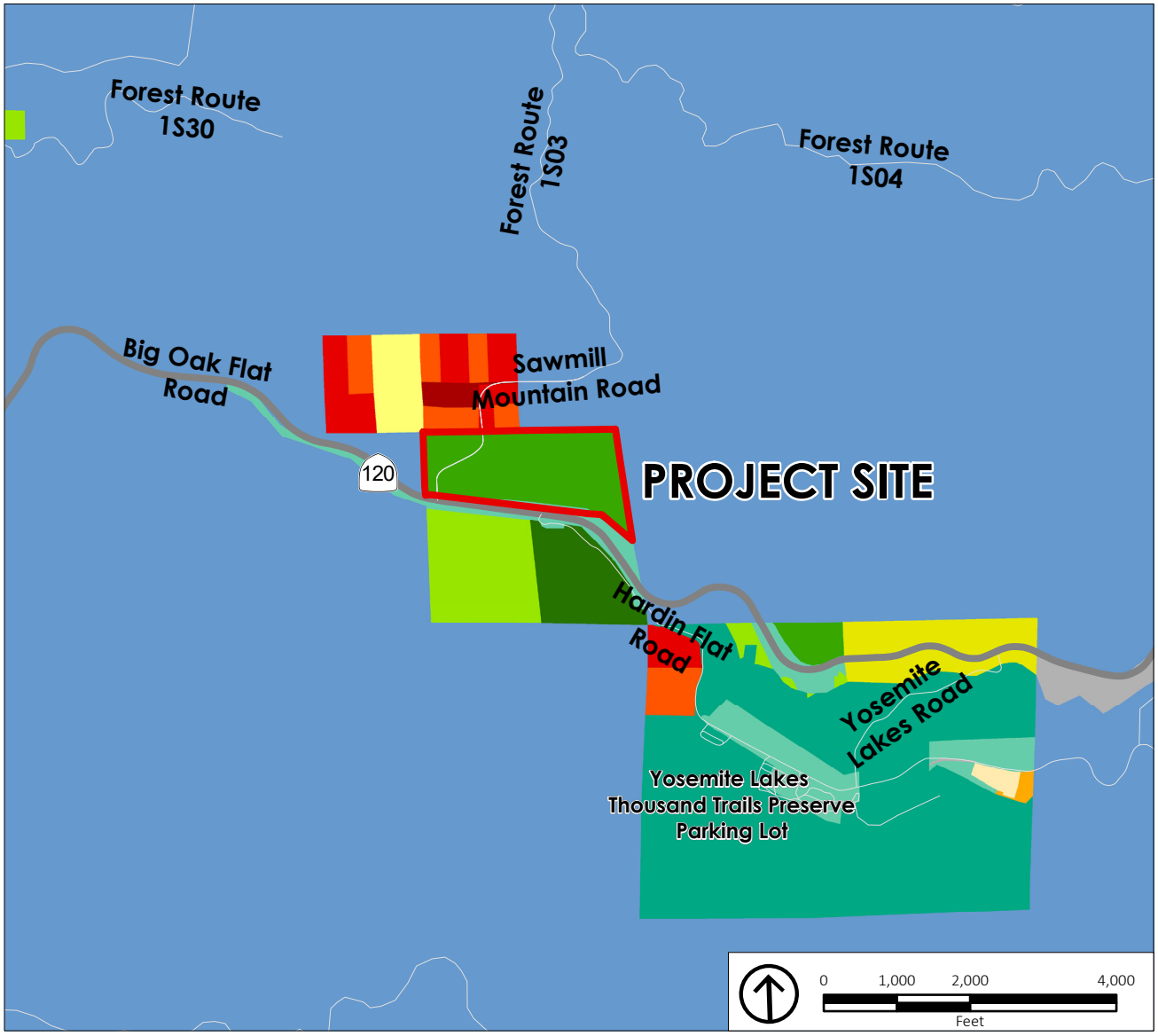
[2] Tuolumne County, Summary of Proposed Land Use Designation, Tuolumne County General Plan Update, page 8 and 9, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/10269/Summary-of-Land-Use-Designations?bidId=, accessed March 18, 2019.

[3] Tuolumne County, Tuolumne County Code of Ordinances, *Chapter 17.31 Commercial Recreational District, or (C-K) District,* https://www.tuolumnecounty.ca.gov/DocumentCenter/View/436/Chapter-1731---Commercial-Recreation-District-or-C-K-District?bidId=.



Source: ESRI, 2019; National Park Service, 2019; Toulumne County, 2019; PlaceWorks, 2019.

Figure 3-2
General Plan Land Use



Source: ESRI, 2019; National Park Service, 2019; Toulumne County, 2019; PlaceWorks, 2019.

Project Site

Zoning

- A-10 (General Agricultural 10 ac min)
- A-20 (General Agricultural 20 ac min)
- R-1 (Single Family Residential)
- RE-1 (Residential Estate 1 ac min)
- RE-2 (Residential Estate 2 ac min)
- RE-5 (Residential Estate 5 ac min)
- RE-5:PD (Residential Estate 5 ac min, Planned Development Combining District)
- C-K (Commercial Recreational)
- C-K & O (Commercial Recreational with Open Space)
- C-K & O-1 (Commercial Recreational with Valuable Wildlife Habitat Open Space)
- K (General Recreational)
- K & O & O-1 (General Recreational with Open Space and Valuable Wildlife Habitat Open Space)
- P (Public)
- Zoning Not Found

Figure 3-3
Zoning

The second Zoning District within which the proposed project is located, O, has the intent to protect the public by limiting development in areas not suitable for development because of flooding or other natural hazards and to provide areas of open space for the protection of wildlife habitat and scenic quality where vegetation removal may be appropriate in certain instances or for the preservation of cultural resources. Permitted uses in the O District include, but are not limited to, roads, driveways, trails, bridges, wells or sewage disposal systems permitted in conjunction with another entitlement for which an environmental review under CEQA has been adopted; vegetation removal required by the Tuolumne County Fire Prevention Bureau or conducted by hand; planting vegetation; and uses and land management activities approved for certain purposes. Conditional uses may be permitted in the O District when they do not conflict with scenic or wildlife habitat value or cause flooding, drainage, or fire hazards. Uses conditionally permitted include, but are not limited to, general recreation without buildings, farming or ranching without buildings, growing or harvesting timber, public utilities, vegetation removal, prospecting, sewage disposal systems, wells, docks, Christmas tree farms, and roads, driveways, or bridges where access through another district is not feasible.[4]

Surrounding Zoning Districts include Public (P) to the west and east of the project site, which generally consists of lands under the jurisdiction of public agencies such as federal, State, and public utilities agencies.[5] To the north of the site are several different Zoning Districts including Public (P), Residential Estate Two-Acre Minimum (RE-2), Residential Estate Five-Acre Minimum (RE-5), and General Agricultural 10-Acre Minimum (A-10). Zoning Districts to the south include Commercial Recreational (C-K) and Commercial Recreational with Open Space-1 (O-1).[6]

3.2 PROJECT OBJECTIVES

The project applicant has prepared the following project objectives for the project:

- Provide a financially viable, environmentally sensitive lodging option to address the increased demands for eco-sensitive resorts and Yosemite recreation tourism.
- Develop and operate a lodging facility at a scale sufficient to support a variety of accommodations, amenities and on-site recreation capabilities on an undeveloped property which is zoned for a commercial recreation use and is within 10 miles of the Yosemite National Park, Big Oak Flat entrance.
- Create a one-of-a-kind place where individuals, families and groups can experience one of nature's most beautiful settings. Incorporate indoor – outdoor relationships throughout the resort; design public spaces which include lobbies, dining, event and special amenity areas to have open connections to nature both visually and physically.

[4] Tuolumne County, Tuolumne County Code of Ordinances, *Chapter 17.14 Open Space District, or (O) District,* https://www.tuolumnecounty.ca.gov/DocumentCenter/View/424/Chapter-1714---Open-Space-District-or-O-District?bidId=.

[5] Tuolumne County, Tuolumne County Code of Ordinances, *Chapter 17.41 Public District, or (P) District,* https://www.tuolumnecounty.ca.gov/DocumentCenter/View/444/Chapter-1741---Public-District-or-P-District?bidId=.

[6] Tuolumne County, Tuolumne County General Plan Land Use Designation Map with Zoning and Supervisor Districts, http://gis.co.tuolumne.ca.us:8093/flexviewers/General%20Plan%20And%20Zoning/, accessed on March 19, 2019.

- Provide diverse recreational and wellness experiences to promote year-round use through education, outdoor recreation activities, wellness and well-being programs. The lodging facility will serve as a portal to the Stanislaus National Forest and U.S. Forest Service lands for hiking, trail running, biking and other outdoor activities.
- Provide a helicopter landing zone for emergency personnel to provide immediate medical treatment and transportation to regional hospitals for both the project users and the surrounding community.
- Reduce visual impacts at the project entrance by using low-rise structures that gradually increase in height as the building elements are pushed in an away from the neighboring properties. This design creates a maximum set-back for buildings, incorporates desirable height transitions, and enlarges the open space between the building structures and neighboring properties.
- Reduce noise to nearby residential properties by locating the activity recreation areas on the opposite side of the property and using the building orientation in a manner that provides substantial sound mitigation.
- Minimize light spillage by following Dark- Sky influenced design programs and following the California Title 24 Building Energy Efficiency Standards. An example of this is achieved by using downward positioned, fully shielded, high efficiency 3000K (Kelvin) LED (low-emitting diode) fixtures.
- Design and construct Type I fire resistive structures, fire prevention systems and defensible space areas by providing increased building separation, low building heights, high performance fire extinguishing and alarm systems, surplus water storage, hold-in-place refuge and complete perimeter accessibility to ensure fire-fighting and life-safety capabilities in the event of a wildland fire.
- Provide a robust parking design that is convenient but planned in such a way so not to dominate the site. Accomplish this by avoiding large expanses of asphalt and incorporating gently curving roads that follow the natural topography of the site. Use berms and landscape elements to screen and visually break up on-site roadways and parking areas.
- Incorporate a Yosemite Area Regional Transportation System (YARTS) stop area to foster and promote the use of public transportation for lodge guests, visitors and employees.
- Provide up to 30 day-use parking stalls for the public benefit to encourage the use of the public transportation or ride sharing to ease Yosemite National Park traffic.
- Develop a site which has a safe, reliable and sustainable source of water.
- Develop a site for which the geology (native physical structure and substance) is ideal for a septic system, whereby the optimal operating performance and service-life can be maintained.

3.3 PROJECT COMPONENTS

The proposed project is designed as a hotel lodge comprised of various single, two-, and three-story elements. The building design accommodates a setback, maximizing the distance between taller structures and adjacent residential properties to minimize visibility from both public and private views. Elements of the project include a public market, general lodge with 100 guestrooms and multi-purpose uses, indoor and outdoor areas, and 26 cabin guestrooms in seven buildings, as well as 5 employee

apartments with four rooms in each unit, for a total of 20 employee rooms. A total of 40 jobs would be created once the project is operational. The proposed project would develop 18 percent (11.5 acres) of the project site with buildings, roads, and parking. An additional 1.4 acres would be used for the primary septic system. Refer to Figure 3-4 for the proposed project's site plan. Additional project plans are provided in Appendix B of this Draft EIR.

The project would incorporate design elements into the building program which would include green building materials such as energy-efficient windows, skylights, doors, insulation, roofing, lighting, plumbing, and heating and cooling equipment. The proposed development would create a comprehensive energy-efficient building infrastructure and envelope. Solar panels are proposed to be constructed on the roof of the buildings.

3.3.1 MAIN PROJECT USES

3.3.1.1 GUEST LODGING

Hotel Lodge

The floor plans for the proposed lodge are shown in Figures 3-5 through 3-8. The proposed project would construct a total of 100 units of guest lodging within the main lodge, situated on the west side of the project site. The hotel lodge would be three stories in height. There are a variety of unit types that may accommodate individuals, couples, families, and larger groups. The lodge would include two "manager's suites," in addition to the 100 guest rooms, reserved for employee housing to accommodate the project's managers. The hotel lodge totals approximately 85,000 square feet of floor area.

Figure 3-9 illustrates the basement level of the hotel lodge, which would provide service spaces such as loading docks, an employee entrance and locker area, storage, a trash/recycling area, and offices.

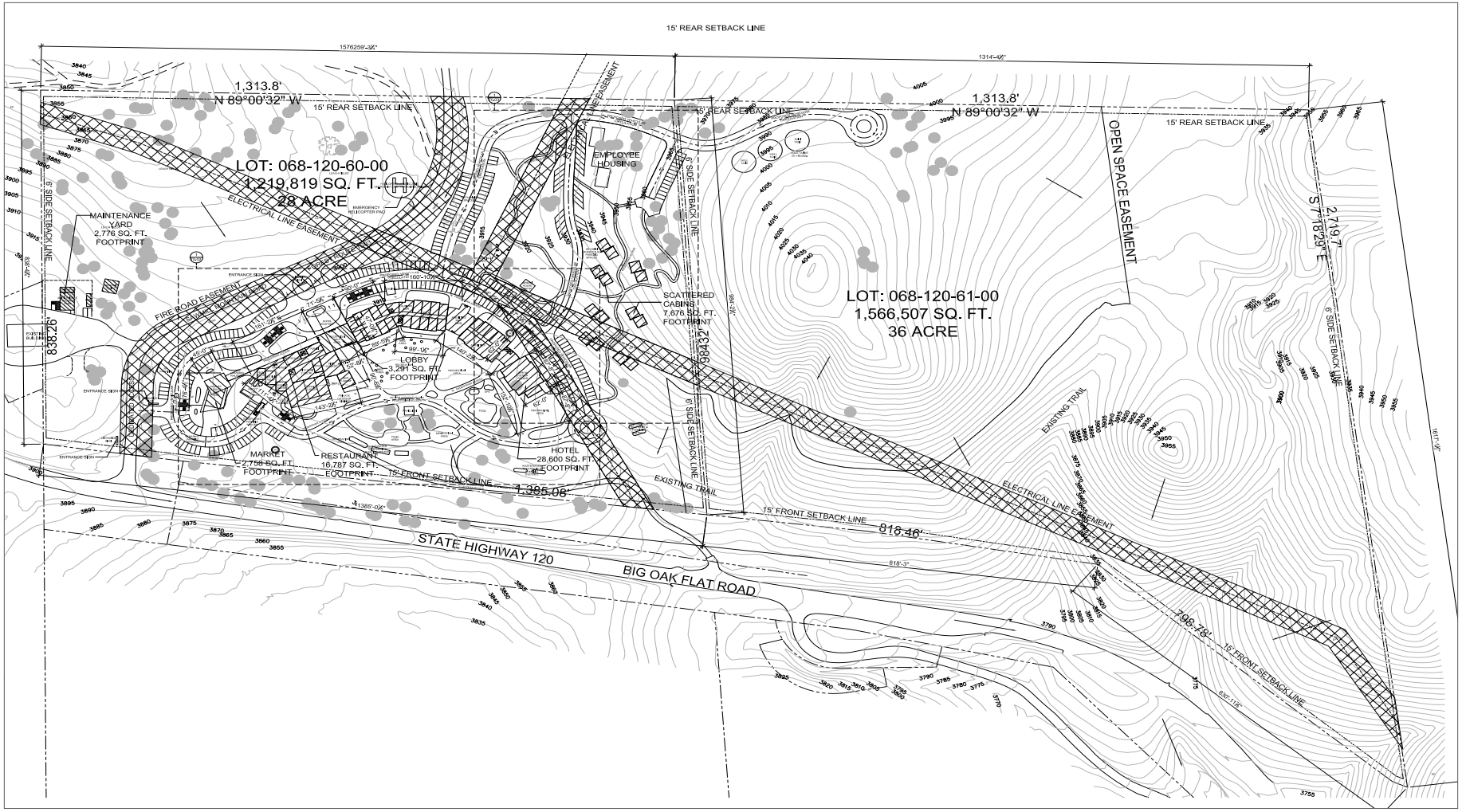
It is estimated that the hotel lodge would host an average of 290 guests, and it would accommodate a maximum occupancy of 400 guests.

Guest Cabin Rooms

The project would include 26 guestrooms in seven buildings with cabin-style architecture in a total of approximately 15,000 square feet of floor area. Six of the buildings would be two stories (each with four rooms) and the seventh building would be one story (with two rooms). The guestrooms in these buildings would be clustered to the northeast of the hotel lodge, terraced up the hillside. As shown on Figure 3-10, the buildings would be connected by a series of walking paths to the resort amenities.

It is estimated that the buildings would host an average of 104 guests, and they would accommodate a maximum occupancy of 156 guests.

PROJECT DESCRIPTION



Source: AVRP Skyport, 2019.

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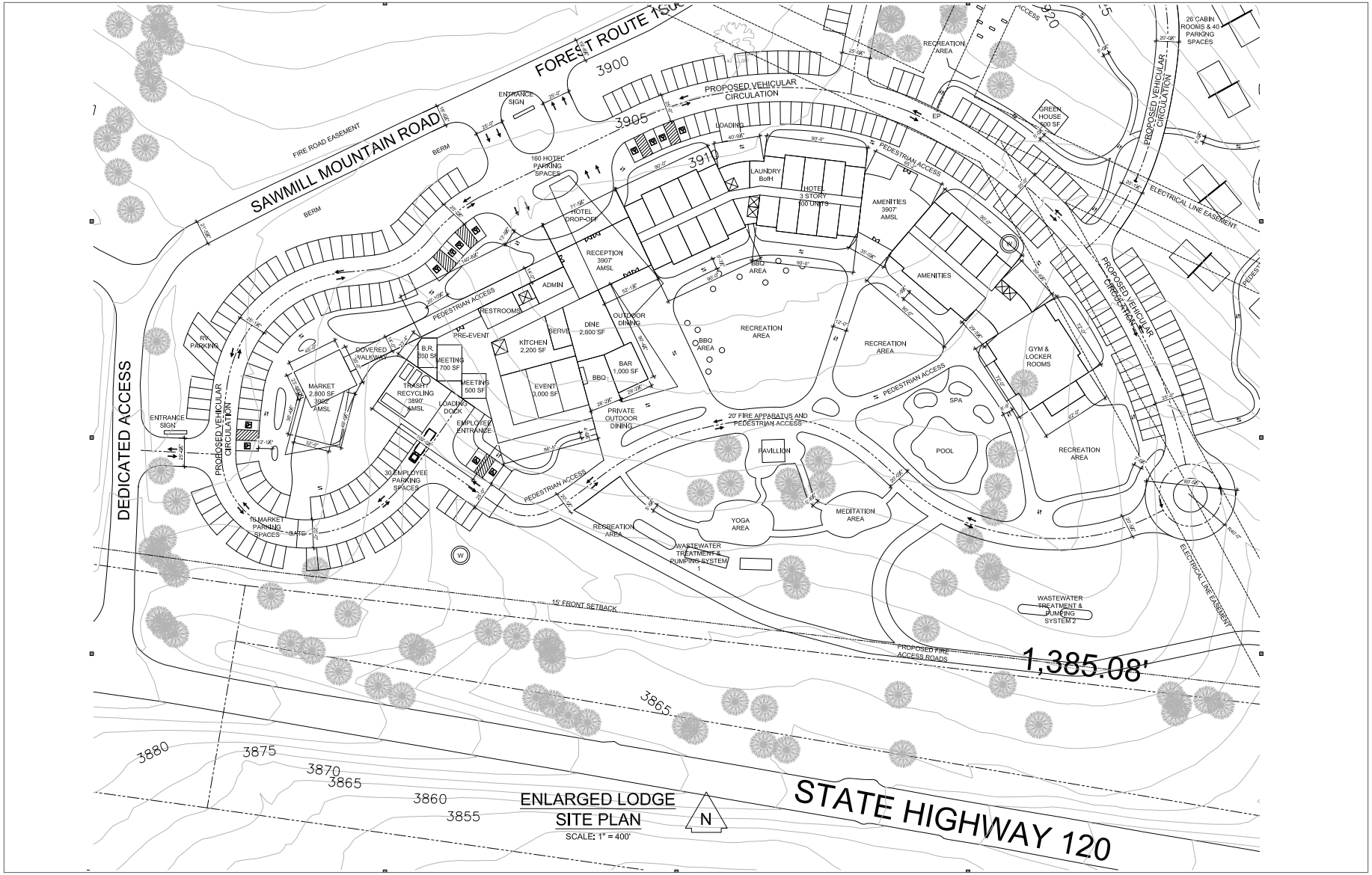
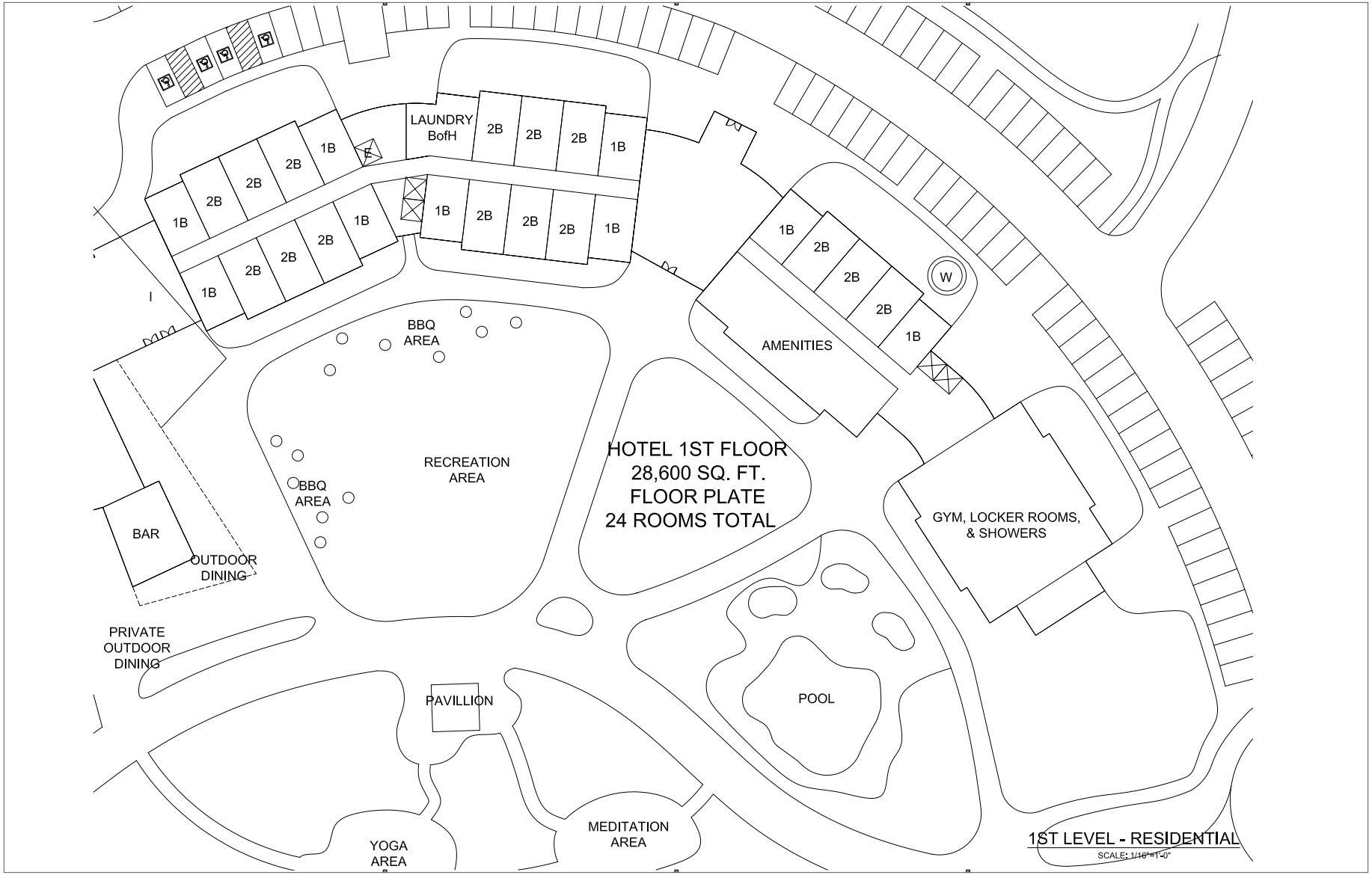
Scale (Feet)

Figure 3-4
Project Site Plan



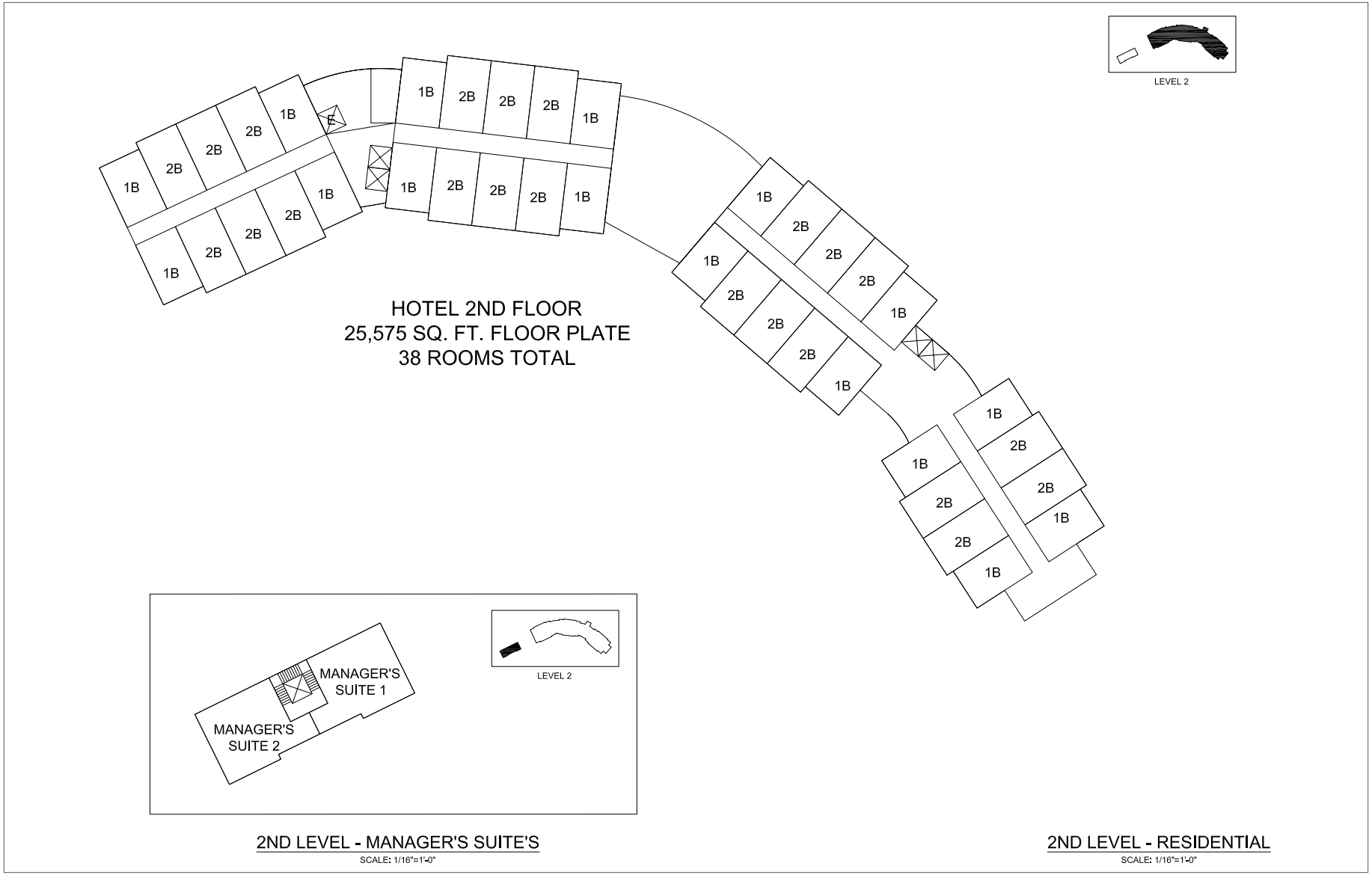
Source: AVRP Skyport, 2019.

Figure 3-5
Site Plan for Hotel Lodge Area



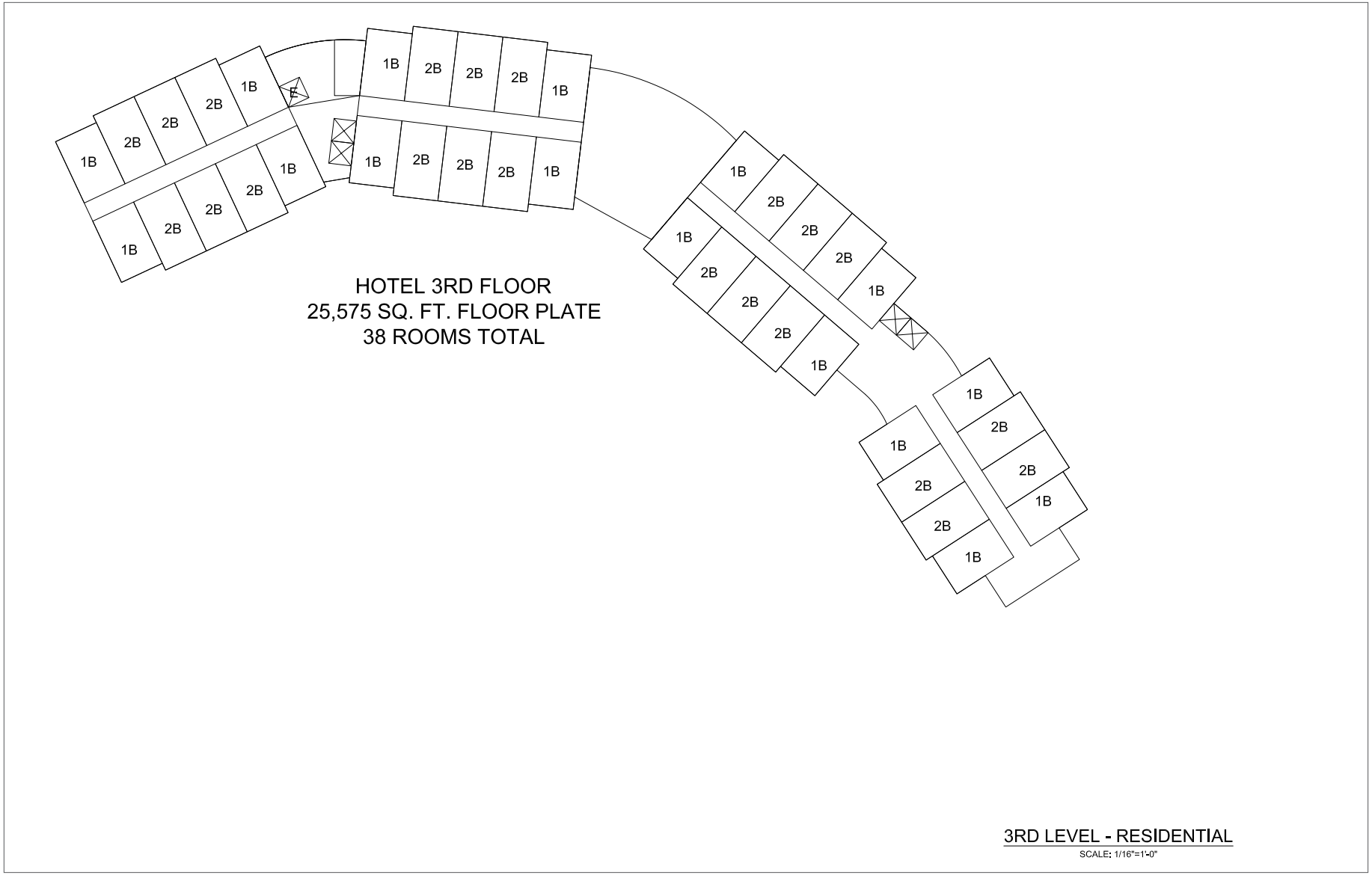
Source: AVRP Skyport, 2019.

Figure 3-6
First Floor Plan of Hotel Lodge – Lodging Area



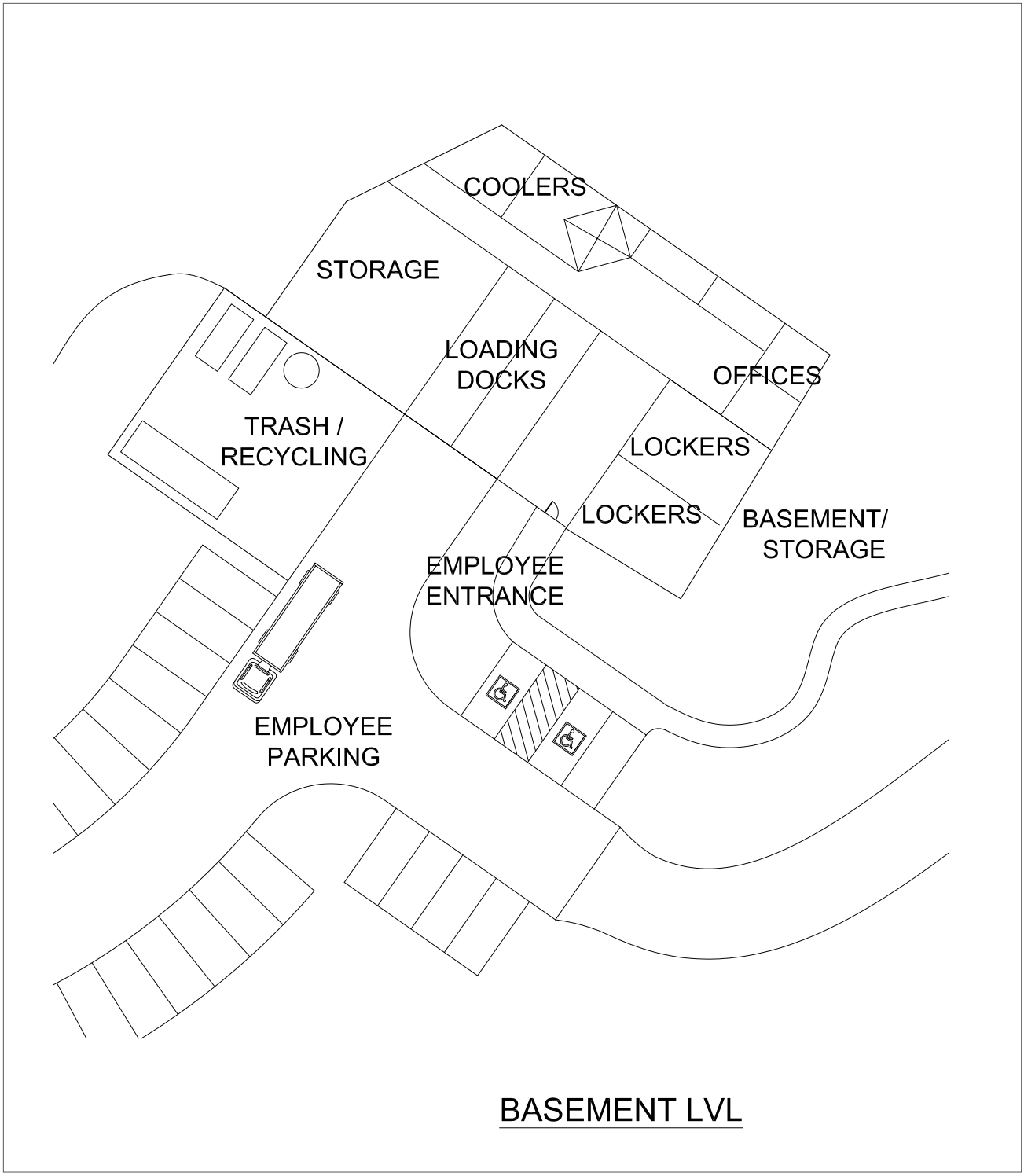
Source: AVRP Skyport, 2019.

Figure 3-7
Second Floor Plan of Hotel Lodge



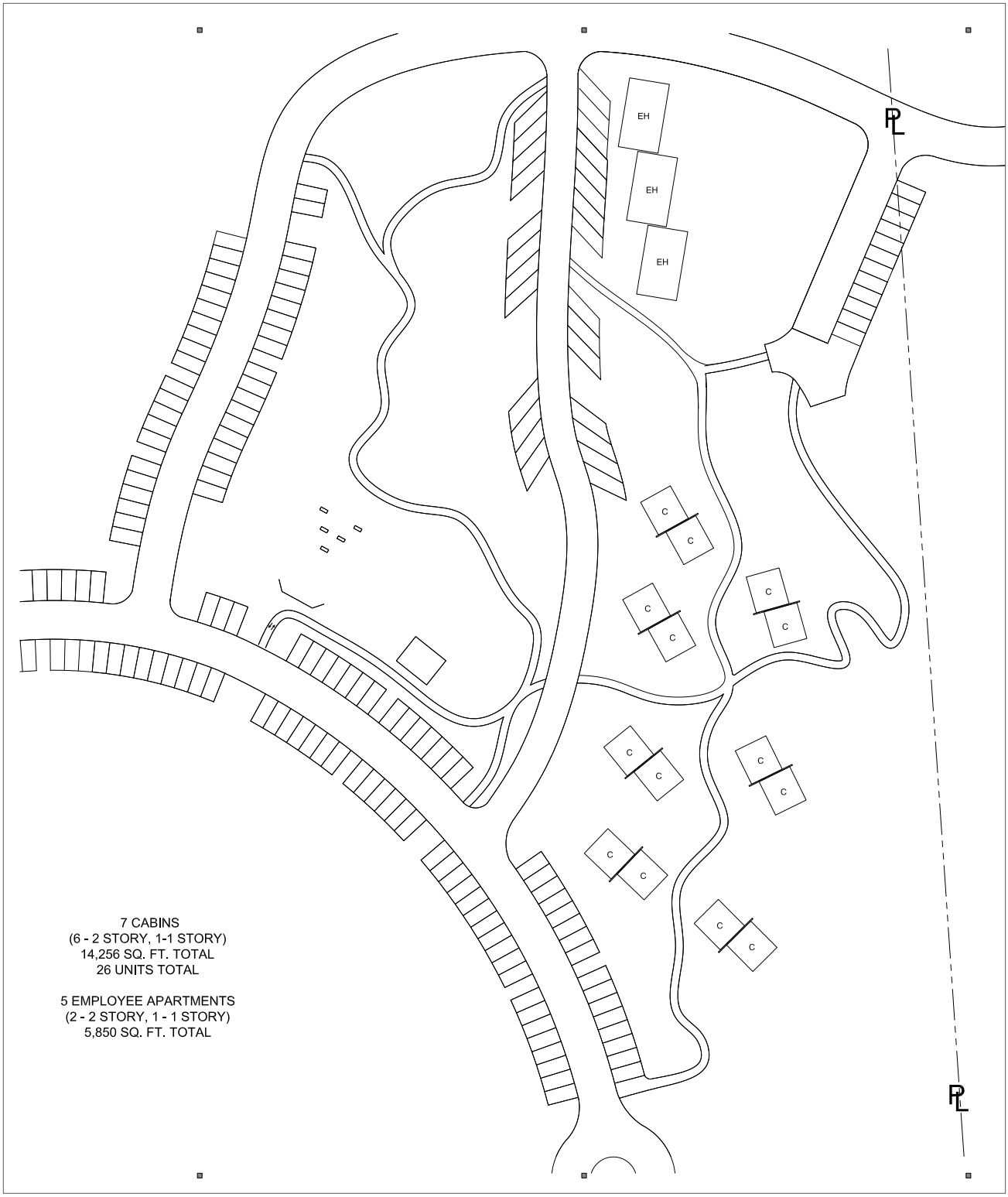
Source: AVRP Skyport, 2019.

Figure 3-8
Third Floor Plan of Hotel Lodge



Source: AVRP Skyport, 2019.

Figure 3-9
Basement Level of Hotel Lodge



Source: AVRP Skyport, 2019.

Figure 3-10
Guest Cabins and Employee Housing Plan

3.3.1.2 EMPLOYEE HOUSING

Five employee apartments are proposed on the far northeast corner of the project site, indicated on Figure 3-10. Each apartment would contain four bedrooms to accommodate a total of 20 employees. Employee apartments would be provided in a total of three buildings with cabin-style architecture. One building would be single story in height (providing one apartment, with four employee bedrooms) while the remaining two buildings would be two stories in height (providing four apartments, with 16 employee bedrooms). The employee apartments would be approximately 6,000 square feet in total floor area.

As stated above, rooms in the main lodge would also be reserved for employee housing to accommodate the project's managers.

3.3.1.3 MARKET

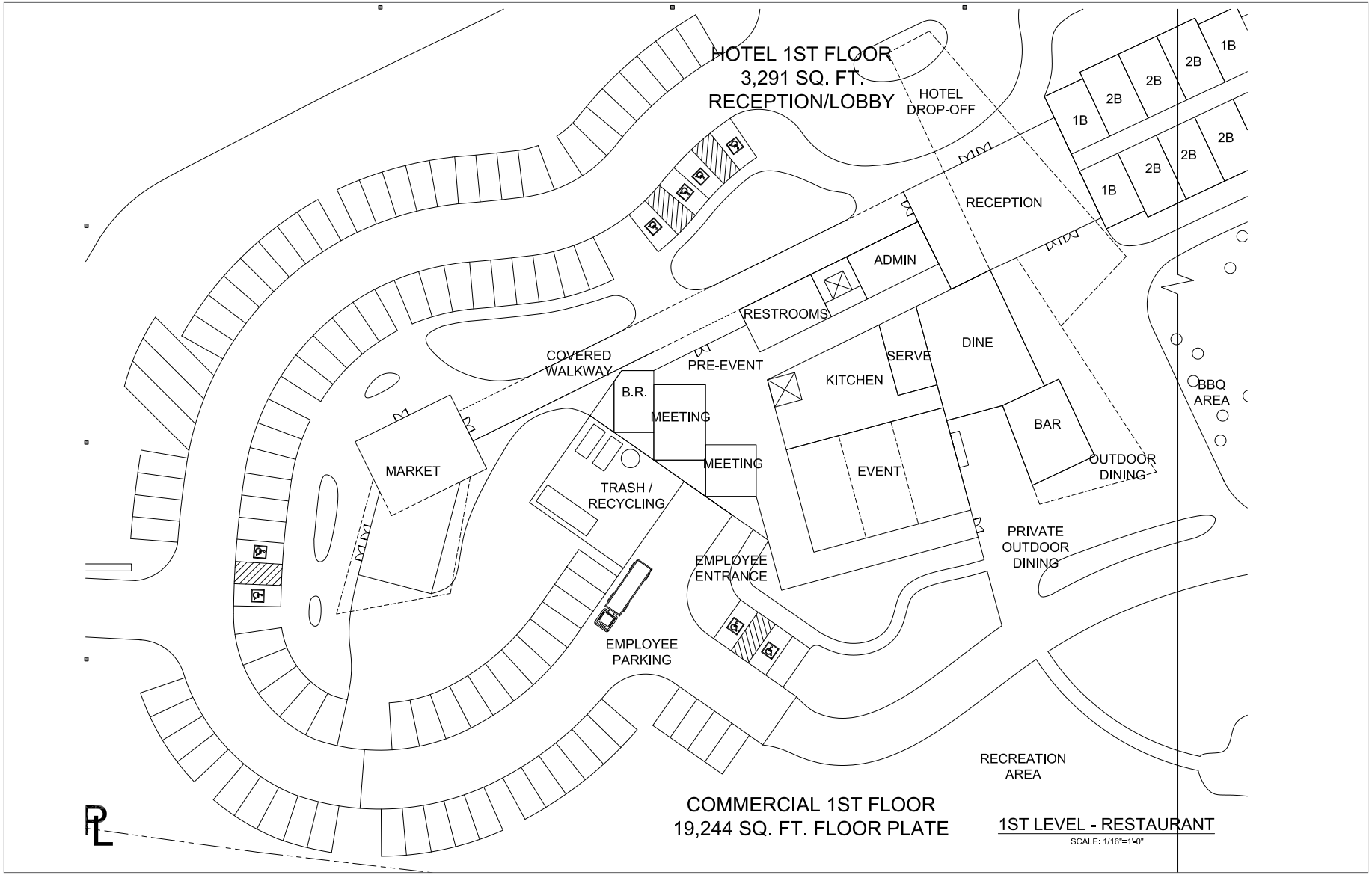
The proposed project would include a 2,800-square-foot market open for use by both guests and the general public. The market would be the only amenity open to the general public and is intended to serve both hotel guests and visitors traveling to Yosemite National Park. Its offerings would include "grab 'n go" food options, drinks, and picnic supplies, as well as other items typical for a hotel gift shop, such as coffee and tea, personal care supplies, and souvenirs. A covered walkway would provide a pedestrian connection between the market and the main lodge. The market would be located on the western side of the project site, near the southern driveway off Sawmill Mountain Road. Due to proposed landscaping, the market would not be highly visible from Highway 120.

3.3.1.4 BUSINESS FACILITIES

As shown on Figure 3-11, the proposed project also includes meeting space comprising of meeting rooms and a 3,000-square-foot main ballroom/event room, which would be able to be arranged into a combination of individual rooms or could remain one large room. The hotel's meeting space is intended to be used for guests of the hotel.

3.3.1.5 AMENITIES

The project would include several proposed amenities both indoors and outdoors, shown on the site plan shown in Figure 3-4 and the floor plan of indoor amenities shown in Figure 3-11. The hotel lodge would include an indoor gym, guest laundry facilities, bar, event space, independent meeting rooms, and indoor dining. Outdoor amenities would include two outdoor recreation areas consisting of grass-landscaped fields, a pool and spa, pavilion, yoga area, meditation area, and several barbecue areas as well as a separate outdoor dining area. There will be designated guest barbecue areas with hotel provided propane gas barbecues. Pool use would not be permitted during designated quiet hours.



Source: AVRP Skyport, 2019.

Figure 3-11
First Floor Plan of Hotel Lodge – Amenity Area

3.3.2 CIRCULATION

The proposed project is located on the corner of Highway 120 and Sawmill Mountain Road. There are two driveways proposed to access the site via Sawmill Mountain Road, an ingress and an egress to access the public market, and one ingress and egress to access the reception area and lodging. One looped roadway provides access throughout the entire site, proposed to begin on the northern edge of the site, passing around the border of the cabin guestrooms. All roadways are designed to follow the natural slope of the land and are to be screened where possible by berms and landscaping, and all loading and service areas would be strategically located behind the main buildings (see Figure 3-9) so as not to conflict with any site circulation paths.[7] Figure 3-12 illustrates the circulation for the proposed project. All deliveries would occur at the designated loading dock during normal delivery hours (8:00 am to 5:00 pm). These delivery hours would be required by the County as a condition of approval.

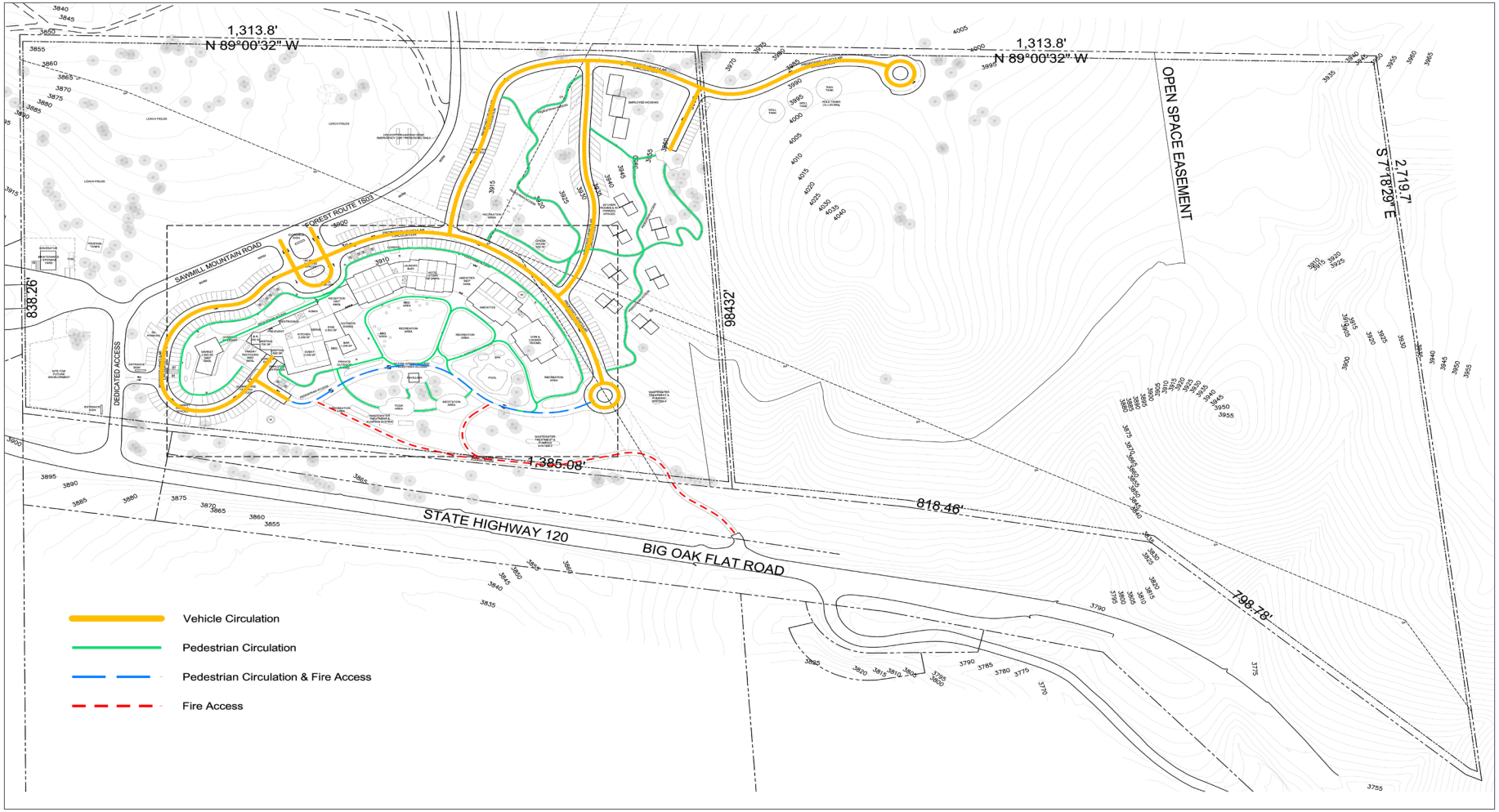
The project proponents have established a goal of 10 percent resort guest using YARTS to reach Yosemite National Park per day during the peak season. To aim to achieve this goal, the lodge would provide a YARTS stop, with bus access being provided to the site to pick up riders staying at the lodge. Additionally, as a public benefit, the project would provide up to 30 day-use parking stalls to encourage the use of the public transportation and ride sharing to ease Yosemite National Park traffic.

The proposed project includes 286 on-site parking spaces. There are 100 parking spaces for the lodge (one per guestroom), 16 parking spaces for the market, 30 parking spaces for employees, 40 parking spaces for the employee housing, 26 parking spaces for the cabin guestrooms, 30 spaces for day use for YARTS and ride sharing users, and 44 overflow parking spaces. Parking areas would be designed to avoid large expanses of asphalt and would be sited along roads that follow the natural topography of the site. Parking spaces would be screened and broken up with berms and landscaped elements.[8]

Several walking paths would be located throughout the project site to reduce the need to navigate the site in a vehicle. Walking paths would link guestrooms of both the hotel lodge and the cabin guestrooms to all amenities on-site. Pedestrian crosswalks and walkways would include striped paving for safety. Signage would be provided for vehicle and pedestrian wayfinding.

Additionally, the proposed project includes several circulation considerations for emergency services. A fire access route is proposed along the southern border of the project site, with direct access to Highway 120. All proposed interior roadways on-site are of an adequate size to accommodate access by emergency vehicles. The project proposal also includes an emergency helicopter landing pad on the northwestern corner of the project site, with vehicular access to Sawmill Mountain Road. The helipad would be for emergency uses only and would be open for use by the entire community. The County would require, through a condition of approval, that the helipad be used for emergencies only.

[7] AVRP Skyport, Terra Vi Lodge: Architectural Narrative.
[8] AVRP Skyport, Terra Vi Lodge: Architectural Narrative.



Source: AVRP Skyport, 2019; PlaceWorks, 2019.

0 2400
Scale (Feet)

Figure 3-12
Site Circulation Plan

3.3.3 LANDSCAPE

Landscaping is proposed to include opportunities for education and outdoor recreation. The proposed project would implement a tree preservation program, as identified below in Section 3.3.5, Sustainability. As part of the tree preservation program, trees on-site would be preserved wherever possible. In total, 46 trees would need to be removed for construction of the project. Additionally, planting on-site would consist of native trees and shrubs. A large portion of the project site would remain as forest areas contributing to reforestation, encouraging reestablishment of natural habitats, and protection for existing wildlife.[9]

Fences are proposed to be low split-rail or wood post-and-rail type and are used to direct visitors, separate site functions, and delineate open space areas. Any needed retaining walls would be constructed of natural stone designed to mimic natural materials. Recycled materials salvaged from the site such as boulders, logs, and charred tree trunks, would be used to enhance the natural forest landscape setting.

All landscaping proposed as part of the project would consist of low water-use vegetation. Planted areas would be irrigated with a high efficiency irrigation system in compliance with State and County water efficient landscape regulations. Water used for irrigation would originate from stormwater and greywater systems that capture and store water on-site for the purpose of irrigation. Subsurface groundwater would not be used for landscape irrigation. All proposed plantings would be native California Species that require minimal water.

As shown on Figure 3-13, there are two primary types of landscaping areas on-site. The forest area is meant to enhance and preserve the natural environment around the proposed project for screening purposes. The forest area generally includes the corridor along Highway 120, the roadway corridor along Sawmill Mountain Road, the Caltrans material storage facility to the west of the site, all site perimeters and buffers, and the areas surrounding all cabin guestroom buildings and leach fields, as well as all dedicated open space and forest management areas. Existing trails in the open space and forest areas would remain and would be maintained as unpaved trails. The project may include some interpretive signage or “keep to the trail” signs.

The lodge and market landscaping area would generally include all road corridors not designated as forest area, all parking lots, drop-off locations, walkways, lodge perimeters, amenity areas, recreational areas, and perimeter transitional areas. The lodge and market landscaping area would include landscaping designed to feel pedestrian in scale to provide a comfortable and cohesive landscaped environment.

[9] Smith and Smith Landscape Architects, November 2018, Terra Vi Lodge Yosemite Landscape Narrative.

Source: AVRP Skyport, 2019; PlaceWorks, 2020.

0 180
Scale (Feet)

Figure 3-13
Proposed Landscape Plan

3.3.4 LIGHTING

The project would include outdoor lighting for safety and security purposes. Project lighting would be designed to minimize light spillage by following Dark-Sky influenced design programs and following the California Title 24 Building Energy Efficiency Standards. For example, lighting would be downward positioned, fully shielded, high efficiency, 3000K LED fixtures.

3.3.5 SUSTAINABILITY

The project would include features to reduce its potential impacts on the environment. As mentioned above, the project would incorporate an energy-efficient building program, and it would provide housing for 20 employees on-site, plus managers' housing within the lodge. Section 3.3.8, Utilities, of this Project Description, outlines some sustainable features included as part of the project proposal. Additional sustainable features include the following:

- A tree preservation program would preserve the majority of trees on-site and include planting of dozens of trees.
- Building materials would be chosen based on resiliency (i.e., lifespan, fire resistance, and weather resistance). Additionally, materials used in construction of the project would be repurposed, recycled materials whenever feasible.
- Buildings would incorporate energy-efficient design, including energy-efficient windows, doors, insulation, roofing, and heating and cooling equipment. Buildings would include skylights to reduce use of lights, managed occupancy smart thermostats, lighting control systems, and LED (light-emitting diode) lighting. The project would also include installation of roof-mounted solar photovoltaic and solar thermal panel systems with battery storage.
- Mechanical infrastructure would include low flow plumbing fixtures, high efficiency equipment such as heat pumps (for air conditioning) and boilers.
- Electric vehicle charging stations would be installed in on-site parking areas.
- The project would incorporate solid waste disposal reductions, including a recycling program during both construction and operation, and implementation of a food waste program to limit the amount of food waste generated. Food waste reduction starts with education. The hotel would educate the staff and guests on the impacts of food waste to our planet. The food waste program would include:
  - Conducting food waste audits.
  - Developing recipes to reduce waste and cross utilizing ingredients.
  - Providing left over food to employees.
  - If available, working with local composting sites.
- Recyclable single-use flatware and utensils to lower food- and beverage-related water use and wastewater.
- A water conservation program.
- All operation laundry would be cleaned and processed off-site, substantially reducing on-site water use and wastewater disposal.
- The project would create education programs to educate hotel staff and guests about sustainability. Staff would be trained on how to reduce solid waste disposal, food waste generation, and water

consumption. Guests would also be encouraged to reduce their water consumption and waste generation. Below are examples of the conservation programs the hotel would implement:

- Reduced frequency of housekeeping: the hotel would educate the guests on the impacts of servicing the rooms less often and the importance of reusing towels and linens.
- Guest room water usage monitoring: the hotel will incorporate water flow technology to provide guests real time information on water usage per room. Guests will be educated on water usage and impacts on the environment.
- Guest room toiletries (shampoo/conditioner/lotion): the hotel will not use mini disposable toiletries, rather large refillable dispensers to eliminate waste.
- On-site water treatment and storage to reduce water consumption.
- Greywater systems for landscape irrigation to eliminate the use of fresh water, and rainwater collection and storage.

3.3.6 WILDFIRE HAZARD REDUCTION

The project site is located within a Very High Fire Hazard Severity Zone, as mapped by the California Department of Forestry and Fire Protection (CAL FIRE) and was previously significantly burned by the 2013 Rim Fire; therefore, the proposed project includes several features for wildland fire safety. The project would include a Wildland Fire Protection Plan that would be reviewed and approved by the Tuolumne County Fire Department.

- Construction. The project proposes wide separations between buildings to prevent structure-to structure ignition, and to provide easy access by emergency responders. All exterior building materials are proposed to be constructed to comply with the most recent wildland-urban interface building code (Chapter 7A of the California Building Code) as ignition-resistant, with non-combustible materials, non-impregnatable vents, and double-paned windows with one pane of tempered glass, while still being consistent with the look and feel of a nature lodge. An underground basement will be designed and constructed to be a place for guests and employees to stay for a short period of time during a time of wildfire or other disasters, when early evacuation is not possible. There would be enough space, an air filtering system and positive ventilation to support the people harbored in the project. This will reduce the traffic on possible evacuation routes.
- Vegetation Management. A Vegetation Management Plan that integrates the needs for wildland fire safety would be incorporated into the landscaping documents. The landscape would be designed and maintained in compliance with this Vegetation Management Plan, which would be reviewed and approved by the Tuolumne County Fire Prevention Bureau. The landscape would be irrigated using the greywater system, which is an additional defense against wildland fire.
- Fire Prevention. A suite of prohibitions against risky behaviors would be developed. Smoking would be permitted only in a designated smoking area. Signs prohibiting smoking and littering would be posted throughout the entire project site. Barbecues during times of high fire danger would be prohibited. Guests and personnel would be educated on fire-safe behaviors. Trash cans would be provided throughout the property to reduce litter, and the ground would be cleaned by staff frequently.

During construction, a fire prevention plan would be implemented to reduce the chance of ignition. This plan would prescribe the equipment, training and behaviors of the construction team. All equipment with motors would comply with California Public Resources Code (PRC) Section 4442.

Fire pits would be located in public areas and would be operated and maintained by hotel staff only.

- Communication and Alerts. A communication plan would be established to ensure receipt and notification of vital incident information. Equipment necessary to implement the communication plan would be acquired. These are likely to include radios, cell phone towers or boosters, satellite phones, and/or other equipment.

  Weather stations would be installed and monitored. Protocols for alerts would be established so that personnel on-site would be notified when high fire danger exists.

- Training. Appropriate employees would be trained as first-response emergency responders, with trained staff on duty at all times. Key engineering staff would complete certificate programs at the California Regional Fire Academy. The courses would include technical training relating to wildland fires, fire prevention, fire department apparatus, tools and equipment, breathing apparatus, extinguishers, hazardous materials, communication and emergency medical treatment. Periodic regular fire safety drills would be performed. These would encompass evacuation and shelter-in-place options. In a worst-case scenario in which early evacuation is not feasible, the expectation is that the guests and employees would remain on-site in the event that a wildland fire nears the project. Guests would be educated on the need for and use of emergency alerts in the county and on-site.

- Evacuation. Based on monitoring of both weather conditions and nearby incidents, guests would be notified to evacuate early to minimize peak traffic on Highway 120 in the event of an incident that requires evacuation. Pre-fire evacuation plans would identify triggers for evacuation in terms of proximity of wildfires, and winds. Early response is a function of awareness and communication with fire departments. This implies weather, scanners, and monitoring with agreed-upon set trigger points.

- Access. The project proposes direct access to Highway 120 for fire service. Two driveways from Sawmill Mountain Road are proposed, each with different destinations and routes; one an ingress and egress to access the public market, and one an ingress and egress to access the reception area and lodging. One looped roadway would provide emergency access around the cabin guestroom buildings and throughout the entire site. All roadways are designed to comply with California PRC 4290 and Tuolumne County Ordinance Code Chapter 11.12 to allow full access for emergency vehicles, with slopes flatter than 12 percent, a radius larger than 40 feet, and a width no less than 20 feet (without parking).[7]

- Wildland Fire Response Support. Development in the county must comply with fire safety standards outlined in Title 15 of the Code of Ordinances.[10] The project proposes construction in compliance with the National Fire Protection Association's fire protection system and would include fire sprinkler and

[10] Tuolumne County, Tuolumne County Code of Ordinances, *Chapter 17.31 Commercial Recreational District, or (C-K) District*, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/436/Chapter-1731---Commercial-Recreation-District-or-CK-District?bidId=, accessed on March 18, 2019.

standpipe systems.[11] Suppression systems and site hydrants for fire protection would be provided using a combination of reclaimed, treated greywater, and potable water storage. Water supply would be provided by a storage system and augmented with wildland fire hoses.

An emergency helipad would be located on the western side of Sawmill Mountain Road, within the western project site parcel. The emergency helipad would be used for emergency services only and would be available for use to the entire community.

3.3.7 PUBLIC SERVICES

3.3.7.1 FIRE

The fire station nearest to the project site is the Groveland Community Services District fire station located at 18930 Main Street (Highway 120) in Groveland, approximately 14.3 miles west of the project site (or a 16.8-mile drive).

3.3.7.2 POLICE

Police protection for the project site is provided by the Tuolumne County Sheriff's Office. The Sherriff's office is located at 28 N. Lower Sunset Drive in Sonora, which is approximately 25 miles northwest from the project site, or a 45-mile drive.

3.3.7.3 SCHOOLS

The project site is located in the Big-Oak Flat—Groveland Unified School District. The nearest schools to the project site include the following:

- Tenaya Elementary School (K-8) at 19177 State Highway 120 in Groveland, approximately 14 miles west of the project site (or an 18.5-mile drive).
- Tioga High School (9-12) at 19304 Ferretti Road in Groveland, which is approximately 14.5 miles west of the project site (or a 21-mile drive).

3.3.7.4 LIBRARIES

Library service in the vicinity of the project site is provided by the Tuolumne County Library. The nearest public library is located at 480 Greenley Road in Sonora, approximately 24.5 miles northwest of the project site, which equates to a 45-minute drive.

[11] National Fire Prevention Association (NFPA) 13 Standard for the Installation Sprinkler Systems (2016 Edition); NFPA 22 Standard for Water Tanks for Private Fire Protection (2013 Edition); NFPA 24 Standard for the Installation of Private Service Mains (2016 Edition).

3.3.8 UTILITIES

3.3.8.1 WATER SUPPLY AND WATER CONSERVATION

The project proposes an on-site public water system that would be developed from two on-site wells that are currently in place. Three monitoring wells have also been installed on-site but are not proposed for use for water supply. Well water is proposed to be treated and stored in water tanks located adjacent to the on-site roadway that ends in a cul-de-sac along on the northern boundary. Treatment of well water may include an on-site treatment unit that would be located next to the proposed water tanks. The determination of whether to include the treatment unit would be dependent on the result of future water quality testing, which would be conducted prior to project completion. As mentioned above, fire suppression systems and site hydrants for fire protection would be provided using a combination of reclaimed, treated greywater and potable water storage. All water conveyance pipes would be routed under proposed roads to minimize impacts to native ground.[12]

The project proposes to minimize water consumption through the use of grey water systems for landscape irrigation, as well as by using high-efficiency appliances and low-flow plumbing features. It is estimated that the project would generate up to 7,000 gallons of grey water per day for secondary uses such as landscape irrigation. Additionally, the project proposes use of recyclable single-service plates and utensils, which require three times less water for washing and sanitation activities.

3.3.8.2 WASTEWATER

The wastewater system would be divided between five separate wastewater systems sized for 10,000 gallons per day of sewage loading each. Enhanced wastewater system reliability would be provided through duplex pumping equipment. An area has been planned for and set aside for a 100 percent replacement future leach system area.

The food service wastewater treatment system would include a technologically advanced aerobic treatment system that would be continuously monitored. Specifically, a microprocessor-controlled treatment system would provide remote telemetry to a qualified service provider for 24-hour wastewater treatment system monitoring.

All wastewater would be separated into black water and greywater and treated on-site. The black water would be disposed through the proposed leach system, and the greywater would be treated, stored, and re-used for on-site landscape irrigation. The proposed wastewater treatment and pumping system would be located on the southern border of the project site, between Highway 120 and the proposed fire access road. Surplus greywater would be disposed in the leach field.[13]

[12] Land and Structure, November 2018, Terra Vi Lodge Grading.
[13] Land and Structure, November 2018, Terra Vi Lodge Grading.

3.3.8.3 STORMWATER

Due to the topography of the project site, there is very little stormwater that runs onto the project site. The project would harvest rainwater and surface greywater, which would be stored in one of three water tanks located on the eastern portion of the project site, and would be used for toilets, irrigation, and fire suppression systems. Roof drainage and landscape area drains would direct stormwater underground to detention areas. Sheet flow from parking areas and roads would be captured in surface drainage swales, which would then be directed towards detention areas. All drainage swales and detention areas would be landscaped to incorporate them into the built environment. With the increase in impervious surfaces from the proposed project, any additional stormwater that would flow off-site would first be detained on-site during storm events, and then metered so as not to exceed the capacity of the existing drainage culvert that passes under Highway 120.

3.3.8.4 ENERGY

To reduce energy demand, the project proposes use of energy-efficient building design with strategically designed openings, overhangs, shading features, building orientation, and daylighting, all of which help to maintain interior heat in the winter and maximize shade in the summer, thereby reducing heating and air conditioning needs. Furthermore, an energy-efficient building envelope is proposed, and it would include continuous insulation with vapor and air barriers. These vapor and air barriers thus reduce the amount of air and moisture moving in and out of buildings and reduce the need for heating and cooling systems year-round. All building materials are proposed to be energy efficient, including the windows, doors, insulation, roofing, LED lighting, high-efficiency heating and cooling equipment. Skylights are proposed, where appropriate, to minimize lighting use and to provide daylight indoors. Ceiling fans are also proposed, where appropriate, to minimize air conditioning use. On-site renewable energy is proposed in the form of solar photovoltaic and solar thermal panel systems, located on the roof of the hotel lodge, with battery storage systems to power the buildings during off-peak times. Propane tanks would be located on the maintenance yard on the west side of Sawmill Mountain Road and a propane line would connect the tanks to the main lodge building.

An existing Pacific Gas & Electric overhead transmission line traverses the project site within an easement. The project seeks to underground the portion of the transmission line from Sawmill Mountain Road eastward to the lot line between the two project site parcels.

3.3.8.5 SOLID WASTE

To reduce the amount of solid waste that leaves the project site, several recycling, composting, and solid waste disposal provisions would be included as part of the proposed project. The project would utilize programs to enhance recycling and food waste composting. As stated in Section 3.3.5, the hotel would incorporate a food waste program and also educate both the staff and guests on conservation and sustainability.

3.3.8.6 MAINTENANCE

The project would include a maintenance yard on the west side of Sawmill Mountain Road, across the road from the lodge. The driveway for the maintenance yard would be shared with the existing driveway on the project site that lies within an easement to provide access to an existing adjacent Caltrans storage building. The maintenance yard would include a storage area, generator, propane tanks, fuel storage, and parking spaces.

3.3.9 CONSTRUCTION

The proposed project includes construction of the hotel lodge, including the associated 100 guestrooms and amenities, seven cabin guestroom structures, the 2,800-square foot market, the three employee apartment buildings, and the 286 parking spaces for guests, employees, and the proposed market. A total of 17 trees would be removed to allow for construction of the lodge, employee housing, and parking and maintenance areas.

Grading would be balanced, meaning that no soil import or export would be required.

The project would include improvements, including tree removal, along the Highway 120 frontage at the intersection with Sawmill Mountain Road to provide a left-turn lane on eastbound Highway 120, a right-turn pocket on westbound Highway 120, and improved sight distance. The intersection improvements would require changes at this location to the existing drainage located adjacent to Highway 120. A preliminary conceptual design for these improvements is provided in Figure 3-14.

As shown in Figure 3-14, the improvements would include a new drainage swale, culvert pipe, and drainage headwalls, and would require fill, new asphalt, and a relocation of the drainage flow line. In total, 29 trees would be removed along Highway 120. These improvements are outside of the project site within the Caltrans right-of-way and would require an encroachment permit.

3.4 REQUIRED PERMITS AND APPROVALS

Following certification of this EIR, the County would issue permits for the project, including a site development permit, grading permit, sewage disposal permit, building permits, and certificates of occupancy. Site development permits are issued pursuant to Section 17.68.120 of the Tuolumne County Ordinance Code. In determining whether to issue a site development permit, the County reviews the application for conformance to the planning and engineering standards covering: site layout; structure design; landscaping; water, sewer, and other utilities; surface drainage and erosion control; fire protection; access; and traffic circulation and parking.

The community development director shall find that the proposed development would not be substantially detrimental to the health, safety, or general welfare of persons residing or working in the neighborhood of the project site, and that the development would be consistent with the Tuolumne County General Plan.

"Responsible agencies" are public agencies that carry out or approve a project for which a lead agency is conducting CEQA review; responsible agencies are all agencies other than the lead agency with discretionary approval power over the project. The following agencies are considered to be responsible agencies for the proposed project:

Federal Aviation Administration:
- Review and approval of the proposed emergency helipad

United States Army Corps of Engineers:
- Section 404 Clean Water Act Nationwide Permit

California Department of Fish and Wildlife:
- California Fish and Game Code Section 1600 Streambed Alteration Agreement

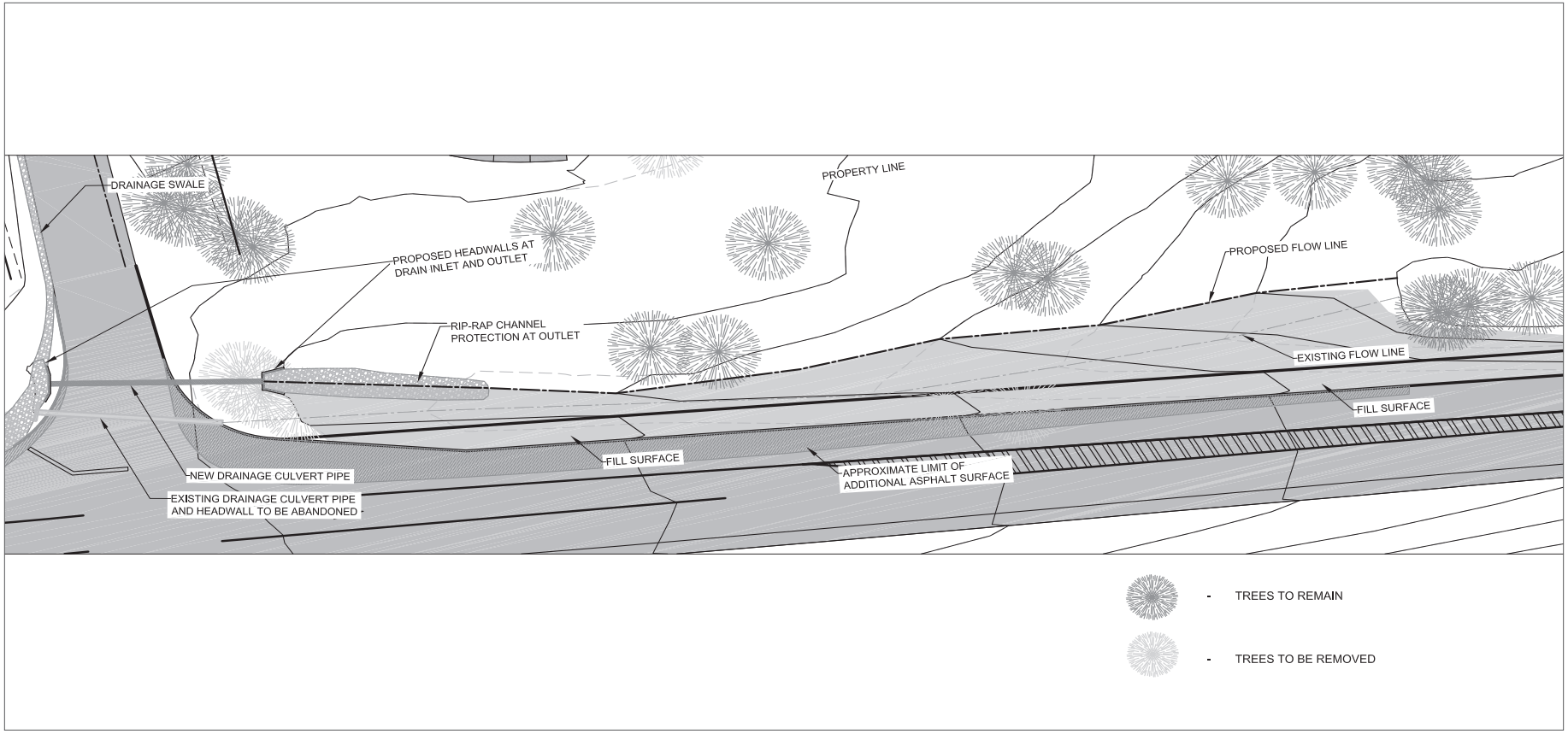
California Department of Forestry and Fire Protection:
- Timberland conversion permit

Caltrans:
- Permit for the proposed fire service access directly from Highway 120.
- Encroachment permit for intersection improvements

State Water Resources Control Board:
- Domestic Water Supply Permit

Regional Water Quality Control Board permits may include some or all of the following permits:
- Construction Storm Water General Permit
- Phase I and II Municipal Separate Storm Sewer System (MS4) Permits
- Dewatering Permit
- Limited Threat General NPDES Permit
- National Pollutant Discharge Elimination System Permit
- Section 401 Clean Water Act Water Quality Certification

Tuolumne County Airport Land Use Commission:
- Review and approval of the proposed emergency helipad



Source: Land & Structure, 2019.

0 60
Scale (Feet)

Figure 3-14
Conceptual Design for Drainage Channel at Highway 120/Sawmill Mountain Road Intersection

4. Environmental Evaluation

CHAPTER ORGANIZATION

This chapter of the Draft EIR is made up of 17 subchapters that evaluate the direct, indirect, and cumulative environmental impacts from approval and implementation of the proposed project. The following sections describe the format of the environmental analysis, the format of the thresholds of significance, and the methodology of the cumulative impact analysis.

FORMAT OF ENVIRONMENTAL EVALUATION

The California Environmental Quality Act (CEQA) Guidelines Section 15128 allows for no analysis of environmental issues for which there is no likelihood of significant impact. Due to the location of the proposed project, no impacts would occur to agricultural or mineral resources. The California Department of Conservation Farmland Mapping & Monitoring Program does not note any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within Tuolumne County, where the proposed project is located. In addition, the proposed project site is neither zoned for agricultural uses nor subject to a Williamson Act Contract, per Tuolumne County's zoning map and Williamson Act mapping included in the EIR for the County's General Plan. The California Department of Conservation, Geological Survey (CGS) has classified lands within Tuolumne County into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present in areas. Lead agencies are required to incorporate identified MRZs resource areas delineated by the State into their General Plans.[1] There are no known mineral resources in the southeastern portion of Tuolumne County; therefore, the proposed project does not include any significant known or inferred mineral resources. Given this, construction of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State or the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan and this issue has therefore not been analyzed further in this Draft EIR.

In accordance with Appendix F, Energy Conservation, and Appendix G, Environmental Checklist, of the CEQA Guidelines as amended per Assembly Bill 52 (Tribal Cultural Resources) and the California Supreme Court in a December 2015 opinion [*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478)], the potential environmental effects of the proposed project are analyzed for potential significant impacts in the following 17 environmental issue areas, which are organized with the listed abbreviations:

[1] Public Resources Code Section 2762(a)(1).

- Aesthetics (AES)
- Air Quality (AQ)
- Biological Resources (BIO)
- Cultural Resources and Tribal Cultural Resources (CULT)
- Energy (ENE)
- Forestry Resources (FOR)
- Geology and Soils (GEO)
- Greenhouse Gas Emissions (GHG)
- Hazards and Hazardous Materials (HAZ)
- Hydrology and Water Quality (HYD)
- Land Use and Planning (LU)
- Noise (NOI)
- Population and Housing (POP)
- Public Services, Parks, and Recreation (PS)
- Transportation (TRANS)
- Utilities and Service Systems (UTIL)
- Wildfire (WF)

Each subchapter is organized into the following sections:

- Environmental Setting offers a description of the existing environmental conditions, providing a baseline against which the impacts of the proposed project can be compared, and an overview of federal, State, regional, and local laws and regulations relevant to each environmental issue.
- Thresholds of Significance refer to the quantitative or qualitative standards, performance levels, or criteria used to evaluate the existing setting with and without the proposed project to determine whether the impact is significant. These thresholds are based primarily on the CEQA Guidelines, and also may reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts. Apart from its adopted policies and levels of service that may be used as thresholds, the County has not adopted its own set of thresholds of significance for use in CEQA documents.
- Impact Discussion gives an overview of the potential impacts of the proposed project and explains why impacts are found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts related to the proposed project. Impacts and mitigation measures are numbered consecutively within each topical analysis and begin with an acronym or abbreviated reference to the impact section.

THRESHOLDS OF SIGNIFICANCE

As noted above, significance criteria are identified before the impact discussion subsection, under the subsection, “Thresholds of Significance.” For each impact identified, a level of significance is determined using the following classifications:

- *Significant (S)* impacts include a description of the circumstances where an established or defined threshold would be exceeded.
- *Less-than-significant (LTS)* impacts include effects that are noticeable, but do not exceed established or defined thresholds, or can mitigated below such thresholds.
- *No impact* describes circumstances where there is no adverse effect on the environment.

For each impact identified as being significant, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If one or more mitigation measure(s) would reduce the impact to a less-than-

significant level successfully, this is stated in the EIR. *Significant and unavoidable (SU)* impacts occur where mitigation measures would not diminish these effects to less-than-significant levels.

CUMULATIVE IMPACT ANALYSIS

A cumulative impact consists of an impact created as a result of the combination of the project evaluated in the EIR, together with other reasonably foreseeable impacts not caused by the proposed project. CEQA Guidelines Section 15130 requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Used in this context, cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effect of probable future projects.

Where the incremental effect of a project is not "cumulatively considerable," a lead agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. Where the cumulative impact caused by the project's incremental effect and the effects of other reasonably foreseeable projects is not significant, the EIR must briefly indicate why the cumulative impact is not significant.

The cumulative impact discussions in subchapters 4.1 through 4.17 explain the geographic scope of the area affected by each cumulative effect (e.g., immediate project vicinity, county, watershed, or air basin). The geographic area considered for each cumulative impact depends upon the impact that is being analyzed. For example, in assessing aesthetic impacts, the pertinent geographic study area is the vicinity of the proposed project from which the new development can be publicly viewed and may contribute to a significant cumulative visual effect. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative effect.

CEQA Guidelines Section 15130 of the CEQA Guidelines permits two different methodologies for completion of the cumulative impact analysis:

- The 'list' approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the county; and
- The 'projections' approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

This cumulative impact in this Draft EIR relies on the list approach of past, present, and probable future projects in the vicinity of the project site that, when considered with the effects of the project, may result in cumulative effects. In some instances, the cumulative analysis discussions contained in subchapters 4.1 through 4.17 include a discussion of the growth projections and references to specific projects as relevant to the impact analysis. As shown in Table 4-1, the Tuolumne County identified four pending projects within the vicinity of the proposed project at the time when the preparation of the Draft EIR began.

TABLE 4-1 CUMULATIVE PROJECTS WITHIN THE VICINITY OF THE PROPOSED PROJECT

Project Characteristics	Yosemite Under Canvas	Berkeley Tuolumne Camp Restoration[a]	Thousand Trails / Yosemite Lakes RV Expansion[b]	Mountain Sage Conditional Use Permit
Location	South of Highway 120, access off Hardin Flat Road	331585 Hardin Flat Road	31383 Hardin Flat Road	18653 Main Street
Acreage	80.1 total site acres	14.5 acres to be developed; 4.5 acres to be graded	403.7 total site acres	2.7 acres to be permitted for conditional uses
Units	99 tents[c]	90 cabins[d]	150 RV sites, cabins, and mobile home sites	N/A
Other Project Features	Communal kitchen, two communal bathrooms, one large reception and dining tent, in-ground swimming pool	First aid tent, nurse cabin, decks, office, recreation hall, restroom structures, three camp laundries, nature center, amphitheater, sports courts, sauna	N/A	Up to 14 seasonal, outdoor events per year; seasonal non-certified Farmer's Market twice weekly; farm stand
Square feet per unit	200 to 400	425 to 625	2,450 per lot	N/A
Total Maximum Guests	247.5	360[e]	N/A	500

Notes: RV = recreational vehicle; N/A = information not available
a. This project was analyzed by the City of Berkeley as the lead agency in a Final Mitigated Negative Declaration/Initial Study dated December 2018. The project is currently undergoing plan review by Tuolumne County.
b. Tuolumne County received a pre-application for this project in 2017 and has not received further information on this project at the time of the publication of this Draft EIR.
c. 77 deluxe/suite tents with wash basin, shower, and toilet; 22 safari tents with communal bathrooms.
d. 13 employee cabins and 1 permanent residence.
e. Includes both staff and campers.
Source: Tuolumne County, 2019.

The following provides a summary of the cumulative impact setting for each impact area:

- **Aesthetics:** The cumulative setting for visual impacts includes the effects of the proposed project together with the cumulative development projects listed in Table 4-1.
- **Air Quality:** The project's potential contribution to cumulative impacts is assessed utilizing the same significance criteria as those for project-specific impacts. Individual development projects that generate construction or operational emissions that exceed the Air District screening thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Mountain Counties Area Basin is in nonattainment.
- **Biological Resources:** The geographic scope of the cumulative analysis for biological resources consists of an "intensive study area" which includes the areas of the project site that are outside of the Open Space Zoning District. A "secondary study area" was also evaluated, which includes the portion of the project site that is within the Open Space Zoning District, and land to the north and east of the project site, in the foothills of the Sierra Nevada Mountain Range.
- **Cultural Resources and Tribal Cultural Resources:** The cumulative setting for cultural resource impacts includes the effects of the proposed project together with the cumulative development projects listed in Table 4-1.

- Energy: The area considered for cumulative impacts to energy consumption is the service area of Pacific Gas & Electric.
- Forestry Resources: The cumulative setting for forestry impacts includes the effects of the proposed project together with the cumulative development projects listed in Table 4-1.
- Geology and Soils: The cumulative setting for impacts related to geology and soils is site specific and addressed in each project's geotechnical investigation.
- Greenhouse Gas Emissions: Because GHG emissions are not confined to a particular air basin but are dispersed worldwide, the cumulative analysis focuses on the global impacts.
- Hazards and Hazardous Materials: The cumulative setting for impacts related to hazards and hazardous materials includes Tuolumne County, which is the service area for the Tuolumne County Department of Environmental Health.
- Hydrology and Water Quality: The geographic context used for the cumulative assessment of hydrology and water quality impacts within the Upper Tuolumne Watershed.
- Land Use and Planning: The cumulative setting for land use and planning projects includes the effects of the proposed project together with the cumulative development projects listed in Table 4-1.
- Noise: The cumulative setting for noise impacts includes the effects of the proposed project together with the cumulative development projects listed in Table 4-1.
- Population and Housing: The cumulative setting for population and housing impacts includes the effects of the proposed project together with the cumulative development projects listed in Table 4-1.
- Public Services, Parks, and Recreation: Cumulative impacts are considered in the context of the growth from the proposed project combined with the estimated growth in the service areas of each service provider.
- Transportation: The cumulative setting for transportation applies the regional transportation demand model and incorporates the cumulative development projects listed in Table 4-1.
- Utilities and Service Systems: Cumulative impacts are considered in the context of the growth from the proposed project combined with the estimated growth in the service areas of each utility's service area.
- Wildfire: The cumulative setting for wildfire impacts includes the effects of the proposed project together with the cumulative development projects listed in Table 4-1.

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4.1 AESTHETICS

This chapter describes the regulatory framework and existing conditions on the project site related to aesthetics, and the potential impacts of the project on aesthetics and visual resources.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 REGULATORY FRAMEWORK

This section summarizes key State and local regulations related to aesthetics concerning the proposed project. There are no federal regulations pertaining to aesthetics that apply directly or indirectly to the proposed project.

State Regulations

California Scenic Highway Program

The California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans), protects State scenic highway corridors from changes which would diminish the aesthetic value of lands adjacent to the highways. Some portions of Highway 120 are State-designated scenic highways; however, the designated portion of Highway 120 is west of the project site–from Route 49 near Chinese Camp to the east until reaching Moccasin Creek–and is not in the vicinity of the project site.[1]

California Building Code

Title 24 in the California Code of Regulations is the California Building Standards Code. Part 6 of Title 24 is the California Energy Code, which includes standards for lighting to improve energy efficiency and reduce light pollution and glare by regulating light power, brightness, and sensor controls.

Part 11 of Title 24 is the California Green Building Standards Code, known as CALGreen. CALGreen establishes building standards aimed at enhancing the design and construction of buildings through the use of building concepts that have a reduced negative impact or positive environmental impact. CALGreen encourages sustainable construction practices and includes standards for planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. Section 5.106.8, Light Pollution Reduction, specifically establishes Backlight, Uplight, and Glare ratings to minimize the effects of light pollution for non-residential development. The standards for lighting are updated on a three-year basis, and have varying requirements according to lighting zones, established by the location of a project. The standards contain lighting power (i.e., maximum zonal lumens) allowances for new installed equipment and specific alterations that are dependent on the designated lighting zone. Rural areas are designated lighting zone 2 which requires more stringent regulation of outdoor lighting systems lighting power. The allowed lighting power is based

[1] Tuolumne County General Plan, Chapter 2: Circulation Element, page 2-22.

on the brightness of existing lighting in the surrounding area. Providing greater power than is needed potentially leads to debilitating glare on adjacent properties.

Local Regulations

Tuolumne County General Plan

The Community Development and Design, Natural Resources, and Community Identity Elements include several goals, policies, and implementation programs, listed in Table 4.1-1, that are aimed at preserving the scenic quality of the county.

TABLE 4.1-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO AESTHETICS

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
COMMUNITY DEVELOPMENT AND DESIGN	
Goal 1B	*Minimize conflicts between incompatible land uses.*
Policy 1.B.3	Require new commercial development to be designed to minimize the visual impact of parking areas on public roads and on public viewsheds.
Implementing Program 1.B.g	Require proponents of new commercial development to locate parking areas behind buildings or sufficiently screen them from public roads and public viewsheds, or, if locating behind buildings and screening are determined to be infeasible, provide other landscaping or design features to visually enhance the parking areas.
Policy 1.B.5	Preserve the existing nighttime environment by limiting the illumination of areas surrounding new development. New lighting that is part of residential, commercial, industrial, or recreational development shall be oriented away from off-site sensitive uses, and shall be hooded, shielded, and located to direct light downward and prevent glare.
NATURAL RESOURCES ELEMENT	
Goal 16A	*Balance property rights with the conservation of the environment and rural character of the County, which contributes to the quality of life of residents, encourages tourism and supports economic development.*
Policy 16.A.3	Conserve the natural scenic quality of hillsides and hilltops throughout Tuolumne County.
Implementing Program 16.A.e	Encourage hillside development to be designed and located to be compatible with, rather than imposed on, the landscape and environment by minimizing the amount of grading and topographical alteration it necessitates.
Implementing Program 16.A.f	Maintain hillside development guidelines which provide recommendations for integrating new construction with hillsides and hilltops. The guidelines should address fire-safe construction techniques, color and building materials, vegetation retention, retaining wall enhancement, alternative road construction techniques to reduce cuts and fills, and illustrate techniques for blending new construction with the surrounding hillsides and hilltops.
Implementing Program 16.A.g	Encourage the design of new development to blend with the natural contour of the land and the natural vegetation.
Policy 16.A.5	Conserve scenic resources, landmarks and the natural landscape.
Implementing Program 16.A.i	Provide flexibility in development standards to facilitate the clustering of new development in order to encourage the retention of scenic resources, landmarks and the natural landscape.

TABLE 4.1-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO AESTHETICS

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
Policy 16.A.6	Encourage the protection of clusters of native trees and vegetation and outstanding individual native and non-native trees which help define the character of Tuolumne County.
Policy 16.A.7	Encourage and support the voluntary conservation of scenic resources through recognition programs and the provision of incentives, such as flexibility in development standards or reductions in appropriate County fees.
COMMUNITY IDENTITY ELEMENT	
Goal CI-C	*Recognize, preserve and enhance the character and identity of each of the County's individual communities.*
Policy CI-C.1	Encourage new development to be designed to be compatible with the pattern of surrounding development and in an architectural style which is aesthetically appealing and blends into the scale and architectural character of the area.
Implementation Program CI-C.a	Establish buffer areas around existing residential neighborhoods to protect them from infringement of potentially incompatible land uses, such as agriculture, mining, industry, solid waste facilities, airports and sewage treatment facilities. These buffer areas may include building setbacks and/or limitations on land uses within an established distance of existing residences.
Policy CI-C.5	Encourage parking areas for new commercial, industrial and business park development to be located behind buildings or sufficiently screened from public roads by retaining or replanting native vegetation and/or through the use of topography or other natural features. Any landscaping shall enhance new commercial and industrial development.
Policy CI-C.6	Preserve the existing nighttime environment by limiting the illumination of areas surrounding new development.
Implementation Program CI-C.I	Require new lighting that is part of residential, commercial, industrial, or recreational development to be oriented away from off-site sensitive uses, and to be hooded, shielded, and located to direct light pools downward and prevent glare.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Tuolumne County Code of Ordinances

The Tuolumne County Code of Ordinances is organized by Title, Chapter, and Section. Most provisions relating to aesthetics and scenic resources are included in Title 15, Buildings and Construction, and Title 17, Zoning, as described below. The County enforces these Zoning Code regulations through the plan check and approval process for each project. The proposed project is zoned C-K (Commercial-Recreation) and O (Open Space).

- Chapter 15.04, Construction Codes: Tuolumne County has adopted the California Building Code, which includes Section 5.106.8, Light Pollution Reduction of CALGreen. As described above, this section regulates BUG lighting standards for new development.
- Section 17.14.050, Building Intensity: Due to the limitations on structures allowed in the (O) zone, building intensity standards are not applicable.
- Section 17.30.050, Building Intensity: Within any commercial recreational (C-K) district, the maximum residential building intensity shall be one (1) dwelling unit per two (2) acres. The maximum ratio of the coverage of all buildings on a parcel, referred to as the floor area ration (FAR), shall be 0.5.

Additional building coverage is possible through the density bonus regulations of the California Government Code related to the provision of childcare facilities.

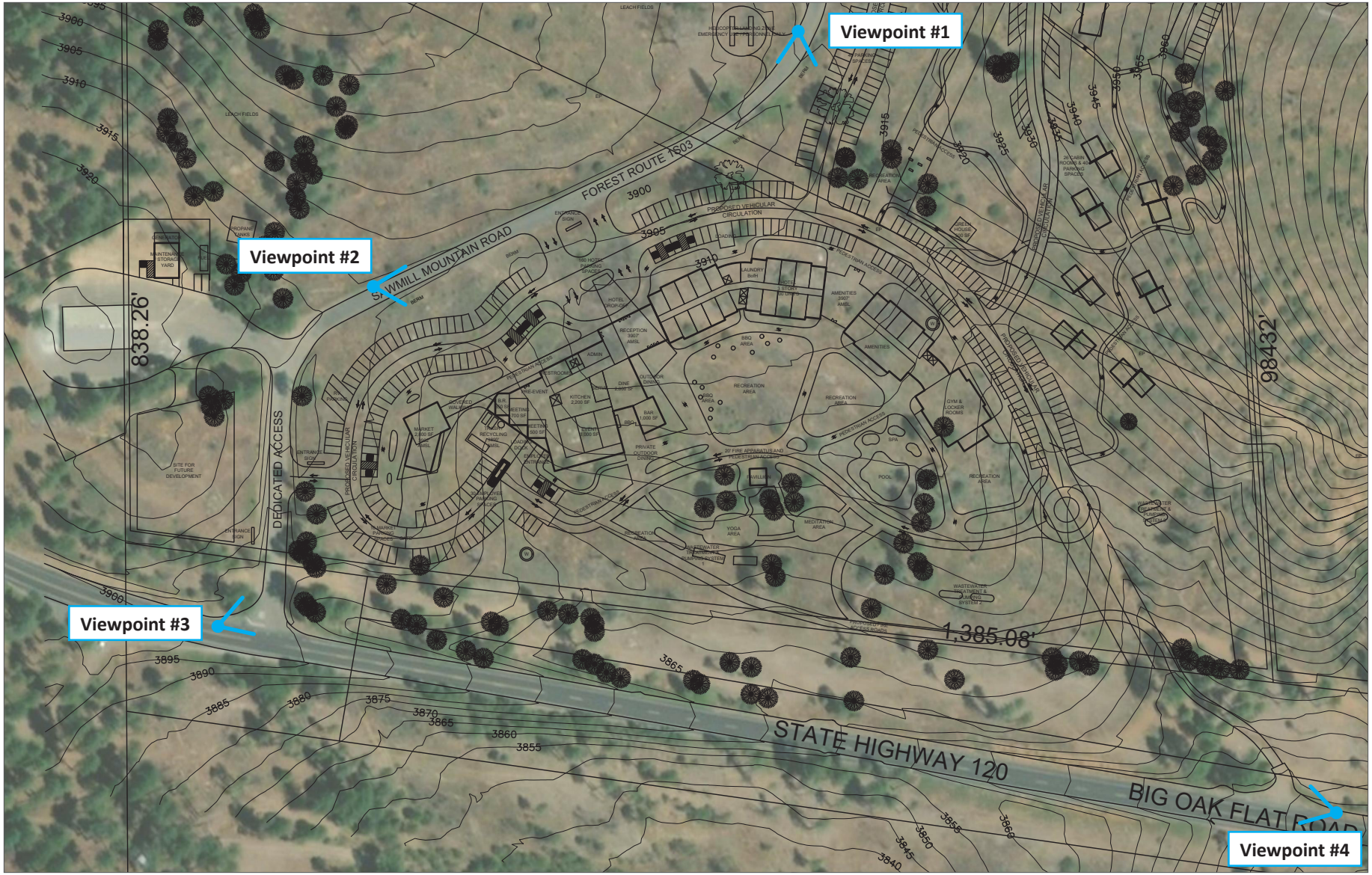
- Chapter 17.54, Height Regulations: This chapter established height regulations for all zoning districts within Tuolumne County. For Commercial Recreation (C-K) zoning districts, height is limited to 50 feet from grade, and for Open Space (O) zoning districts, height is limited to 40 feet from grade.

4.1.1.2 EXISTING CONDITIONS

Site Conditions

The project site is located in a rural portion of Tuolumne County and is generally surrounded by rural residential homes on Sawmill Mountain Road north and northeast, open space lands to the west and east, and Highway 120 to the south. Nearby development also includes campsites, resorts, and recreational vehicle sites, which are not visible from the project site. The nearest resorts are the Yosemite Lakes RV Resort located approximately 1 mile to the southeast and Sweetwater Campground located approximately 2.25 miles to the west.

The project site is undeveloped, except for on-site wells. A Caltrans maintenance building is located directly west of the project site (accessed through an on-site easement). Four viewpoint locations along the perimeter of the project site were chosen to illustrate existing site conditions, including topographical conditions that affect far field views around the site. The view locations relative to the project boundary are shown on Figure 4.1-1. The existing site conditions and views are shown on Figures 4.1-2 through 4.1-4. Topography on-site varies from flat to moderately sloped. Vegetation on-site is in various stages of regrowth after the damage caused by the 2013 Rim Fire burned the majority of the brush and trees that existed on the site, which were subsequently removed. Much of the site is covered in twigs, felled trees, stumps, grasses, and saplings of mixed conifer trees. Some mature trees survived the 2013 Rim Fire, all which have burn scars on the bottom half of their trunks, some without any existing foliage. There are several informal driveways on-site: one on an unpaved access point off of Sawmill Mountain Road, and one partially paved access point off of Highway 120. There is a knoll that exists to the east of Sawmill Mountain Road which contains mixed conifer trees in various stages of regrowth, and dead trees remaining from the 2013 Rim Fire.



Source: PlaceWorks, 2020.

Approximate Viewpoint Locations

Figure 4.1-1
Viewpoint Locations

Source: PlaceWorks, 2020.

Figure 4.1-2
Viewpoint #1: North Façade Looking South

Source: PlaceWorks, 2020.

Figure 4.1-3
Viewpoint #2: North Façade Looking East

Source: PlaceWorks, 2020.

Figure 4.1-4
Viewpoint #3: Southwest Corner Looking Northeast

Source: PlaceWorks, 2020.

Figure 4.1-5

Viewpoint #4: Southeast Corner Looking Northwest

Scenic Views

Scenic corridors can be defined as an enclosed area of landscape, viewed as a single entity that includes the total field of vision visible from a specific point, or a series of points along a linear transportation route. Public view corridors are areas in which short-range, medium-range, and long-range views are available from publicly accessible viewpoints, such as from county roads. A scenic road is defined as a highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and human-made scenic resources. Scenic roads direct views to areas of exceptional beauty, natural resources, landmarks, historic, or cultural interest. There are no State or locally designated scenic roads located adjacent to or near the project site. Some portions of Highway 120 are State-designated scenic highways; however, the designated portion of Highway 120 is west of the project site–from Route 49 near Chinese Camp to the east until reaching Moccasin Creek–and is not in the vicinity of the project site.[2]

Scenic vistas are generally interpreted as long-range views of a specific scenic feature (e.g., open space lands, mountain ridges, bay, or ocean views). Public views are those which can be seen from vantage points that are publicly accessible, such as streets, freeways, parks, and vista points. These views are generally available to a greater number of persons than private views. Private views are those views that can be seen from vantage points located on private property. There are no existing designated scenic vistas or views on or near the project site. Limited, long range mountain views can be seen in Figures 4.1-2 through 4.1-4, however other areas around the project site offer greater viewing opportunities, especially along Sawmill Mountain Road, where views of the higher granite peaks to the northeast are available. On the project site, the best area to see long range views is from the top of the knoll, in the Open Space Zone, where no development is proposed.

Light and Glare

Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass or spill to adjacent sensitive receptors (e.g., residential development), sky glow, and over-lighting. Views of the night sky are an important part of the natural environment. Excessive light and glare can be visually disruptive to humans and nocturnal animal species. Nighttime lighting within the immediate project vicinity is minimal and limited to security lights at the Caltrans facility, the cabins along Sawmill Mountain Road, and periodically from vehicles on Highway 120. There is no street lighting on the subject property or in the surrounding vicinity.

4.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant aesthetic impact if it would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.

[2] Tuolumne County General Plan, Chapter 2: Circulation Element, page 2-22.

3. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage points).
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.3 IMPACT DISCUSSION

AES-1	The project would not have a substantial adverse effect on a scenic vista.

Scenic vistas are generally interpreted as long-range views, while scenic corridors may provide short-, middle-, and/or long-range views. The Tuolumne County General Plan does not designate any scenic vistas or corridors in the project vicinity. However, the General Plan does include policies that enforce the protection of views of hillsides and hilltops, which are present in the vicinity of the project site. Therefore, for the purposes of this analysis, long-range views of the mountains in the Stanislaus National Forest are considered scenic vistas. Such existing vistas are shown on Figures 4.1-2 through 4.1-5. The analysis below focuses on views across the project site when viewed from Sawmill Mountain Road and Highway 120. These public views are used to approximate private views across the site from nearby properties.

As described above, there is no existing development on-site, except for a Caltrans storage building directly to the west, and the project site consists primarily of vegetated land. The proposed project would result in construction of a 100-guest room hotel lodge comprised of various single-, two-, and three-story buildings, guest cabins, employee apartments, and associated infrastructure along the western portion of the site. The remainder of the developed portion of the project site would include paved roads, walking paths, landscaped and natural undeveloped areas. Land within the Open Space easement on the eastern portion of the site would be undeveloped.

For the purposes of this evaluation, it is assumed that the proposed buildings and water tanks could potentially obstruct public views of scenic vistas when viewed across the project site. Given that the proposed buildings would be limited to one to three stories (21 to 40 feet) in height, and the proposed water tanks are 14 feet at the tallest point, the project would be consistent with Tuolumne County Code of Ordinances, Chapter 17.54, Height Regulations for the C-K zoning designation. Visual simulations were prepared at the four viewpoint locations, as shown on Figure 4.1-1. Three visual simulations were produced at each viewpoint location, which illustrate site conditions after implementation of the proposed project at the time of landscape planting, at five years from planting, and at 10 years after planting.

Visual Simulations

Viewpoint #1- North Façade Looking South

Viewpoint #1 is located on the northern edge of the project site, situated along the western edge of Sawmill Mountain Road, looking south over the project site. As shown on Figure 4.1-2, landscaping in the

near vicinity of this viewpoint consists of some mature trees that survived the 2013 Rim Fire, vegetation in various stages of regrowth, grasses, felled trees, and power lines. Far field views include mature trees and mountains.

Figures 4.1-6a through 4.1-6c illustrate site conditions after construction of the proposed project. As shown on Figure 4.1-6a, far field views of the mountains and remaining mature trees are obstructed by the proposed hotel lodge main facility. Landscape plantings would not screen views of the hotel lodge at the time of planting, and views of the hotel lodge would be visible from Sawmill Mountain Road. However, Figure 4.1-6b illustrates that five years after landscape planting, views of the hotel lodge would be almost entirely screened with landscaping, except for views of the roof of the structure. Further, as shown in Figure 4.1-6c, 10 years after planting, the landscape plantings would entirely screen the proposed hotel lodge, and the project site would appear as a mixed-conifer forest. There would be no view of the proposed development, nor would far field views be visible.

Viewpoint #2- North Façade Looking East

Viewpoint #2 is located on the northwestern edge of the project site, situated along the western edge of Sawmill Mountain Road, looking east over the project site. As shown on Figure 4.1-3, landscaping in the near vicinity of this viewpoint consists of few mature trees damaged in the 2013 Rim Fire, vegetation in various stages of regrowth, grasses, and felled trees. Far field views include mature trees and mountains, particularly the mountain to the north of the project site, and farther field mountains to the east of the project site.

Figures 4.1-7a through 4.1-7c illustrate site conditions after implementation of the proposed project. As shown on Figure 4.1-7a, far field views of the mountain to the north of the project site is not obstructed by the proposed project. Views of far field mountains to the east of the proposed project are obstructed. Landscape plantings would not screen views of the hotel lodge at time of planting, and views of the hotel lodge would be visible from Sawmill Mountain Road. Figure 4.1-7b illustrates that five years after landscape planting, views of the hotel lodge would be largely screened with landscaping, except for views of the hotel lodge sign immediately adjacent to Sawmill Mountain Road, as well as some views of parking and of the main facility. Far field views of the mountain to the north of the proposed project would be visible. As shown in Figure 4.1-7c, 10 years after planting, the landscape plantings would almost entirely screen the proposed hotel lodge except for the sign located immediately adjacent to Sawmill Mountain Road and some on-site pedestrian walkways. At landscape planting maturity, the project site would largely appear as a mixed-conifer forest. There would be minimal views of the proposed development and far field views would not be visible.

Source: PlaceWorks, 2020.

Figure 4.1-6a

Viewpoint #1: Proposed Project Post Construction

Source: PlaceWorks, 2020.

Figure 4.1-6b

Viewpoint #1: Proposed Project 5 Years Post Construction

Source: PlaceWorks, 2020.

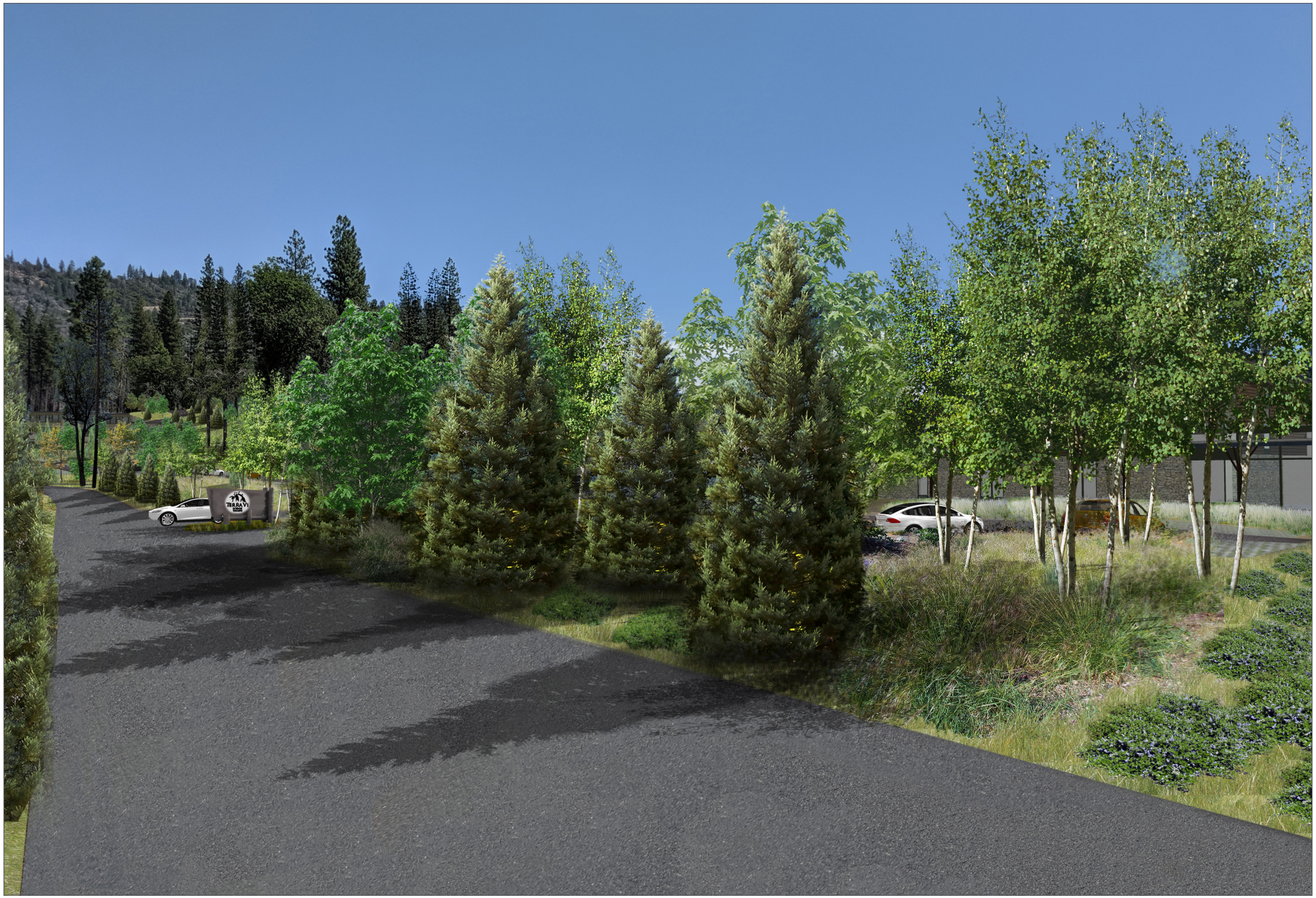
Figure 4.1-6c

Viewpoint #1: Proposed Project 10 Years Post Construction

Source: PlaceWorks, 2020.

Figure 4.1-7a

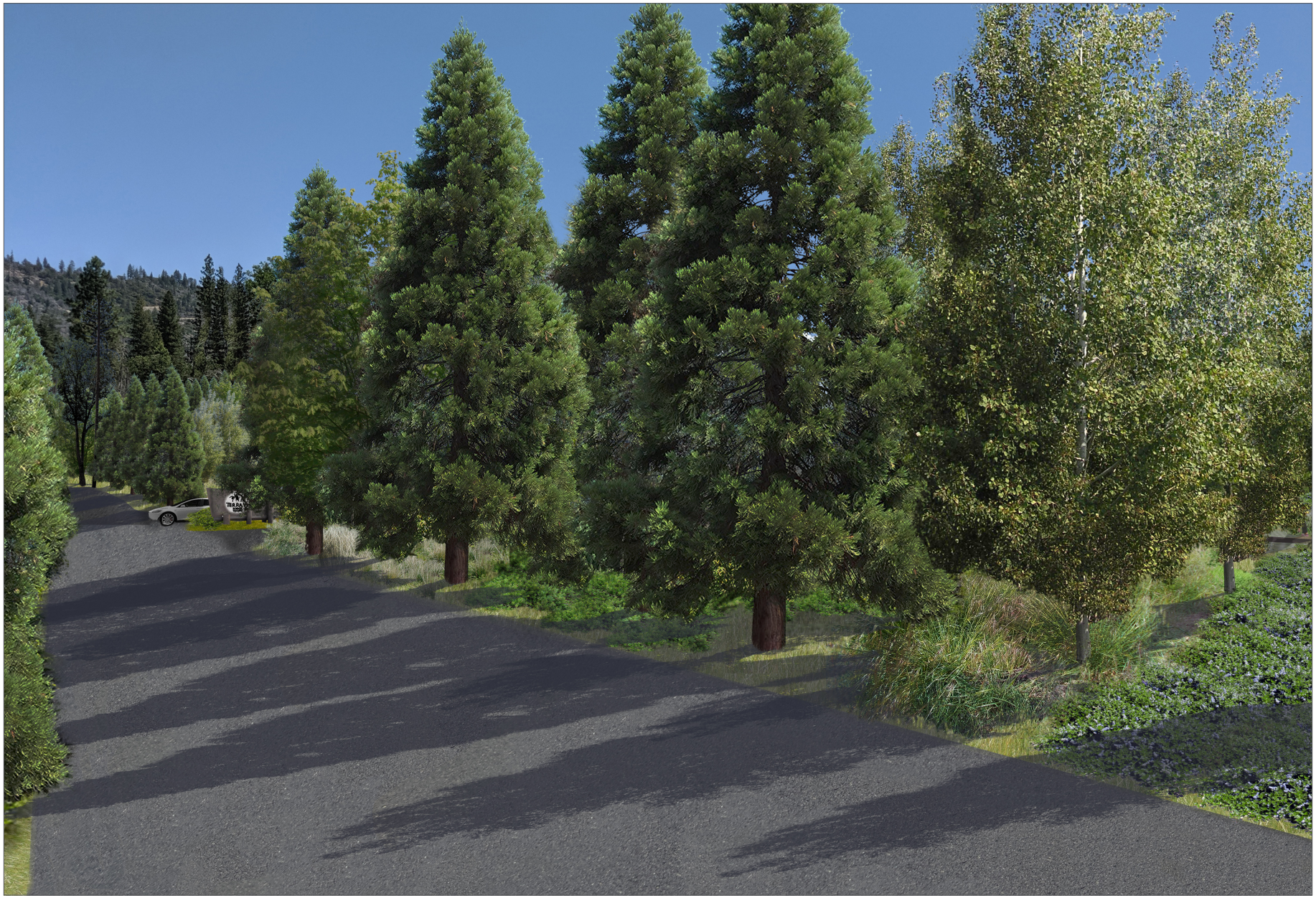
Viewpoint #2: Proposed Project Post Construction



Source: PlaceWorks, 2020.

Figure 4.1-7b

Viewpoint #2: Proposed Project 5 Years Post Construction



Source: PlaceWorks, 2020.

Figure 4.1-7c

Viewpoint #2: Proposed Project 10 Years Post Construction

Viewpoint #3- Southwest Corner Looking Northeast

Viewpoint #3 is located on the southwestern edge of the project site, situated along the northwestern edge of the intersection of Sawmill Mountain Road and Highway 120, looking northeast over the project site. As shown on Figure 4.1-4, landscaping in the near vicinity of this viewpoint consists of mature trees damaged in the 2013 Rim Fire, vegetation in various stages of regrowth, grasses, felled trees, and a mountain to the east of the project site. There are no views considered far field visible from Viewpoint #3.

Figures 4.1-8a through 4.1-8c illustrate site conditions after implementation of the proposed project. As shown on Figure 4.1-8a, all existing views of the mountain to the east of the project site are not obstructed by the proposed project. Landscape plantings would not screen views of the hotel lodge at time of planting, and views of the hotel lodge would be visible from both Sawmill Mountain Road and Highway 120. Figure 4.1-8b illustrates that five years after landscape planting, views of the hotel lodge and the mountain to the east of the project site would not be largely screened. The proposed hotel lodge would still be visible from both Highway 120 and Sawmill Mountain Road five years after project landscape planting. As shown in Figure 4.1-8c, 10 years after landscape plantings the project site would almost entirely screen the proposed hotel lodge except for the sign located off of Sawmill Mountain Road. At landscape planting maturity, the project site would largely appear as a mixed-conifer forest.

Viewpoint #4- Southeast Corner Looking Northwest

Viewpoint #4 is located on the southeastern edge of the project site, situated along the northern edge of Highway 120, looking northwest over the project site. As shown on Figure 4.1-5, landscaping in the near vicinity of this viewpoint consists of mature trees damaged in the 2013 Rim Fire, vegetation in various stages of regrowth, grasses, and felled trees. There are no views considered far field visible from Viewpoint #4.

Figures 4.1-9a through 4.1-9c illustrate site conditions after implementation of the proposed project. As shown on Figure 4.1-9a, there are limited views of the hotel lodge visible from Highway 120. One vehicle pathway would be visible from Highway 120 at the time of planting. Figure 4.1-9b illustrates that, five years after landscape planting, views of the hotel lodge and the vehicle pathway would be partially screened. The roof of the hotel lodge and vehicles would be visible from Highway 120. As shown in Figure 4.1-9c, 10 years after landscape plantings the project site would be entirely screened and would appear as a mixed-conifer forest.

Source: PlaceWorks, 2020.

Figure 4.1-8a

Viewpoint #3: Proposed Project Post Construction

Source: PlaceWorks, 2020.

Figure 4.1-8b

Viewpoint #3: Proposed Project 5 Years Post Construction

Source: PlaceWorks, 2020.

Figure 4.1-8c

Viewpoint #3: Proposed Project 10 Years Post Construction

Source: PlaceWorks, 2020.

Figure 4.1-9a

Viewpoint #4: Proposed Project Post Construction

Source: PlaceWorks, 2020.

Figure 4.1-9b

Viewpoint #4: Proposed Project 5 Years Post Construction

Source: PlaceWorks, 2020.

Figure 4.1-9c

Viewpoint #4: Proposed Project 10 Years Post Construction

Analysis of Potential Impacts to Scenic Vistas

The water tanks would be approximately 14 feet at the tallest point and would not block any views. The retaining walls would be 5 feet in height from grade, placed to taper into the landscape, and would be designed to mimic natural materials, thereby not blocking views. All buildings would be located on lower elevations on the western portion of the project site. Additionally, the existing coniferous forest surrounding the project site would remain. Mature trees existing on the project site are of heights that currently block the majority of scenic vista views from the project site. Furthermore, the views of the mountains in Stanislaus National Forest from the project site are not recognized by the County or State as scenic viewing locations; that is, a distinct location where people gather with a reasonable expectation of having a view of a scenic resource. Therefore, development of the proposed project would not further block or obstruct public views of scenic vistas from public viewing. Similar views would continue to be visible along the project site.

The proposed project was designed to comply with the County's General Plan policies, listed in Table 4.1-1, which require development on hillsides and within view of scenic resources to blend with the natural contour of the land and the natural vegetation, as well as be compatible with the landscape and environment. As described in Chapter 3, Project Description, of this Draft EIR, the proposed project includes strategies that, once implemented, would help to protect scenic resources in the project vicinity. For example, the proposed project would include a tree preservation program, to ensure trees on-site are preserved wherever possible, and would include the planting of native trees and shrubs to aid in the long-term recovery of the Sierra mixed-conifer forest that was devasted by the 2013 Rim Fire. In addition, the County will review the project for conformance to the planning standards covering site layout, structure design, and as part of its issuance of the site development permit. Consistency with these policies would further ensure that development of the proposed project would result in a *less-than-significant* impact to scenic vistas.

Mitigated Condition

There are two mitigation measures in this Draft EIR that would affect the project landscaping plan in a way that would have the potential to affect the effectiveness of proposed landscaping as a means of visually screening the project from Highway 120 and/or Sawmill Mountain Road. As discussed in Chapter 4.17, Wildfire, Mitigation Measure WF-2 would reduce the density and placement of plantings along roadways through the implementation of a Vegetation Management Plan. In addition, under Mitigation Measure WF-2, the undeveloped areas of the project site would be maintained with wildland safety in mind, with widely spaced conifers and oak trees, and brush and grass in these areas shall be maintained and managed so that continuous groupings comprise less than 50 percent of groundcover.

With implementation of Mitigation Measure WF-2, the project landscaping plans would be revised for compliance with the Vegetation Management Plan. Therefore, the vegetation installed along Sawmill Mountain Road and Highway 120 would appear different than they appear in the visual simulations shown in Figures 4.1-6a through 4.1-9c. Compliance with Mitigation Measure WF-2 would involve installation of plantings in a way that strategically staggers placement and planting heights to provide effective screening of the proposed project from adjacent roadways. The mitigated condition plantings, although installed farther from Highway 120 and more widely spaced, would still fill the visual space and screen the

proposed project from Highway 120 and Sawmill Mountain Road. Therefore, Mitigation Measure WF-2 would not result in any secondary impacts to aesthetics or visual resources.

In addition, as discussed in Chapter 4.12, Noise, implementation of Mitigation Measure NOI-1.1 would require construction of a solid noise barrier measuring 8 feet in height along the north, east, and west sides of the maintenance yard boundary. The barrier could be constructed of either masonry or precast concrete panels. The noise barrier would be located in the area shown on Figure 4.12-2 and would not affect scenic views from roadways. Therefore, Mitigation Measure NOI-1.1 would not result in any secondary impacts to aesthetics or visual resources.

Significance without Mitigation: Less than significant.

AES-2	**The project would not substantially degrade the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings.**

A scenic road is defined as a highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and human-made scenic resources. There are no State- or locally designated scenic routes located adjacent to or near the project site. Therefore, there would be *no impact.*

Significance without Mitigation: No impact.

AES-3	**The project would change but would not degrade the existing visual character or quality of public views of the site and its surroundings.**

Development of the proposed project would represent a change to the existing wilderness visual character of the project site from a natural landscape of Sierra mixed-conifer forest to a hotel lodge with commercial space, cabins, employee housing, roadways and pedestrian pathways, water tanks, and recreational features. The building façades would consist of fire-resistant materials with natural colors and glass to both blend into the natural landscape and provide transparency for visitors and hotel guests. To ensure consistent style, the proposed project would utilize an architectural style that is complementary to the surrounding natural, forested landscape, such as open wood beamed framing, brick walls, and large windows for daylighting.

As described under impact discussion AES-1, the hotel lodge, cabins, and employee housing would be concentrated on the western portion of the project site, with the tallest buildings (the lodge hotel) located at lower elevations. The site plan would place the most intensive uses–that is, the lodge and associated outdoor visitor uses–oriented toward Highway 120, away from the residential properties to the north of the site, and would place the less intensive uses–that is, the employee cabins and utilities—closer to the residential properties.

The project site is located along the Highway 120 corridor, which serves as a gateway to Yosemite National Park. The corridor sets the stage for visitors of the park and provides aesthetic conditions that convey the

rural forest nature of the region. As such, the hotel lodge would be surrounded by native landscaping consisting of conifers and black oaks, with ornamental native small trees, shrubs, groundcovers, and grasses. The mixed-conifer landscape would extend to the lodge perimeter areas, which would reinforce the forest setting. As shown on Figures 4.1-8c and 4.1-9c, the proposed project would be almost entirely concealed from Highway 120, except for a view of the resort sign located off of Sawmill Mountain Road, once the proposed landscape buffer is fully mature 10 years post planting. The landscape buffer consists of existing trees, native trees, and shrubs that would entirely fill in the viewshed from Highway 120. The natural forest landscape along Highway 120 would also contribute to the visual context of the site and help to screen the lodge from view from the public realm, including Highway 120, and other lands in the area that are open to the public. The landscaping along Sawmill Mountain Road would also provide visual screening of the lodge. Amenity and recreational open space areas would have native mixed-conifer forest plantings and ornamental flowering trees, which would further promote the reforestation of the Sierra mixed-conifer landscape. The cabins and employee housing would be located mid-slope within the site and the three proposed water tanks would be located partially up the northwestern slope of the knoll. The cabins would dot the landscape and be surrounded by sequoia and bigleaf maple plantings. The three water tanks would be surrounded by sequoia plantings, which would act as a buffer from the proposed internal roadways and downslope views.

Development would be situated on 11.5 acres for buildings, roads, and parking, and an additional 1.4 acres for the primary septic system, totaling 12.9 acres or approximately 20 percent of the project site. The remainder of the project site would be in the Open Space Zoning District and be left undeveloped with Sierra mixed-conifer vegetation. While the addition of buildings and associated roadways and landscaping could represent a change to existing visual character of the project site and its immediate vicinity, the scale of proposed buildings would be consistent with applicable zoning requirements, the placement of buildings would be sited to orient the more intense uses along Highway 120 and away from adjacent residential properties, and landscaping would be designed to enhance and preserve the natural environment and to screen the proposed project.

In addition, development would be required to comply with the County's General Plan policies, which require development on hillsides and within view of scenic resources to blend with the natural contour of the land and the natural vegetation, as well as be compatible with the landscape and environment. The proposed project would also be required to comply with the County Code of Ordinances, Chapter 17.54, Height Regulations, which requires buildings in Open Space zoning districts to be no more than 40 feet in height from grade and buildings in Commercial Recreation zoning districts to be no more than 50 feet in height from grade. As shown on Figures 4.1-6a through 4.1-9c, implementation of the proposed project would change the existing visual quality of public views of the site and surroundings until full maturity of the proposed landscape buffer is achieved approximately 10 years post landscape planting, because the proposed development would be visible at all four viewpoints evaluated in this EIR. However, the figures show that a majority of public views of the proposed project would be screened by landscaping five years post landscape planting, with full screening at landscape maturity 10 years post landscape planting. Once plantings are mature, the proposed project would largely not be visible off-site, and the project site would appear as a mixed-conifer forest. Therefore, consistency with regulations in the Code of Ordinances, as well as the proposed landscape buffer, would ensure that future development under the proposed project would not substantially degrade the visual quality of the site or its surroundings, and associated impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

AES-4	**The project would not expose people on- or off-site to substantial light that would adversely affect day or nighttime views in the area, but could create a significant impact associated with glare.**

Nighttime illumination and glare impacts are the effect of a project's exterior lighting upon adjoining uses and areas. Light and glare impacts are determined through a comparison of the existing light sources with the proposed lighting plan or policies. This analysis focuses on potential impacts associated with off-site light spillage onto public and private property.

As described above, there is no existing development on-site, except for on-site wells. As such, the site does not currently contain existing sources of nighttime illumination, with the exception of any light spillage onto the site that may occur from the Caltrans garage located directly to the west of the site (accessed through an easement on the project site). The surrounding development consists of rural residential homes, along Sawmill Mountain Road immediately north of the project site, and open space forest lands to the east and west, with no nighttime illumination. Nighttime lighting is also visible intermittently from passing cars driving during night hours on Highway 120 or Sawmill Mountain Road.

Development of the proposed project would introduce new sources of light and glare to the project site with the new buildings, pedestrian pathways, and on-site amenities. Cars visiting the project site would bring additional intermittent lighting to Highway 120 and Sawmill Mountain Road. Cars would access the project site at the main entrance located close to the intersection of Sawmill Mountain Road and Highway 120, therefore, cars would not be directed towards the residential properties north of the site. The project would include outdoor lighting for safety and security purposes, including lighting in the helicopter landing zone. While a detailed lighting plan has not yet been developed, proposed project lighting would be designed to minimize light spillage by following Dark-Sky influenced design programs[3] and follow the California Title 24 Building Energy Efficiency Standards. Lighting would be downward positioned, fully shielded, high efficiency, 3000K LED fixtures, to prevent off-site light spillage. Exterior lighting, and glass facades would also be shielded from off-site viewpoints with the proposed landscaping, which would consist of reforesting the site with native trees and a mixed-conifer landscape. Some exterior lighting, namely from the proposed emergency helipad, would not be fully shielded and may potentially spill off-site onto residential properties. However, the helipad is proposed for emergency use only, therefore use would be sporadic, lighting would be intermittent, and only be necessary for safety when in use. Exterior lighting on buildings and in landscaped areas would also be required to comply with County General Plan Policy CI-C.6, which requires the preservation of existing nighttime environment by limiting the illumination of areas surrounding new development. Implementation of Program CI-C.I also requires new lighting that is part of commercial or recreational development to be oriented away from off-site sensitive uses, and to be hooded, shielded, and located to direct light pools downward and prevent glare. Glare would be minimized by positioning roof and window overhangs to shield glass windows and facades from

[3] Dark-Sky influenced design encourages careful consideration of lighting and its influence on wildlife and hinderance of views of the night sky. Design which reduces these impacts include shaded luminaires directed downwards, avoidance of light that induces glare, and minimization of the number of light sources introduced to site.

direct sunlight. However, the proposed installation of solar panels on the project site could potentially result in a new source of glare on the project site. As such, there could potentially be a significant impact of glare. Consistency with County General Plan policies would ensure that future development under the proposed project would not create substantial light sources that could degrade daytime or nighttime views in the area, and impacts would be *less than significant.* However, impacts from new sources of glare are potentially *significant*.

Significance without Mitigation: Significant.

Impact AES-4: The proposed project includes the installation of photovoltaic panels to generate solar energy. Because the location and materials for the panels is not yet known, the panels have the potential to become sources of glare, which would be a significant impact.

Mitigation Measure AES-4: Proposed photovoltaic panels shall be designed to ensure the following:

- The angle at which panels are installed precludes, or minimizes to the maximum extent practicable, glare observed by viewers on the ground.
- The reflectivity of materials used shall not be greater than the reflectivity of standard materials used in residential and commercial developments.
- Panels shall be sited to minimize their visibility from Highway 120.

Significance with Mitigation: Less than significant.

4.1.4 CUMULATIVE IMPACTS

AES-5	The proposed project would not contribute to significant cumulative aesthetics impacts.

The cumulative impact for aesthetics includes potential future development under the proposed project combined with effects of development on lands within the same viewshed as the project site. A cumulative impact would be considered significant if, when taken together with past, present, and reasonably foreseeable projects in the identified area, it would result in a substantial adverse effect on a designated scenic vista or if it would result in a substantial degradation of the visual quality or character in the vicinity of the project site.

The project site is visible from Highway 120 and Sawmill Mountain Road; however, these roads are not designated by the State or County as Scenic Highways. Therefore, the proposed project would not have the potential to contribute to cumulative impacts associated with scenic highways.

As described in Chapter 4, Environmental Evaluation, the cumulative development projects in the vicinity of the proposed project include Yosemite Under Canvas located immediately to the south of the project site across Highway 120, Thousand Trails/Yosemite Lakes RV Expansion located approximately 1 mile to the southeast of the project site, Berkeley Tuolumne Camp Restoration located approximately 2.8 miles to the southeast of the project site, and Mountain Sage Conditional Use Permit located approximately 14.5 miles to the west of the project site. The Berkeley Tuolumne Camp Restoration project would result in

reconstruction of the Berkeley Tuolumne Camp from damages incurred by the Rim Fire. The 2018 Final Mitigated Negative Declaration/Initial Study for the Berkeley Tuolumne Camp Restoration project described significant-but-mitigable impacts regarding visibility and lighting. Mitigation measures included screening, installation of glare-reducing materials, and dark sky-compliant outdoor lighting consistent with California Green Building Standards. However, this project is not visible from the proposed project site. The Mountain Sage Conditional Use Permit project would modify an existing site to allow temporary, limited uses such as farmer's market, events, and farm stand; this project is also not visible from the proposed project site. Details for the Thousand Trails/Yosemite Lakes RV Expansion have not yet been developed so this project's potential effects or contribution to cumulative effects regarding aesthetics cannot yet be determined with specificity; this project location is also not visible from the project site. Nevertheless, the proposed project would not, in combination with these three cumulative projects, change the visual character of the site vicinity, or impact scenic vistas or designated scenic highways.

The Yosemite Under Canvas site is visible from the project site and is currently undeveloped, with hiking trails and Sierra mixed-conifer forests on-site. The Yosemite Under Canvas project would include the removal of 2.98 acres of mixed-conifer forest and 0.42 acres of previously disturbed forest land to install 99 tent sites and associated restroom, parking, and kitchen facilities. The tents and associated facilities would be located in the southern and southwestern portions of the project site, and the tree line surrounding the northern and eastern project boundaries would be maintained, which would block views from surrounding roadways, residences, and scenic vistas. Similar to the proposed project, the Yosemite Under Canvas project would introduce lighting and daytime glare to the site; however, all light will use low voltage lighting, compliant to the International Dark-Sky Association dark sky standards. Lighting on this project site would also be shielded from surrounding roadways and properties by the mixed-conifer forested landscape. Therefore, the proposed project would not, in combination with this cumulative project, change the visual character of the site vicinity, impact scenic vistas or designated scenic highways, or create a cumulatively significant impact to light and glare.

Similar to the proposed project, the Yosemite Under Canvas project would be required to be in conformance with applicable Tuolumne County General Plan policies and Tuolumne County Code of Ordinances standards, which require development on hillsides and within view of scenic resources to blend with the natural contour of the land and the natural vegetation, be compatible with the landscape and environment, and not create illumination off-site. The uniform application of these regulations, goals, and policies would ensure that all development within the vicinity is compatible with its surroundings upon approval. Therefore, the project would result in a *less-than-significant* cumulative impact with respect to visual character, scenic vistas and highways, and light and glare.

Significance without Mitigation: Less than significant.

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4.2 AIR QUALITY

This chapter describes the regulatory framework and existing conditions on the project site related to air quality, and the potential impacts of the project on air quality. This chapter is based off of the following technical study, which is included in Appendix C, and referenced throughout this chapter as the Air Quality Study:

- Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, June 2020.

4.2.1 ENVIRONMENTAL SETTING

4.2.1.1 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

Pollutants emitted into the ambient air by stationary and mobile sources are regulated in California by federal and State law under the federal Clean Air Act and California Clean Air Act, respectively. Pollutants are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources, and include carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. For land use development projects, criteria air pollutants of greatest concern are ozone, particulate matter, and CO. ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants. Each of the primary and secondary criteria air pollutants and its known health effects is described below.

- **Ozone (O_3)** is a secondary criteria air pollutant and is formed when ROG and NO_x, by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. It is commonly referred to as "smog". O_3 is primarily a summer air pollutant because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature. O_3 is a respiratory irritant that increases susceptibility to respiratory infections; it is also an oxidant that can damage vegetation and other materials. O_3 remains in the atmosphere for one or two days, and is eliminated through chemical reaction with plants, rainout, and washout.
- **Particulate Matter (PM_{10} and $PM_{2.5}$)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch).

  $PM_{2.5}$ and PM_{10} can be inhaled and result in respiratory disease. The suspended particulate matter can also irritate eyes. PM_{10} remains in the atmosphere up to seven days and is removed by settling, rainout, and washout.

- **Carbon Monoxide (CO)** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity, which results in reduced oxygen reaching the brain, heart, and other body tissues.
- **Nitrogen Oxides (NO_x)** are a by-product of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The principal component of NO_x produced by combustion is nitric oxide (NO). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperatures and pressures. NO reacts with oxygen to form nitrogen dioxide (NO_2). NO_2 results in reduced visibility by absorbing blue light and resulting in a brownish-red cast to the atmosphere; it is also an acute irritant.
- **Sulfur Dioxide (SO_2)** is a colorless, pungent gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries, and it forms sulfates (SO_4) in the atmosphere. Together these pollutants are referred to as sulfur oxides (SO_x). At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may injure lung tissue.

Toxic Air Contaminants

At the time of the last update to the toxic air contaminants (TACs) list in December 1999, the California Air Resources Board (CARB) had designated 244 compounds as TACs.[1] Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control measures.

High traffic volume freeways and roads are considered a source of TAC emissions. Another source of TAC is naturally occurring asbestos. No quantitative significance thresholds have been set for naturally occurring asbestos (NOA), but it has been identified as a TAC by the CARB. The California Department of Conservation provides a map from 2000 titled “A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos” that may be used as a screening level indicator of the likelihood of NOA being present on site.

4.2.1.2 REGULATORY FRAMEWORK

Federal, state, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the project area is subject to the rules and regulations imposed by the United States Environmental Protection Agency (USEPA), the CARB, the California Environmental Protection Agency (CalEPA), and the Tuolumne County Air Pollution Control District (TCAPCD). Ambient air quality standards have been adopted at federal and State levels for criteria air pollutants. In addition, both the federal and

[1] California Air Resources Board, 1999. Final Staff Report: Update to the Toxic Air Contaminant List.

State governments regulate the release of TACs. The project site is located in Tuolumne County which is subject to the rules and regulations imposed by the TCAPCD, the federal AAQS adopted by the EPA, and the California AAQS adopted by the CARB. Regulatory framework applicable to the proposed project is summarized below.

Federal and State Regulations

Ambient Air Quality Standards

The Clean Air Act was passed in 1963 by the United States Congress and has been amended several times. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act requires the USEPA to define national AAQS and allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the federal AAQS.

The federal and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health based AAQS for air pollutants including O_3, NO_2, CO, SO_2, coarse inhalable PM_{10}, $PM_{2.5}$, and Pb, which are shown below in Table 4.2-1. In addition, the State has standards for sulfates, hydrogen sulfide, and visibility-reducing particles.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

Tanner Air Toxics Act and Air Toxics "Hot Spot" Information and Assessment Act

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code Section 7412[b]) is a TAC. Under State law, CalEPA, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard[a]	Federal Primary Standard[b]	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[c]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[d]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.

Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter; *Standard has not been established for this pollutant/duration by this entity.

TABLE 4.2-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard[a]	Federal Primary Standard[b]	Major Pollutant Sources

a. California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
b. Federal standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
c. On December 14, 2012, the federal annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing federal 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
d. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
Source: California Air Resources Board, 2017, March, Short-Lived Climate Pollutant Reduction Strategy, https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf, accessed January 27, 2020.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, the CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate best available control technology to minimize emissions. To date, the CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a Health Risk Assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate.

Local Regulations

Air Pollution Control District

Local control in air quality management from the CARB is provided through county or regional level air pollution control districts. The project site is located, as previously mentioned, within the Tuolumne County Air Pollution Control District (TCAPCD). The TCAPCD is responsible for enforcing the standards discussed above under the Federal and State Regulations, and regulating stationary sources, while the CARB is responsible for control of mobile emission sources.

The TCAPCD's Rule 205 states, "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."

Tuolumne County Ordinance Code

Requirements for the construction of on-site wastewater treatment systems treatment and disposal are outlined in Chapters 13.04 and 13.08, respectively, of the Tuolumne County Ordinance Code. Section 13.08.310 of the Tuolumne County Ordinance Code requires the parts of all private sewage collection, treatment, and disposal systems to at all times be maintained in good repair and operated in a manner so as not to cause odors.

4.2.1.3 EXISTING CONDITIONS

Tuolumne County Air Pollution Control District

Climate and Topography

Tuolumne County is located in the Mountain Counties Air Basin (MCAB). It has a wide variation in climate due to the range of elevation within the County. The hill pattern, elevation, and proximity to mountain peaks are responsible for changes in rainfall, temperature, and wind throughout the region. Areas in the eastern MCAB at relatively high elevations have an alpine climate and receive the most precipitation, which is caused by storms moving east over the Sierra Nevada mountain range from the Pacific Ocean. The western areas of the MCAB are more arid and have relatively lower levels of precipitation.

Air Pollution

Routine sources of air pollution within Tuolumne County include vehicles, industrial facilities, open burning, woodstoves, and earth-moving equipment. In addition, the County receives pollutants carried from the San Joaquin Valley and San Francisco Bay Area.

TABLE 4.2-2 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN TUOLUMNE COUNTY

Pollutant	State Standards	Federal Standards
Ozone	Nonattainment	Nonattainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment
PM_{10}	Unclassified	Unclassified
$PM_{2.5}$	Unclassified	Unclassified/Attainment
Sulfates	Attainment	N/A
Lead	Attainment	Unclassified/Attainment
H_2S	Unclassified	N/A
Visibility Reducing Particles	Unclassified	N/A

N/A – not applicable, standard does not exist for the pollutant
Source: Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, January 23, 2020

Attainment Status of the TCAPCD

As discussed above, the USEPA and CARB have established ambient air quality standards for air pollutants to represent safe levels. There are three designation categories. “Nonattainment” means that the air quality violates an ambient air quality standard. “Attainment” means that the air quality meets the established standard. “Unclassified” means that there is insufficient data for determining attainment or nonattainment for a particular standard.

The attainment status for the TCAPCD is shown in Table 4.2-2. The project site is in a nonattainment area for State and federal ozone standards. It is in an attainment or unclassified area for State and federal $PM_{2.5}$, PM_{10}, CO, NO_2, and SO_2.

Existing Ambient Air Quality

Table 4.2-3 summarizes specific air quality monitoring results from the closest available monitoring stations to the project site. These include ozone data from the Sonora-Barretta Street monitoring station located approximately 25 miles northwest of the project site, carbon monoxide data from the Modesto-14th Street monitoring station approximately 58 miles southwest of the project site, and $PM_{2.5}$ and PM_{10} data from the Yosemite Village-Visitor Center monitoring station approximately 22 miles southeast of the project site. The data from these specific locations show regular violations of ozone, $PM_{2.5}$, PM_{10} standards and federal $PM_{2.5}$ standard.

Based on the 2012 emissions inventory for Tuolumne County included in the Air Quality Study, a large percentage of PM_{10}, $PM_{2.5}$, CO, and ROG come from managed burning and disposal. Most of the NO_x in the county comes from mobile sources, primarily on-road motor vehicles. The Air Quality Study shows

that emissions levels are not anticipated to change in future projections.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill. Residential areas are also considered sensitive receptors to air pollution because residents tend to be at home for extended periods of time, resulting in sustained exposure to any

TABLE 4.2-3 AIR QUALITY MONITORING SUMMARY

		Pollutant Concentration by Year		
Pollutant Type, Station, and Measurement	Air Quality Standard	2016	2017	2018
Ozone (O_3)				
Sonora-Barretta Street Monitoring Station				
Highest 1-hour Average (ppm)	0.09 (State)	0.099	0.089	0.101
Second Highest 1-hour Average (ppm)		0.097	0.088	0.100
Highest 8-hour Average (ppm)	0.070 (State & federal)	0.091	0.083	0.087
Second Highest 8-hour Average (ppm)		0.089	0.082	0.084
Carbon Monoxide (CO)*				
Modesto-14th Street Monitoring Station				
Highest 1-hour average (ppm)	20.0 (State)	1.97	2.08	2.76
Inhalable Particulate Matter (PM_{10})*				
Yosemite Village-Visitor Center				
Highest 24-hour Average (µg/m^3)	50 (State)	218.6	62.4	141.7
Second Highest 24-hour Average (µg/m^3)		164.7	58.1	123.6
Annual Average (µg/m^3)	20 (State)	23.7	20.0	24.9
Fine Particulate Matter ($PM_{2.5}$)				
Yosemite Village-Visitor Center				
Highest 24-hour Average (µg/m^3)	35 (federal)	164.9	35.8	109.8
Second Highest 24-hour Average (µg/m^3)		108.1	33.4	94.3
Annual Average (µg/m^3)	12 (State)	--	--	--

Notes: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; -- = insufficient data
*Only State standard is listed as it is more stringent than federal standards.
Source: Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, January 23, 2020

pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods may be short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Sensitive receptors to the proposed project include the residential areas on the north side of the project site, and recreational land users in the area at nearby campsites, trails, or other recreational sites.

4.2.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant air quality impacts if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.

2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or State ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.2.2.1 TUOLUMNE COUNTY AIR POLLUTION CONTROL DISTRICT THRESHOLDS OF SIGNIFICANCE

The TCAPCD has established the following significance thresholds in determining significant impacts of proposed projects:

- ROG – 1,000 pounds per day (ppd) or 100 tons per year (tpy)
- NO_x – 1,000 ppd or 100 tpy
- PM_{10} – 1,000 ppd or 100 tpy
- CO – 1,000 ppd or 100 tpy

4.2.3 IMPACT DISCUSSION

The Air Quality Study analyzed the short-term construction impacts of the proposed project and the long-term operation impacts using CalEEMod emissions modeling program version 2016.3.2. CalEEMod stands for California Emissions Estimator Model and is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions. The model quantifies direct emissions from construction and operation of potential projects, including vehicle use, and indirect emissions such as from energy use, solid waste disposal, vegetation planting or removal, and water use. This is based on default data characterizing construction and operation of land use development projects. Default data values for the analysis of this proposed project were used except where project specific, project location, and updated technical data were available. Project specific data included the size of the project site and the amount of asphalt paved surfaces. Project location data included use of climate data and electricity data supplied by the Climate Registry. Finally, updated technical data included use of vehicle trip generation estimates from the project traffic analysis from KD Anderson & Associates, which is included as Appendix K and described in Chapter 4.15, Transportation. The output files from the CalEEMod model used in the Air Quality Study are included with the report in Appendix C.

AQ-1	The project would not conflict with or obstruct implementation of the applicable air quality plan.

The TCAPCD is responsible for enforcing air quality standards under federal and State Regulations for Tuolumne County. In addition, CARB is responsible for control of mobile emission sources. Table 4.2-4 describes the estimated pollutant emissions estimates from the proposed project. Of the contaminants of concern, all would be well below significance thresholds established, for both construction and operation of the project. In addition, the Air Quality Study did not identify any significant impacts from TAC.

TABLE 4.2-4 CALEEMOD POLLUTANT EMISSIONS ESTIMATES

	Emissions from Construction				Emissions from Project Operation			
Time Period and Significance Factor	ROG	NO_x	PM_{10}	CO	ROG	NO_x	PM_{10}	CO
	Emissions in Pounds per Day				Emissions in Pounds per Day			
Summer	241.1	46.6	20.3	38.3	12.5	17.1	8.5	60.6
Winter	241.2	46.6	20.3	38.1	11.5	19.2	8.5	65.0
Maximum	241.2	46.6	20.3	38.3	12.5	19.2	8.5	65.0
Significance Threshold	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Emissions in Tons per Year				Emissions in Tons per Year			
Construction Emissions 2021	0.60	3.98	0.67	4.74	--	--	--	--
Construction Emissions 2022	2.60	1.14	0.15	1.59	--	--	--	--
Annual Operational Emissions	--	--	--	--	1.99	3.02	1.32	9.94
Significance Threshold	100	100	100	100	100	100	100	100

Source: Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, January 23, 2020

The proposed project would provide lodging and recreational facilities to visitors of the area and housing for employees. While implementation of the project would result in generation of short-term construction-related air pollutant emissions, these would be well below significance thresholds of 1,000 ppd or 100 tpy of ROG, NO_x, PM_{10}, and CO, each, and operation-related air pollutant emissions would be lower still. As the project estimates are below the significance thresholds and standards set by applicable governing agencies, the proposed project would not create a conflict with applicable air quality standards, and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

AQ-2 The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under applicable federal or State ambient air quality standards.

The CalEEMod emissions model provided estimates in ppd and tpy for ROG, NO_x, inhalable particulate matter (PM_{10}), and CO for project construction and operation. The results are summarized in Table 4.2-4, above.

The Air Quality Study also analyzed TAC impacts, specifically those from NOA and mobile source emissions from high-volume roadways. The project site is located approximately 15 miles from the nearest area considered likely to contain NOA, and thus this TAC is not considered to result in significant impacts.

The project region is in nonattainment for both State and federal ozone levels. The operation of construction equipment during construction of the proposed project would result in exhaust emissions including ozone precursors ROG and NO_x. The CalEEMod emissions model estimated maximum construction-related emissions would result in 241.2 ppd and 2.6 tpy of ROG, and 46.6 ppd and 3.98 tpy NO_x. Maximum operation-related ROG emissions would result in 12.5 ppd and 1.99 tpy of ROG, and 19.2 ppd and 3.02 tpy NO_x. These are well under the 1,000 ppd and 100 tpy significance thresholds for both pollutants. Therefore, the impact of the proposed project on nonattainment criteria pollutants for the project region would be *less than significant*.

Significance without Mitigation: Less than significant.

AQ-3 The project would not expose sensitive receptors to substantial pollutant concentrations.

The project site is located in a rural area with few frequently populated places nearby. As discussed in Chapter 3, Project Description, rural residential homes are located to the north of the project site. Recreational land uses are nearby, including walking and hiking trails on all sides, and several campsites, resorts, and recreational vehicle sites. The nearest resort development sites are the Yosemite Lakes RV Resort approximately one mile southeast of the project site, and Sweetwater Campground approximately 2.25 miles to the west. Sensitive receptors would include the residential properties near the project site as these are locations where people may reside long-term, and recreational site users of the nearby trails and campgrounds.

As discussed under AQ-2, the proposed project would be well under emissions limits for pollutants of concern, therefore it would not produce substantial pollutant concentrations to sensitive receptors. Exposure to sensitive receptors from the proposed project would be *less than significant*.

Significance without Mitigation: Less than significant.

AQ-4 The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Types of facilities typically considered to have objectionable odors include wastewater treatment plants, compost facilities, landfills, solid waste transfer stations, manufacturing facilities, paint/coating operations (e.g. auto body shops), dairy farms, petroleum refineries, asphalt batch plants, and food manufacturing facilities. Hotels and lodges, like the proposed project, are not associated with foul odors that constitute a public nuisance.

During project-related construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Winds in the area vary depending on the regional climate and topography and may carry emissions or odors to nearby areas where people are, such as nearby residential areas. Noxious odors would be primarily confined to the immediate vicinity of the construction equipment and would be diluted when carried further away.

The potential for long-term operational project-related odor effects would be primarily related to on-site wastewater facilities. The proposed wastewater system has been developed to serve the entire project buildout with a 100 percent redundancy area being preserved. System reliability would be enhanced by additional redundant mechanical system components. The food service wastewater treatment system would include a technologically advanced treatment system and be continuously monitored. Waste and water detention materials would be separated into black and greywater segments and treated on-site. The black water would be disposed of through an approved leach field system. The greywater is proposed to be treated, stored and re-used for toilets, fire suppression storage and landscape irrigation uses. Surplus greywater would be disposed of in the leach field system. The wastewater from the project would be divided between five separate wastewater systems sized for less than 10,000 gallons per day of sewage loading each. Dividing the total wastewater volume into smaller packages improves wastewater handling efficiency. Wastewater system reliability would be provided through redundant mechanical wastewater system components. The 100 percent future replacement leach system area has been planned for, and the area has been set aside.

Potential odor issues typically result from a combination of the strength of odors coming from a source, the distance to the nearest receptors, and meteorological conditions. A receptor's ability to detect odors varies among individuals and is subjective. Odors are generally a nuisance rather than a health hazard. Due to the subjective nature of odor, the wide range of variables that could influence the potential for odors, and the variety of odor sources, quantitative analysis to determine the presence and magnitude of substantial odor sources is not possible.

Proposed leach fields would be located in the northwestern portion of the project site. The nearest sensitive receptor to this area would be the cabin to the north of the project site, which is approximately 250 feet from the property site boundary. This distance would provide a buffer area in which odors would dissipate before reaching the nearest home.

Proposed wastewater treatment and pumping equipment would be located on the southern side of the proposed hotel outdoor recreation area. At this location, equipment would be located away from the residential properties to the north of the project site.

The proposed wastewater system for the project would conform to the California Plumbing Code, TCAPCD, and Tuolumne County regulations. These regulations have been developed over time, resulting in reliable design principles. Compliance with the California Plumbing Code would ensure that the wastewater system is built to current standards and inspected by the County prior to operation. Compliance with TCAPCD's Rule 205 would ensure that the project does not discharge quantities of air contaminants or materials that cause detriment, nuisance, or annoyance to any considerable number of persons or to the public. Compliance with Tuolumne County Ordinance Code Section 13.08.310 would ensure that the parts of wastewater facilities are maintained in good repair at all times and operated in a manner so as not to cause odors.

Because the wastewater system would conform to established State of California, TCAPCD, and County of Tuolumne regulations, long-term operational project-related odor impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.2.4 CUMULATIVE IMPACTS

AQ-5	**The project would not, in combination with past, present, and reasonably foreseeable projects, result in significant impacts regarding air quality.**

As defined in Chapter 4, Environmental Evaluation, the project's potential contribution to cumulative impacts regarding air quality is assessed utilizing the same significance criteria as those for project-specific impacts. Individual development projects that generate construction or operational emissions that exceed the air district's screening thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Mountain Counties Area Basin is in nonattainment. As discussed above the project region is in nonattainment for ozone. Construction and operation of the project would contribute ozone precursors ROG and NO_x, however as shown in Table 4.2-4, these would be below the TCAPCD's significance thresholds. The proposed project would have less-than-significant impacts regarding applicable air quality standards, nonattainment pollutants for the region, sensitive receptors, and odors as discussed in AQ-1 through AQ-4. Proposed wastewater treatment and pumping equipment would be located on the southern side of the proposed hotel outdoor recreation area. At this location, equipment would be located approximately 500 feet away from proposed camping facilities proposed on the Under Canvas site to the south of the Terra Vi project site. This distance would provide a buffer area in which odors would dissipate before reaching the campsite. Therefore, cumulative impacts resulting from the proposed project would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.3 BIOLOGICAL RESOURCES

This chapter describes the regulatory framework, existing conditions on the project site, and potential impacts of the project related to biological resources. This chapter is based off of the following technical studies, which are included in the appendices of this Draft EIR:

- Augustine Planning Associates, Inc., June 2020, Terri Vi Lodge Yosemite Biological Study Report (contained in Appendix D of this Draft EIR). This report is referred to in this chapter as the "project biological study."
- Sycamore Environmental Consultants, Inc., October 2019, Aquatic Resource Delineation Report for the Terra Vi Lodge Project County of Tuolumne, CA (contained in Appendix E of this Draft EIR). This report is referred to in this chapter as the "project wetland delineation."

4.3.1 ENVIRONMENTAL SETTING

4.3.1.1 REGULATORY FRAMEWORK

Federal Regulations

Clean Water Act

The Clean Water Act (CWA) regulates restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Areas meeting the regulatory definition of "waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the United States Army Corps of Engineers (USACE) Section 404 of the 1972 CWA (Federal Water Pollution Control Act) and Section 10 of the 1899 Rivers and Harbors Act.[1,2]

On January 23, 2020, the Department of the Army (Army) and the U.S Environmental Protection Agency finalized the Navigable Waters Protection Rule to redefine "waters of the United States (U.S.)" under the CWA in fulfillment of Executive Order 13788. The rule was made in an effort to streamline the definition so that it consists of four simple categories of jurisdictional waters, provide exclusions for water features that traditionally have been outside of regulation, and define previously undefined terms in the regulatory text. The four clear categories of federally regulated waters are:[3]

- The territorial seas and traditional navigable waters.
- Perennial and intermittent tributaries to those waters.
- Certain lakes, ponds, and impoundments.

[1] United States Environmental Protection Agency, 2019, Summary of the Clean Water Act, available online at https://www.epa.gov/laws-regulations/summary-clean-water-act, accessed March 29, 2020.

[2] United States Environmental Protection Agency, 2019, Section 10 of the Rivers and Harbors Appropriation Act of 1899, available online at https://www.epa.gov/cwa-404/section-10-rivers-and-harbors-appropriation-act-1899, accessed March 29, 2020.

[3] Federal Register, 2019, Revised Definition of "Waters of the United States", available online at https://www.federalregister.gov/documents/2019/02/14/2019-00791/revised-definition-of-waters-of-the-united-states, accessed March 24, 2020.

- Wetlands adjacent to jurisdictional waters.

The Navigable Waters Protection Rule also describes 12 categories of exclusions, which are features that are not "waters of the U.S.", namely, features only containing water in direct response to rainfall, such as ephemeral features; groundwater; prior converted cropland; many ditches; and waste treatment systems. Furthermore, the Navigable Waters Protection Rule provides clarification to several key elements of the jurisdictional scope of federal CWA jurisdiction, including:[4]

- Removal of the separate categories for jurisdictional ditches and impoundments.
- Refining the definition of "typical year" to provide regional and temporal flexibility and ensure jurisdiction is determined accurately during more wet and more dry periods.
- Defining "adjacent wetlands" as wetlands which are connected meaningfully to other jurisdictional waters through direct abutment or regular surface water communication with jurisdictional waters.

Wetlands on non-agricultural lands are identified using the Corps of Engineers Wetlands Delineation Manual.[5]

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must comply with permit requirements of the USACE. To issue a permit under Section 404, USACE must also obtain a state water quality certification from one of the State's Regional Water Quality Control Boards (RWQCBs) pursuant to Section 401 of the CWA. The State Water Resources Control Board (SWRCB) is the State agency that, together with the RWQCB, is charged with implementing water quality certification in California.[6]

A detailed evaluation of waters pursuant to the current definition of waters of the U.S. and their potential jurisdiction under Section 404 of the CWA (33 U.S.C. 1344) is found within the project wetland delineation (see Appendix E). Any work within areas defined as waters of the U.S. (i.e., wetlands and other waters) may require a Section 404 fill discharge permit from the USACE and Section 401 Water Quality Certification from the RWQCB.

Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) is responsible for implementation of the Federal Endangered Species Act (FESA) (16 United States Code Section 1531 *et seq.*). The Act protects fish and wildlife species that are listed as threatened or endangered and their habitats. "Endangered" species, subspecies, or distinct population segments are those that are in danger of extinction through all

[4] United States Environmental Protection Agency, 2020, The Navigable Waters Protection Rule (Step Two), available online at https://www.epa.gov/nwpr/navigable-waters-protection-rule-step-two-revise, accessed March 24, 2020.

[5] Environmental Laboratory, 1987, Corps of Engineers Wetlands Delineation Manual. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.

[6] California State Water Resources Control Board, 2020, 401 Water Quality Certification and Wetlands Program, available online at https://www.waterboards.ca.gov/water_issues/programs/cwa401/, accessed March 29, 2020.

or a significant portion of their range, and "threatened" species, subspecies, or distinct population segments are likely to become endangered soon.[7]

If a listed species or its habitat is found to be affected by a project, then according to Section 7 of the FESA, all federal agencies are required to consult with USFWS and NOAA Fisheries. The purpose of consultation with USFWS and NOAA Fisheries is to ensure that the federal agencies' actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species.[8]

Section 9 of the FESA prohibits the take of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species' recovery. "Take" is defined as an action or attempt to hunt, harm, harass, pursue, shoot, wound, capture, kill, trap, or collect a species. Section 9 prohibitions also apply to threatened species unless a special rule has been defined with regard to taking at the time of listing. Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the unlawful removal and reduction to possession, or malicious damage or destruction, of any endangered plant from federal land. Section 9 prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in non-federal areas in knowing violation of any State law or in the course of criminal trespass. Section 9 does not provide any protection for candidate species and species that are proposed or under petition for listing.[9]

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 US Code 703 *et seq.*) governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. Moreover, the MBTA prohibits the take, possession, import, exports, transport, selling, purchase, barter—or offering for sale, purchase, or barter—any migratory bird, their eggs, parts, or nests, except as authorized under a valid permit.[10] On February 3rd, 2020, the USFWS published a proposal to adopt a regulation that redefines the scope of the MBTA towards actions resulting in the injury or death of protected migratory birds.[11] The MBTA's prohibitions on take now apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs, and do not apply to take that is incidental to, and not the purpose of, a lawful activity.[12] All native bird species occurring on the project site are protected by the MBTA.

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[7] United States Fish and Wildlife Service, 2020, Endangered Species Act, available online at https://www.fws.gov/endangered/laws-policies/, accessed March 29, 2020.

[8] United States Fish and Wildlife Service, 2020, Endangered Species Act: Section 7(a)(2), available online at https://www.fws.gov/midwest/endangered/section7/index.html, accessed March 29, 2020.

[9] United States Fish and Wildlife Service, 2020, Endangered Species Act: Section 9, available online at https://www.fws.gov/endangered/laws-policies/section-9.html, accessed March 29, 2020.

[10] Code of Federal Regulations Title 50 Section 21.11.

[11] Federal Register, 2020, Regulations Governing Take of Migratory Birds, available online at https://www.federalregister.gov/documents/2020/02/03/2020-01771/regulations-governing-take-of-migratory-birds, accessed March 24, 2020.

[12] United States Department of the Interior, 2017, Memorandum, Subject: The Migratory Bird Treaty Act Does Not Prohibit Incidental Take, dated December 22, 2017, https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf, accessed March 24, 2020.

Federal Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Sec. 668 et seq.) (BGEPA) makes it unlawful to import, export, take, sell, purchase, or barter any bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*), or their parts, products, nests, or eggs. A "take" under BGEPA has been interpreted to include altering or disturbing nesting habitat. Exceptions may be granted by the USFWS for scientific or exhibition use or for traditional and cultural use by Native Americans. However, no permits may be issued for the import, export, or commercial activities involving bald or golden eagles.[13]

State Regulations

Porter-Cologne Water Quality Control Act

The RWQCB is responsible for protecting surface, ground, and coastal waters within its boundaries, pursuant to the Porter-Cologne Water Quality Control Act of the California Water Code. The RWQCB has jurisdiction under Section 401 of the CWA for activities that could result in a discharge of dredged or fill material to a water body. Federal authority is exercised whenever a proposed project requires a CWA Section 404 permit from the USACE in the form of a Section 401 Water Quality Certification. State authority is exercised when a proposed project is not subject to federal authority, in the form of a Notice of Coverage, Waiver of Waste Discharge Requirements. Many wetlands fall into RWQCB jurisdiction, including some wetlands and waters that are not subject to USACE jurisdiction. RWQCB jurisdiction of other waters, such as streams and lakes, extends to all areas below the ordinary high-water mark.

Under the Porter-Cologne Water Quality Control Act, the SWRCB and the nine RWQCBs also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and waste discharge requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.[14]

As stated above, any activities within the project site that impact waters of the United States or State will require 401 Certification and/or a Waste Discharge Requirement from the RWQCB. On the project site, drainages and wetlands that are considered waters of the United States are also considered waters of the State. However, no wetlands were identified that would likely be considered waters of the State but not waters of the U.S. (e.g., isolated wetlands).[15]

California Endangered Species Act

The California Endangered Species Act (CESA) establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies should not approve projects that jeopardize the continued existence of threatened or endangered species

[13] United States Fish and Wildlife Service, 2020, Federal Laws that Protect Bald and Golden Eagles, available online at https://www.fws.gov/midwest/eagle/history/protections.html, accessed March 29, 2020.

[14] California Water Resources Control Board, 2018, Porter-Cologne Water Quality Control Act, available online at https://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf, accessed March 29, 2020.

[15] California State Water Resources Control Board, 2020, 401 Water Quality Certification and Wetlands Program, available online at https://www.waterboards.ca.gov/water_issues/programs/cwa401/, accessed March 29, 2020.

if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a species that is on the federal and State lists, compliance with the FESA satisfies the CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the CESA under California Fish and Game Code Section 2080.1. For projects that would result in the taking of a species that is only State listed, the project proponent must apply for a take permit under Section 2081(b).[16]

California Environmental Quality Act

CEQA and the CEQA Guidelines provide guidance in evaluating impacts of projects on biological resources and determining which impacts will be significant. Section 15380(b) of the CEQA Guidelines provides that a species not listed on the federal or State lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in the FESA and the CESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW or species that are locally or regionally rare.

The CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of "species of special concern" that serve as "watch lists." Species on these lists are of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Thus, their populations should be monitored. These species may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per CEQA Guidelines Section 15380(b), Endangered, Rare, or Threatened Species.[17]

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed a California rare plant ranking (CRPR) system species of concern. Vascular plants included on these lists are defined as follows:

- Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
- Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.
- Rank 2A: Plants presumed extirpated in California, but common elsewhere.
- Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
- Rank 3: Plants about which more information is needed—a review list.
- Rank 4: Plants of limited distribution—a watch list.

These CRPR threat ranks are further described by the following threat code extensions:

- 0.1: seriously threatened in California
- 0.2: moderately threatened in California
- 0.3: not very threatened in California

[16] California Department of Fish and Wildlife, 2020, Consistency Determinations, available online at https://wildlife.ca.gov/Conservation/CESA/Permitting/Consistency-Determinations, accessed March 29, 2020.

[17] California Natural Resources Agency, 2019, California Environmental Quality Act: Statute and Guidelines, available online at https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/2019_CEQA_Statutes_and_Guidelines.pdf, accessed March 29, 2020.

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, adverse effects on plants appearing in Rank 1 or Rank 2 are, in general, are considered to meet the CEQA criteria to be potentially significant. Impacts on plants listed by the CNPS in Rank 3 or Rank 4 are also considered during CEQA review, although because these species are typically not as rare as those on Rank 1 or Rank 2, impacts are less frequently considered significant.[18]

California Fish and Game Code

The California Fish and Game Code includes regulations governing the use of, or impacts on, many of the state's fish, wildlife, and sensitive habitats. The CDFW exerts jurisdiction over the bed and banks of rivers, lakes, and streams according to Sections 1601 to 1603 of the Fish and Game Code. The Fish and Game Code requires a Notification of Streambed Alteration for any activity that deposits debris, waste, or other material or substantially diverts or obstructs the natural flow of, or substantially alters the bed, channel, or bank of any river, stream, or lake.

Certain sections of the Fish and Game Code describe regulations pertaining to certain wildlife species. For example, Fish and Game Code Sections 3503, 3511, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW. Fish and Game Code 3503 states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." Raptors (i.e., eagles, falcons, hawks, and owls) and their nests are specifically protected in California under Fish and Game Code Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Under Section 3511 of the California Fish and Game Code, CDFW designates species that afforded "fully protected" (FP) status. CDFW cannot authorize the take of a fully protected species, "however, the department may authorize the taking of a fully protected bird for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of a fully protected bird pursuant to a permit for the protection of livestock."[19]

With the change to the federal MBTA that the scope of the law only extends to *intentionally* injuring birds, Fish and Game Code 3513(a) has been adopted, named the California Migratory Bird Protection Act, which makes it "unlawful to take or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.) before January 1, 2017, any additional migratory nongame bird that may be designated in that federal act after that date, or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act before January 1, 2017, or subsequent rules or regulations adopted pursuant to that federal act, unless those rules or regulations are inconsistent with this code." On January 20, 2025, Code 3513(a) will be replaced by the provision that "it is unlawful to take

[18] California Native Plant Society, 2018, available online at http://www.rareplants.cnps.org/, accessed March 29, 2020.

[19] California Legislative Information, 2016, Fish and Game Codes 3000 – 4904, available online at http://www.leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=3511.&lawCode=FGC, accessed March 23, 2020.

or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.), or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act."[20]

Non-game mammals are protected by Fish and Game Code Section 4150, and other sections of the Code protect other taxa.[21]

Any work within channels with clearly defined beds and banks on the project site will require a Notification of Streambed Alteration and a possible Streambed Alteration Agreement from the CDFW per Section 1602 of the Fish and Game Code if the activities are found to substantially and adversely affect fish and wildlife resources.[22] All native bird species that occur on the project site are protected by the California Fish and Game Code. As necessary, project activities will take measures to avoid impacts on nesting birds pursuant to Fish and Game Code Sections 3503, 3511, 3513, and 3800. Native mammals and other species on the project site are also protected by the Fish and Game Code, and measures may be required to avoid and minimize impacts on these species during construction activities.

Local Regulations

Tuolumne County General Plan

The Tuolumne County General Plan includes a Conservation Element and Open Space Element combined into a single General Plan element, the Natural Resources Element within Chapter 16. The Natural Resources Element includes several policies and implementing programs which seek to employ a balanced approach to the conservation of biological resources, as natural habitats, fish, and wildlife provide biological functions, scenic value, recreational opportunities, and education pursuits, which are important to County residents and attract visitors. Relevant policies and implementing programs are listed below in Table 4.3-1.[23]

Tuolumne County has, in the past, used the Tuolumne County Wildlife Handbook (1987) to guide mitigation for biological resources.[24] The newly adopted Tuolumne County General Plan Polices 16.B.5 and 16.B.6 and Implementation Programs 16.B.g and 16.B.k related to the Tuolumne County Wildlife Handbook.[25]

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[20] California Legislative Information, 2020, AB-454 California Migratory Bird Protection Act, available online at http://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=201920200AB454&showamends=false, accessed March 23, 2020.

[21] California Legislative Information, 2016, Fish and Game Codes 3000 – 4904, available online at http://www.leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=3511.&lawCode=FGC, accessed March 23, 2020.

[22] California Department of Fish and Wildlife, 2020, Lake and Streambed Alteration Program, available online at https://wildlife.ca.gov/Conservation/LSA, accessed March 29, 2020.

[23] Tuolumne County, 2018, *General Plan*, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11752/Vol-I-Goals-Policies-Policies-Final, accessed February 5, 2020.

[24] Tuolumne County Wildlife Project, 1987, Wildlife Handbook, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/206/Wildlife-Handbook?bidId=, accessed February 28, 2020.

[25] Tuolumne County, 2018, *General Plan*, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11752/Vol-I-Goals-Policies-Policies-Final, accessed February 5, 2020.

TABLE 4.3-1 TUOLUMNE COUNTY GENERAL PLAN POLICIES AND IMPLEMENTATION PROGRAMS PERTAINING TO BIOLOGICAL RESOURCES

Policy/ Implementation Program Number	Policy/Implementation Program Text
NATURAL RESOURCES ELEMENT	
Policy 16.B.5	Evaluate and mitigate impacts to biological resources in accordance with the requirements of State and Federal law.
Implementation Program 16.B.g	Maintain the Tuolumne County Wildlife Maps to assist in evaluating the effects of land development projects.
Implementation Program 16.B.i	Require development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law: ▪ Species listed or proposed for listing as threatened, rare, or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA); ▪ Species considered as candidates for listing under the ESA or CESA; ▪ Wildlife species designated by CDFW as species of special concern; ▪ Animals fully protected under the California Fish and Game Code; and ▪ Plants considered by CDFW to be "rare, threatened, or endangered in California" (California Rare Plant Ranks [CRPR] of 1A, presumed extinct in California and not known to occur elsewhere; 1B, considered rare or endangered in California and elsewhere; 2A, presumed extinct in California, but more common elsewhere and 2B, considered rare or endangered in California but more common elsewhere). Section D – The Tuolumne County Natural Environment Chapter 16 –Natural Resources Element 16-6 ▪ Sensitive natural communities, including wetlands under Federal or State jurisdiction, other aquatic resources, riparian habitats, and valley oak (*Quercus lobata*) woodland. ▪ Important wildlife movement corridors and breeding sites. ▪ Oak woodlands, as provided in Implementation Program 16.B.j.

Implementation Program 16.B.j	Establish thresholds of significance under the California Environmental Quality Act (CEQA) for the conversion of oak woodlands in Tuolumne County. The following provides the County's recommended standard guidelines for determining whether a project may result in a significant impact to oak woodlands, for purposes of review under the California Environmental Quality Act and Public Resources Code Section 21083.4.
	▪ An oak woodland is defined in the General Plan as a woodland stand with 10 percent or greater native oak canopy cover. Tree removal from parcels with less than 10 percent native oak canopy cover is not considered a significant conversion or loss of oak woodland.
	▪ For parcels with 10 percent or greater native oak canopy cover (i.e., parcels with oak woodland, as defined in the General Plan), a significant impact to oak woodland includes tree removal that reduces the total oak canopy cover onsite to below 10 percent (i.e., conversion to non-oak woodland), or a loss of 10 percent or greater of oak canopy woodland stand on the parcel, if the conversion or loss is determined by trained professional to be substantial in consideration of, but not limited to, the following:
	  ▪ Total acres and amount of woodland stand removed or disturbed, and amount retained onsite.
	  ▪ Pattern of development or habitat loss onsite (e.g., clustered vs. dispersed).
	  ▪ Existing habitat functions and quality (e.g., intact/high-quality, moderately degraded, or severely degraded).

TABLE 4.3-1 TUOLUMNE COUNTY GENERAL PLAN POLICIES AND IMPLEMENTATION PROGRAMS PERTAINING TO BIOLOGICAL RESOURCES

Policy/ Implementation Program Number	Policy/Implementation Program Text
	▪ Stand age- or size-class structure. ▪ Rarity. ▪ Landscape position in relation to larger wildlife corridors, stream systems, or other important natural features. o Loss of valley oak (*Quercus lobata*) woodland, which is a sensitive habitat. ▪ Proximity to other oak woodland patches and connectivity to large blocks of intact habitat. ▪ Contribution to a cumulative loss, degradation, or fragmentation of oak woodland across the County. Removal of valley oaks (*Quercus lobata)* regardless of woodland stand size of canopy cover, shall require an evaluation and determination as set forth above, including consideration of any unique habitat value provided by valley oaks.
Policy 16.B.6	Allow property owners to utilize the Tuolumne County Wildlife Handbook, which may be updated periodically, to assist in designing mitigation for impacts to biological resources resulting from new development.
Implementation Program 16.B.k	Periodically update the Tuolumne County Wildlife Handbook in accordance with changes in State and Federal laws and environmental review standards, recognizing that state and federal laws may require mitigation beyond what is adopted in the Wildlife Handbook.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Tuolumne County Oak Woodland Conservation Fund

In 2008, the Tuolumne County Board of Supervisors adopted resolution 14-08, establishing the Tuolumne County Oak Woodland Conservation Fund for the collection of fees to mitigate impacts to oak woodlands and net loss of old growth oaks. The money collected in the fund can only be allocated by the Board of Supervisors. The fund may be used to purchase land in fee or conservation easements for the protection of native oak woodlands or for other measures that will restore or enhance native oak woodlands, or otherwise mitigate the impacts associated with the conversion of oak woodlands or impacts to old growth oaks.

4.3.1.2 EXISTING CONDITIONS

The following section is based on the information in the project biological study (see Appendix D).

Existing Land Uses, Vegetation Communities, and Habitats

The following discussion describes the land uses, vegetation communities, and habitats present on the project site derived from the project biological study (see Appendix D). Because an animal's habitat (i.e., where it lives and reproduces in the environment) is largely determined by the vegetation present, both vegetation communities and habitats are commonly defined in terms of their dominant plant species (e.g., annual grassland, oak woodland), and this convention will be used in this analysis. Thus, in this

document the terms "vegetation community" and "habitat" are used interchangeably; both refer to assemblages of vegetation that are similar in species composition, growth form, and other variables such as soil type or hydrologic conditions.

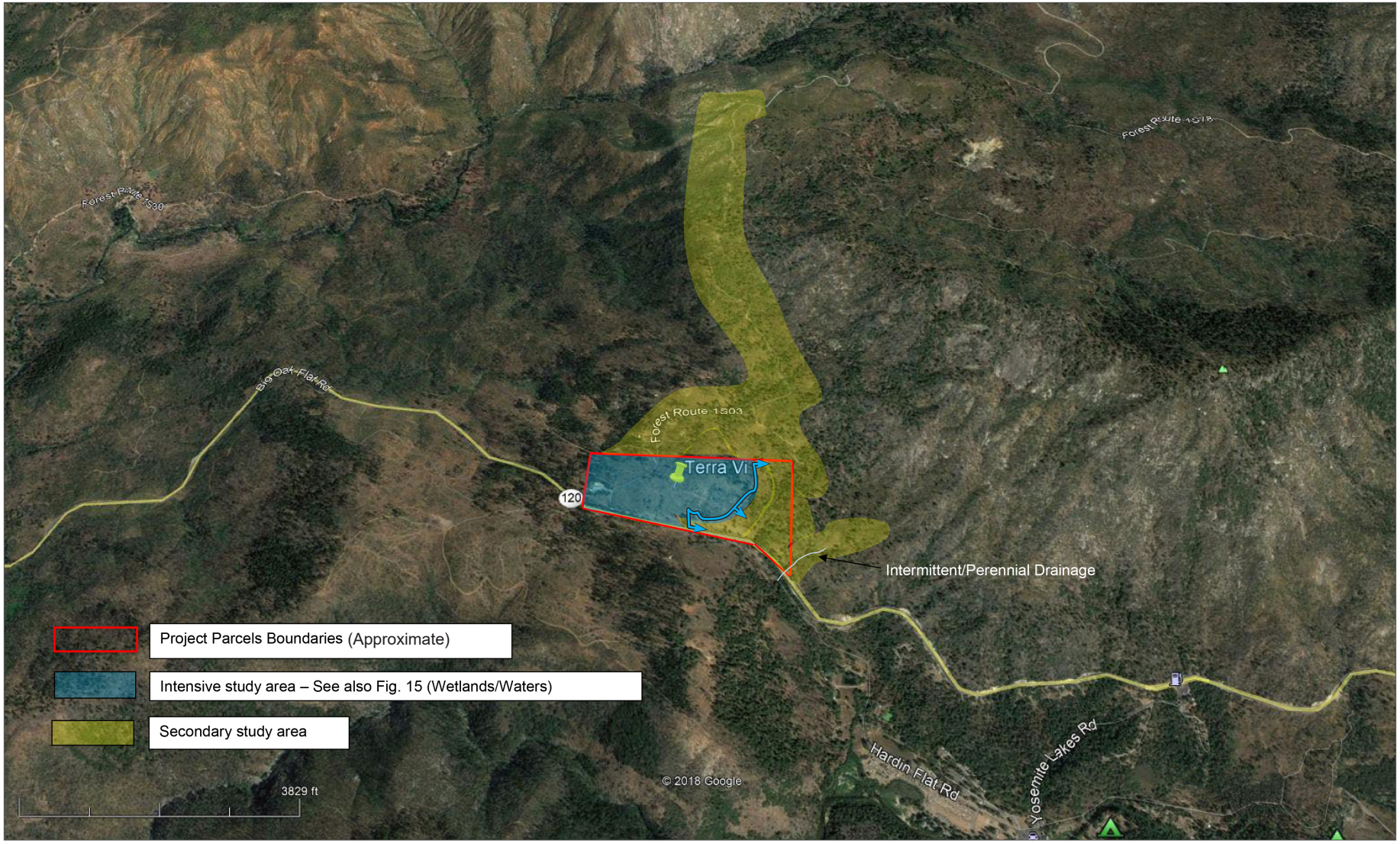
The biological study area (BSA) is defined and illustrated in Figure 4.3-1. Five vegetation communities, land uses, or habitats were identified on the project site: mixed hardwood conifer forest; mixed hardwood conifer forest (burned); ephemeral drainages; perennial drainages; and urban/developed (Caltrans Maintenance). The acreages associated with each vegetation community are provided in Table 4.3-2. The project site is dominated by mixed hardwood conifer forest which was burned during the 2013 Rim Fire.

TABLE 4.3-2 LAND USE AND VEGETATION COMMUNITY/HABITAT ACREAGES ON THE PROJECT SITE

Vegetation Community	Approximate Area (Acres)	Approximate Percentage of Site
Mixed hardwood conifer forest	20.8	33
Mixed hardwood conifer forest (burned)	41.6	66
Ephemeral drainages	<0.1	<0.1
Perennial Drainage	<0.1	<0.1
Urban/Developed (Caltrans Maintenance)	1.0	<0.1
Total	**64**	**100.00**

Note: Values may not sum to total due to rounding.
Source: Augustine Planning Associates, Inc., 2019.

Vegetation communities on-site were decimated in the 2013 Rim Fire as illustrated on Figures 4.3-2 and 4.3-3. Pre-fire, the project site was a mixed conifer heavily wooded habitat. Post-fire, the site was mostly barren ground with isolated stands of trees. Burned trees were identified and removed post-fire. Today, the project site is covered with small, isolated communities of conifers and oaks which escaped destruction from fire. During field studies, new trees (mostly ponderosa pines), shrubs, and grasses were sprouting, and the mostly open site supported an abundance of wildflower communities. As the tree canopy matures on-site over time, the vegetation communities and species supported are predicted to alter considerably and the findings of this analysis should be considered a discrete period in time.

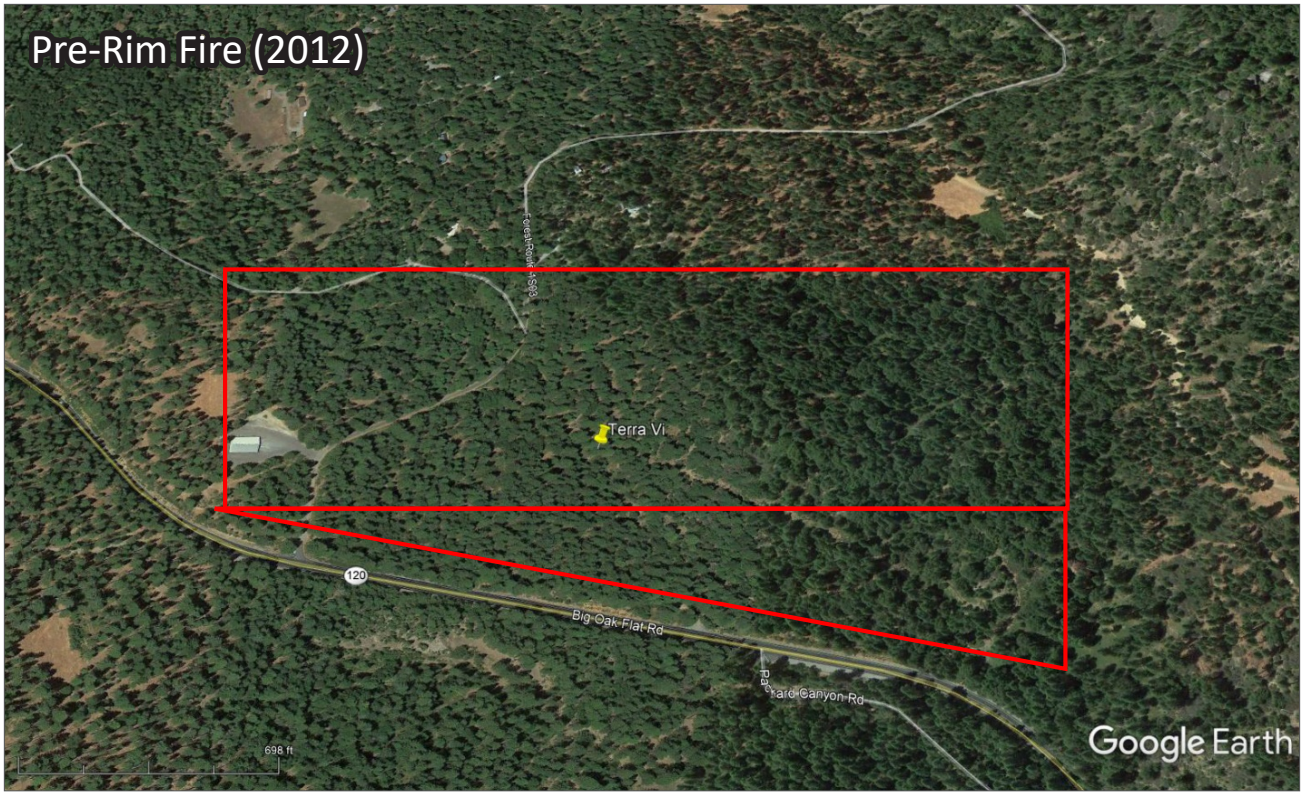


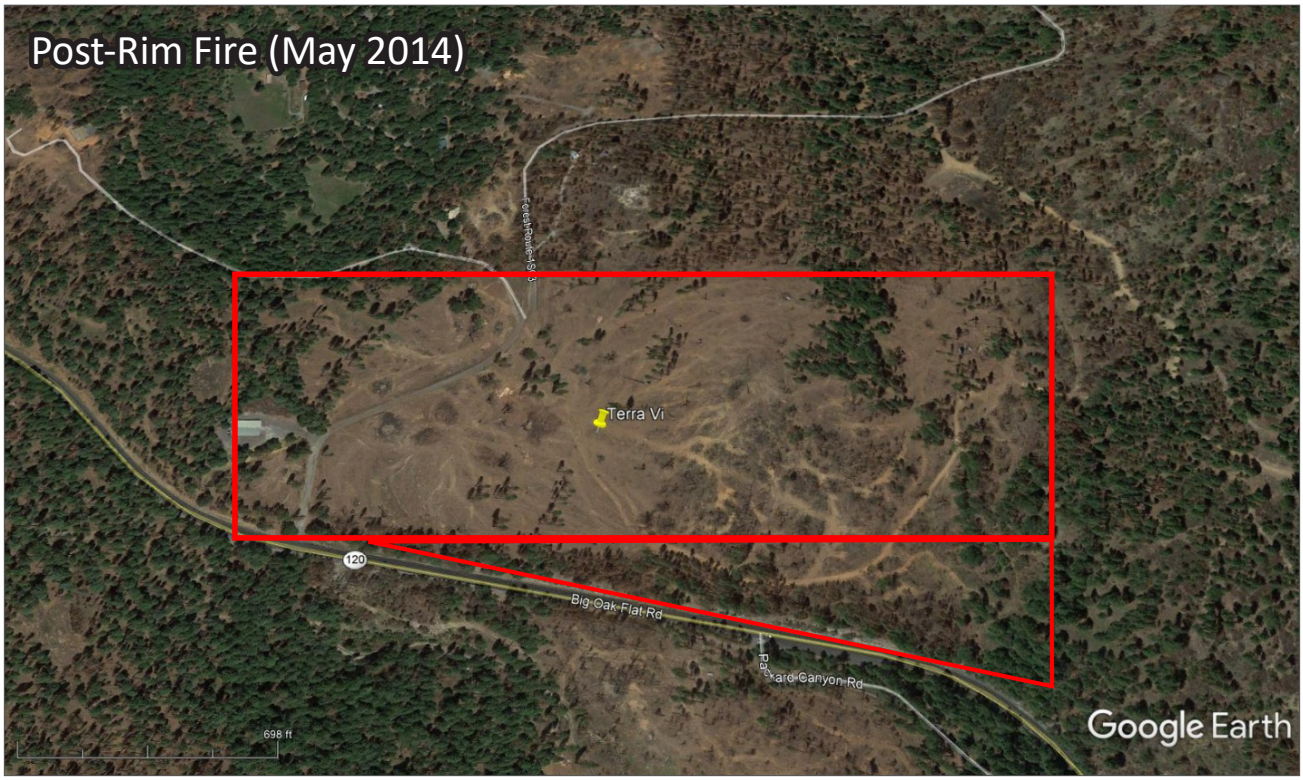
Source: Hansji Corporation, 2019. Google, 2018.

0 3,829
Scale (Feet)

Approximate Open Space Easement

Figure 4.3-1
Biological Study Area

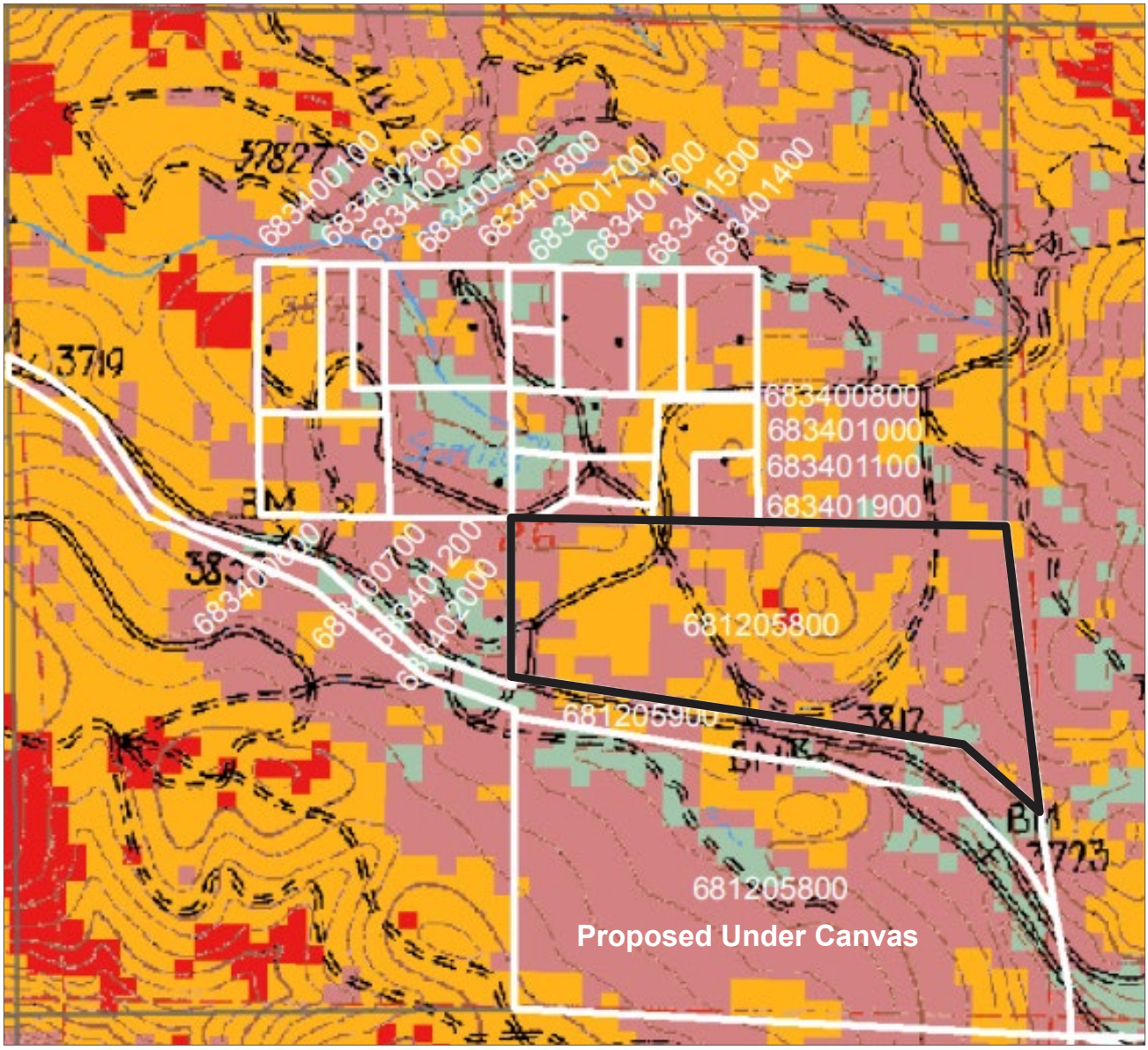




Source: Hansji Corporation, 2019. Google, 2018.

Approximate Project Boundary

Figure 4.3-2
Pre and Post Rim Fire



Source: Hansji Corporation, 2019. https://ucanr.edu/sites/forestry/files/176459.pdf Vegetative Burn Severity - Rim Fire Reference for Private Non-industrial Landowners; CalFire Forest Practice GIS October 13, 2013.

Vegetative Burn Severity

- 0 - 25% Basa Area Loss
- 25 - <50% Basa Area Loss
- 50 - <75% Basa Area Loss
- 75 - 100% Basa Area Loss

- Non Industrial Private Landowner
- Parcel Boundary
- County Boundary
- Fire Perimeter as of 9/26/13

- Approximate Project Boundary

Figure 4.3-3
Rim Fire Burn Severity

Special-Status Species and Sensitive Habitats

Despite the effects of the 2013 Rim Fire, the project site remains a suitable habitat for sensitive plant and animal species on-site. As the land undergoes recovery post-fire, vegetation and species presence is expected to change through time, gradually returning to pre-fire conditions.

CEQA requires an assessment of the effects of a project on species which are "threatened, rare, or endangered;" such species are typically described as "special-status species." To assess the impacts of the project, special-status species have been defined as described below. Impacts on these species are regulated by several of the federal, state, and local laws and ordinances described under "Regulatory Setting" above.

For the purposes of this study, a species is considered "special status" if it meets one or more of the following:

- Listed pursuant to the CESA
- A candidate for listing pursuant to CESA
- A species petitioned for listing pursuant to CESA
- Listed pursuant to the FESA
- A candidate for listing pursuant to FESA
- A species petitioned for listing pursuant to FESA
- Designated by the CDFW as a Species of Special Concern (SSC)
- Designated by the CDFW as a Special Animal (SA)
- Designated by the CDFW as a Fully Protected Species (FPS)
- Designated by CNPS as List 1A (Presumed extinct in California), List 1B (Rare, threatened, or endangered in California and elsewhere), or List 2 Plant (Plants rare, threatened, or endangered in California but more common elsewhere)
- Identified by the US Forest Service as Sensitive (USFS-S)
- Identified by the US Bureau of Land Management as Sensitive (BLM-S)
- Identified by the International Union for Conservation of Nature (IUCN) as vulnerable
- Identified by the Western Bat Working Group (WBWG) as High Priority
- Identified by the WBWG as Moderate Priority
- Birds identified by the USFWS as Birds of Conservation Concern (USFWS BCC)

The full Species lists obtained from the California Natural Diversity Database (CNDDB), USFWS, National Wetlands Inventory and California Native Plant Society are included in Attachment B of the project biological study.[26,27,28] The potential for special-status species identified in CDFW, USFWS and CNPS lists to occur on or within the project boundaries is evaluated in Table 4.3-3.

[26] California Natural Diversity Database, 2019, RareFind 5 [Internet], California Department of Fish and Wildlife, Commercial Version -Biogeographic Data Branch.

[27] United States Fish and Wildlife Service, 2019, Environmental Conservation Online System, Information for Planning and Consultation, https://ecos.fws.gov/ipac/, accessed on February 24, 2020.

[28] California Native Plant Society, Inventory of Rare and Endangered Plants of California (online edition).

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
Plants			
Yosemite onion *Allium yosemitense*	Rare CNPS 1B.3 USFS-S	Broad-leafed upland forest, chaparral, cismontane woodland and lower montane coniferous forest. In pockets of wet soil or in wet cracks of metamorphic rock; also, on slopes and walls. 1750 – 7200± feet. Blooms April – July.	U – The nearest CNDDB record is 2.4± miles south of the project site above 5,000 feet in elevation. Marginal suitable habitat exists on-site in the rocky knoll portions of the site. However, rock on-site is dissimilar to normal gravelly metamorphic rock preferred by the species. Given low competition from other plant species post-fire, the species had a high likelihood of occurrence if present. The species was not identified during surveys conducted during the blooming period for this species. Therefore, the species is considered unlikely to occur.
Big-scale balsamroot *Balsamorhiza macrolepis*	CNPS 1B.2 BLM-S USFS-S	Chaparral, Valley and foothill grassland, cismontane woodland, sometimes on serpentine. 295 - 5,100± foot elevation range. Blooms March to June.	U - The nearest CNDDB record is 2.3± miles west of the project site. The site lacks serpentine and the sandy loam preferred by the species. Given the distinctive leaves of the species, it would be located during surveys during the blooming season if present, even without blooms. The species was not identified during surveys conducted during the blooming period for this species. Therefore, the species is considered unlikely to occur.
Sierra bolandra *Bolandra californica*	CNPS 4.3	Occurs usually in wetlands, montane coniferous forests. Prefers mesic and rocky habitat. 2450 - 8040± foot elevation range . Blooms June to July.	The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. This species does not meet the threshold for consideration as special-status species for this study. The species was not found during surveys conducted during the species' blooming season.
Fresno ceanothus *Ceanothus fresnensis*	CNPS 4.3	Cismontane woodland (openings), Lower montane coniferous forest 2103 – 6,900± foot elevation range. Blooms May to July.	The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. This species does not meet the threshold for consideration as special-status species for this study. The species was not found during surveys conducted during the species' blooming season.
Small's southern clarkia *Clarkia australis*	CNPS 1B.2 BLM-S USFS-S	Cismontane woodlands, lower montane coniferous forest. Open rocky sites in conifer forests or oak woodlands 2600-6800± feet. Blooms May – August.	P/F – The nearest CNDDB record is shown within 0.2 mile of the site but was mapped as a "best guess" by CNDDB. Due to the proximity of the record to the site, and presence of suitable habitat on-site, targeted surveys for the species were conducted on multiple occasions during the blooming season. *Clarkia rhomboidea*, a species visually similar to *C. australis* was found throughout the project site. Multiple individuals were keyed using the Jepson manual and all were confirmed to be *C. rhomboidea*. Therefore, the species is considered absent from the site at present. However, given the changing post-fire landscape, the potential for future occupation of the site by this species cannot be rejected. Therefore, a mitigation measure

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
			requiring re-confirmation of absence during the blooming season prior to issuance of grading permits for project construction, is included.
Mariposa clarkia *Clarkia biloba ssp. australis*	CNPS 1B.2 BLM-S USFS-S	Chaparral, cismontane woodland 1000-3,100± feet. Blooms May – July.	U - The nearest CNDDB record is 2.6 miles west of the project site. Records for *C. biloba ssp. biloba* occur adjacent to the project site (CalFlora, Dean Taylor, 1982). Due to the presence of suitable habitat on-site, targeted surveys for the species were conducted on multiple occasions during the blooming season. A population of approximately three *Clarkia biloba* plants was identified on-site in July (near the northern parcel boundary half-way up the knoll) and keyed to *Clarkia biloba ssp. biloba* using the Jepson manual. Given the site elevation (above the usual range of *C. biloba ssp. australis*) and the presence of *C. biloba ssp. biloba* on-site, the species is not expected to occur.
Sierra clarkia *Clarkia virgata*	CNPS 4.3	Cismontane woodland, lower montane coniferous forest. Elevations ranging from 1,615 – 5,300± feet. Blooms May – August.	The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. This species does not meet the threshold for consideration as special-status species for this study. The species was not found during surveys conducted during the species' blooming season.
Mountain Lady's-slipper *Cypripedium montanum*	CNPS 4.2	Broad-leafed upland forest, Cismontane woodland, Lower montane coniferous forest. Elevations ranging from 2,225 – 7,300± feet. Blooms March - August.	The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. This species does not meet the threshold for consideration as special-status species for this study. The species was not found during surveys conducted during the species' blooming season.
Yellow-lip pansy monkeyflower *Diplacus pulchellus*	CNPS 1B.2 BLM-S USFS-S	Lower montane coniferous forest, meadows and seeps; sandy decomposed granite soils and moist meadows, vernally wet sites. Soils can be clay, volcanic, or granitic. 2000-6,500± foot elevation. Blooms April to July.	U – The nearest CNDDB record is 1.8± mile north of the project site. All moist areas of the site were surveyed on multiple occasions during the blooming period for this plant. The species was absent and is not anticipated to occur.
Yosemite woolly sunflower *Eriophyllum nubigenum*	CNPS 1B.3 USFS-S	Chaparral, lower montane coniferous forest, upper montane coniferous forest. South facing slopes on granitic slabs and domes, gravelly soils. 5000-9,000± feet. Blooms May to August.	U - The nearest CNDDB record is 2.5 miles south of the project site. The site lacks the south facing granitic slabs and gravelly soils preferred by the species. The species was absent during surveys conducted during the blooming period for the species. The species is not anticipated to occur.
Slender-stemmed monkeyflower *Erythranthe filicaulis*	CNPS 1B.2 BLM-S USFS-S	Cismontane woodland, lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Within the transition zone off the Sierra Nevada, moist granitic sand and meadow	P/F - The nearest CNDDB record is shown less than 1/2 mile from the site in a similar area also burned in the Rim Fire. Due to the proximity of the and presence of suitable habitat on-site, targeted surveys for the species were conducted on multiple occasions during the blooming season. *Diplacus*

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
		edges, vernally mesic sites. 2,900- 9,000± feet. Blooms April – August.	*torreyi*, a species visually similar to *E. filicaulis* was found on moist, south facing slopes on the project site. Multiple individuals were keyed using the Jepson manual and all were confirmed to be *D. torreyi*. No *E. filicaulis* were found. However, given the changing post-fire landscape, the potential for future occupation of the site by this species cannot be rejected. Therefore, a mitigation measure requiring re-confirmation of absence during the blooming season prior to issuance of grading permits for project construction, is included.
Small-flowered monkeyflower *Erythranthe inconspicua*	CNPS 4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. Elevations ranging from 760 – 2,495± feet. Blooms May – June.	The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. This species does not meet the threshold for consideration as special-status species for this study. The species was not found during surveys conducted during the species' blooming season and the species range generally is at lower elevations than those found on the project site.
Pilot Ridge fawn lily *Erythronium taylorii*	CNPA 1B.2 USFS-S	Lower montane coniferous forest. Steep, metamorphic rock outcrops in Douglas-fir/mixed conifer/black oak forest. 4,400-4,600 feet. Blooms April – May.	U - The nearest CNDDB record is shown less than 2 miles south of the site. The project site lacks the preferred metamorphic rock outcrops favored by the species. The species was absent during surveys conducted during the blooming period for the species. The species is not anticipated to occur.
Mi-Wuk (Gowan's) navarretia *Navarretia miwukensis* Formerly *Navarretia crystallina*	CNPS 1B.2	Open, sparsely vegetated pyroclastic flows, often gently sloping terrain. 800-1500 m. Blooms May to August.	U - The nearest CNDDB record is shown less than 2 miles north of the site. The site lacks the characteristic sparsely vegetated volcanic flow terrain present in other locations characteristic for this species. The species was absent during surveys conducted during the blooming period for the species. The species is not anticipated to occur.
California beaked-rush *Rhynchospora californica*	CNPS 1B.1	Inhabits bogs and fens, lower montane coniferous forests, meadows and seeps, marshes and swamps (freshwater). 150 – 3,300 feet. Blooms May to July.	U – There are no CNDDB records for the species in the Ascension USGS quadrangle. The site lacks the species' preferred wetland habitat and is somewhat above the plant's normal elevation range. The species was not present during surveys.
Hall's wyethia *Wyethia elata*	CNPS 4.3	Cismontane woodlands and lower montane coniferous forest from 3,000± - 4,600± feet. Blooms May-August.	The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. This species does not meet the threshold for consideration as special-status species for this study.

BIOLOGICAL RESOURCES

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
Insects			
Wawona riffle beetle *Atractelmis wawona*	None – former USFWS species of concern	Limited distribution in the main stem and south fork of the Merced River. Habitat needs not well known.	U - The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. This species does not meet the threshold for consideration as special-status species for this study. There are no rivers within the BSA providing suitable habitat.
Crotch bumble bee *Bombus crotchii/c/*	Candidate Endangered (state)	Inhabits open grassland and scrub habitats. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California. This species was historically common in the Central Valley of California, but now appears to be absent from most of it, especially in the center of its historic range. Primarily nests underground./c/ Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum (CNDDB).	P - The nearest CNDDB record is shown less than 2 miles west of the site and dates to an uncertain record from 1927. The site is not characteristic of open grassland but has some limited scrub habitat and supports at least one preferred plant genera (e.g., Clarkia). No evidence of underground nesting was identified on-site during biological surveys. Despite absence during surveys, the species could locate on-site prior to project construction. Therefore, mitigation measures are included to re-verify species absence prior to issuance of grading permits.
Mollusks			
Western pearlshell *Margaritafera falcata*	None	Aquatic. Prefers lower velocity waters.	U – No flowing streams occur on-site. The species was absent during surveys and is unlikely to occur.
Fish			
Delta smelt *Hypomesus transpacificus*	FT	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay. Aquatic, Estuary; Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	U – No rivers exist on-site. Suitable habitat for this species does not exist on-site.
Amphibians			
California red-legged frog	FT CDFW: SSC	The species prefers quiet pools of streams, marshes, and occasionally ponds. Lowlands and foothills in or near permanent sources of deep water with dense,	U – The nearest CNDDB record is more than 5 miles north of the project site near the Tuolumne River and dates to 1922. The site lacks the suitable habitat combination of quiet, relatively deep pools with permanent water

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
Rana draytonii		shrubby or emergent riparian vegetation. CNDDB records for the species in Tuolumne County place its range here between 1,500± and 5,030± feet in elevation. The species requires 11-20 weeks of permanent water and access to estivation habitat.	for 11-20 weeks with dense or shrubby riparian vegetation. The species was not found during site surveys. The species is not expected to occur on-site.
Foothill yellow-legged frog *Rana boylii/c/*	C-T (CESA) BLM-S CDFW: SSC USFS-S	In or near rocky streams in valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral, and wet meadow types.	U – The nearest CNDDB record is less than one mile from the project site dating to 1948 with a second less than two miles from the project site dating to 1962. Marginal rocky substrate in valley-foothill riparian habitat exists in a steep drainage primarily off-site and touching the corner of the project site through site open space. The creek was surveyed from the highway extending approximately 2,000 feet upstream west of the project site and no foothill yellow-legged frogs were identified. The species does not tend to wander more than a few meters from its home stream and, therefore, is unlikely, if present, to leave any of the creeks present in the Biological Study Area and enter the project site.
Birds			
Golden eagle *Aquila chrysaetos*	BGEPA BLM: S CDF: S CDFW: FP CDFW:WL USFWS: BCC	Habitat typically rolling foothills, mountain areas. Tuolumne County is within the year-round range for the species at most elevations.	U – The CNDDB does not include records for this species within 10 miles of the project site. The site lacks extensive open foothill grasslands typically occupied by the species. None were observed during site surveys. It is not anticipated on-site.
Cassin's Finch *Carpodacus cassinii* aka *Haemorhous cassinii*	USFWS: BCC	Common montane resident; breeds in most higher mountain ranges in California. Prefers tall, open coniferous forests, in lodgepole pine, red fir, and subalpine conifer habitats, particularly in breeding season. Most numerous near wet meadows and grassy openings; also frequents semi-arid forests, unlike purple finch. Occurs regularly in Sierra Nevada.	U - The CNDDB does not include records for this species. The site lacks the species preferred high elevation conifers and lacks meadow and grassing openings. The species was not present during surveys and is not likely to occur.
Olive-sided flycatcher	USFWS: BCC	Uncommon to common, summer resident in a wide variety of forest and woodland habitats below	P - There are no CNDDB records for the species in Tuolumne or Mariposa Counties. Preferred nesting habitat for the species was largely destroyed by

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
Contopus cooperi	CDFW: SSC	9000± feet throughout California exclusive of the deserts, the Central Valley, and other lowland valleys and basins. Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine.	the Rim Fire. Therefore, the species is not likely to occur except for potentially in the marginal habitat along the western and eastern-most edges of the site. The species was not identified on-site. Pre-construction surveys are required to minimize the potential disturbance of this species either on-site or in the vicinity of the site in the unlikely event that the species might nest off-site nearby or along the edges of the project boundaries.
Willow flycatcher *Empidonax traillii*	CE USFS: S USFWS: BCC	Rare to locally uncommon, summer resident in wet meadow and montane riparian habitats 2000-8000± ft in the Sierra Nevada. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows.	U - The nearest CNDDB record occurs more than four miles from the project site. The site lacks the lush growth of willows and lacks meadow habitat preferred by the species. It was not present during surveys and is not likely to occur.
American peregrine falcon *Falco peregrinus anatum*	CDF-S CDFW: FP USFWS: BCC	Very uncommon breeding resident, and uncommon as a migrant. Active nesting sites are known in the Sierra Nevada and in other mountains of northern California. Migrants occur in the western Sierra Nevada in spring and fall. Breeds mostly in woodland, forest, and coastal habitats. Riparian areas and coastal and inland wetlands are important habitats yearlong, especially in nonbreeding seasons.	P – The nearest CNDDB record occurs within two miles of the project site in association with rocky, north-facing cliffs in a Mixed Conifer-Hardwood Forest in a steep canyon. This type of habitat does not occur on-site; however, suitable habitat may occur north and east of the project area or along parcel boundary edges where some tree stands survived the fire. Give the range of the species, it could occasionally roost temporarily on-site. Pre-construction surveys are required to minimize the potential disturbance of this species either on-site or in the vicinity of the site.
Bald eagle *Haliaeetus leucocephalus*	CE BLM: S CDF: S CDFW: FP USFS:S USFWS: BCC BGEPA	Requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches. Year- round range extends into the western half of Tuolumne County with wintering including the eastern (higher elevation) portion of the county.	U – The nearest CNDDB record is more than 10 miles from the project site which lacks large bodies of water and rivers. While the species could temporarily roost during its movements throughout the county; however, given the species' mobility, impacts to the species are not anticipated. It was not present during surveys.
Rufous hummingbird *Selasphorus rufus*	USFWS: BCC	Post-breeders may migrate south through the Sierra Nevada in summer, although spring migration mostly is through the lowlands and foothills. Breeds elsewhere. Uses riparian areas, open woodlands, chaparral, mountain meadows, and other habitats	U - The CNDDB does not have records for this species. The site lacks the species' preferred riparian habitat and lacks gardens or orchards rich in nectar producing flowers. The species was not identified on-site during surveys. Therefore, it is not expected to occur.

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
		rich in nectar-producing flowers, including gardens and orchards. Uses valley foothill hardwood, valley foothill hardwood-conifer, riparian, and various chaparral habitats in both northward and southward migration; montane riparian, aspen, and high mountain meadows (to tree-line and above) used in southward migration. Arrives in February and migrates north through lowlands and foothills until mid-April (south) and early May (north); a few remain in the state. Post-breeder males begin to migrate back through California in late June and early July. This early appearance of males in the Sierra Nevada has led some observers to suspect breeding.	
Williamson's sapsucker *Sphyrapicus thyroideus*	USFWS: BCC	Uncommon to common, summer resident in coniferous forests at 5500-9500± feet. Preferred nesting habitat is lodgepole pine, but also nests in aspens adjacent to stands of red fir, Jeffrey pine, and eastside pine habitats Winter status unclear. Some individuals resident in breeding habitat, but many (most?) descend into ponderosa pine and other coniferous habitats at lower elevations.	U - There are no CNDDB records for this species. The project site is below the normal elevation range for the species and lacks the high elevation confers preferred by the species. Therefore, the species is unlikely to occur except as a short-term visitor during downhill movements should studies discover that the species undertakes down-elevation migrations in winter.
Great gray owl *Strix nebulosa*	SE CDF: S USFS: S	Rarely seen resident at 4500-7500 feet in the Sierra Nevada south to the Yosemite region. Most recent records are from the Merced and Tuolumne River drainages of Yosemite National Park. Breeds in old-growth red fir, mixed conifer, or lodgepole pine habitats, always in the vicinity of wet meadows. Uses trees in dense forest stands for roosting cover. Small trees and snags in, or on edge of, meadows used for hunting perches. Reproduction: Nests in large, broken-topped snags, usually greater than 60 cm (24 in) dbh; builds no nest (Winter 1980).	U - The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle. The project site lacks old-growth trees in proximity to a wet meadow favored by the species. The species was not present during surveys and is not likely to occur.
California spotted owl	USFWS: BCC	Uncommon, permanent resident in suitable habitat. In northern California, resides in dense, old-growth,	P – CNDDB records for the species occur within one mile of the project site and include nesting habitat. No nesting sites have been identified on-site.

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
Strix occidentalis	BLM: S CDFW: SSC USFS: S	multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to 7600 feet. May move downslope in winter along the eastern and western slopes of the Sierra Nevada, and in other areas.	Potential nest trees were destroyed in the Rim Fire. Species movements documented for owls do not intersect with the project site. Given the proximity of the species, it could occasionally roost temporarily on-site. Pre-construction surveys are required to minimize the potential disturbance of this species either on-site or in the vicinity of the site.
Mammals			
Pallid bat *Antrozous pallidus*	BLM: S CDFW:SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. The species eats a wide variety of insects and arachnids, including beetles, orthopterans, homopterans, moths, spiders, scorpions, solpugids, and Jerusalem crickets. It forages over open ground, usually 1.6-8 feet above ground level.	U – The nearest CNDDB record occurs within one mile of the project site in association with a bridge. The project site lacks appropriate roosts that would protect bats from high temperatures. Therefore, the species is not anticipated to roost on-site. Open ground for foraging also is not optimal for foraging due to the emerging shrub and saplings, therefore, it is unlikely to forage on-site. The species was not identified during surveys. Based on the preceding, the species is not expected to occur on-site.
Spotted bat *Euderma maculatum*	BLM: S CDFW: SSC WBWG: H	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.	P - The nearest CNDDB record occurs within approximately one mile south of the project site. The site lacks rock crevices and cliffs preferred for roosting and lacks water for foraging; however, mixed conifer forest habitat does occur along the project edges. The species was not identified during surveys; however, “washes” occur on-site and water is present at the stream to the southeast, and could attract foraging species which could roost off-site in Sawmill Mountain rock outcroppings. Conformance with construction hours as prescribed in the project mitigation measures (i.e., day work hours) will ensure that work does not occur during foraging hours for the species.
Western mastiff bat *Eumops perotis californicus*	BLM: S CDFW: SSC WBWG: H	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, chaparral, and urban. Cover: Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting. When roosting in rock crevices, needs vertical faces to drop off to take flight. Nursery	P - The nearest CNDDB record occurs within approximately one mile south of the project site. The project site itself lacks structures high enough to accommodate the vertical drops necessary for the species to take flight. Therefore, the species is not expected to roost on-site. Extensive rock outcroppings off site in association with Sawmill Mountain could provide appropriate roosting habitat. Therefore, the species is expected to roost well off site and, therefore, may forage on-site.

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
		roosts described as tight rock crevices at least 35 inches deep and 2 inches wide, or crevices in buildings. Records in Tuolumne County vary from 250 to 9,613 feet in elevation.	Conformance with construction hours as prescribed in the project mitigation measures (i.e., day work hours) will ensure that work does not occur during foraging hours for the species. In addition, preconstruction bat surveys will be required to ensure that no bat roosts have become established since project surveys were completed and site construction begins.
Silver-haired bat *Lasionycteris noctivagans*	WBWG: M	Exists along the Sierra Nevada. Summer habitats include montane coniferous forests. Summer range is generally below 9000 feet. Feeds mainly on moths and other soft-bodied insects. Also, eats beetles and hard-shelled insects. Feeds less than 20 feet above forest streams, ponds, and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	P - The nearest CNDDB record occurs within approximately one mile south of the project site. The site has suitable roosting habitat in the form of trees with exfoliating bark and abandoned woodpecker holes. Therefore, potential roost sites, while not present during biological surveys, could be occupied prior to commencing site work. Suitable foraging habitat is present in the form of open, brushy areas and the stream to the southeast. Conformance with construction hours as prescribed in the project mitigation measures (i.e., day work hours) will ensure that work does not occur during foraging hours for the species. In addition, preconstruction bat surveys will be required to ensure that no bat roosts have become established since project surveys were completed and site construction begins.
Hoary bat *Lasiurus cinereus*	WBWG: M	The most widespread North American bat. Breeding habitat includes all woodlands and forests with medium to large- size trees and dense foliage. The species requires water. Occurs between 850 and 9,613 feet in elevation in Tuolumne County.	P – The nearest CNDDB record occurs within approximately one mile south of the project site. The project site has suitable breeding and roosting habitat where post-fire woodlands and forest remain (in particular along the project edges). None were observed during site surveys. Marginal foraging habitat occurs along the stream to the southeast. Conformance with construction hours as prescribed in the project mitigation measures (i.e., day work hours) will ensure that work does not occur during foraging hours for the species. In addition, preconstruction bat surveys will be required to ensure that bat roosts do not near the proposed work area. Therefore, no impacts to the species are anticipated.
Long eared myotis *Myotis evotis*	BLM: S WBWG: M	Widespread in California, but generally believed to be uncommon in most of its range. Occurs in the Sierra Nevada and in nearly all brush, woodland, and forest habitats, from sea level to at least 9000 ft., but coniferous woodlands and forests seem to be preferred. Feeds on beetles, moths, flies, and	P - The nearest CNDDB record occurs within approximately one mile south of the project site. The site has suitable habitat in the form of trees with exfoliating bark and snags. Therefore, potential roost sites, while not present during biological surveys, could become occupied prior to commencing site work. Foraging habitat is present on-site.

BIOLOGICAL RESOURCES

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)
		spiders Forages among trees, over water, and over shrubs. Usually less than 40 ft. above the ground. Species roosts in buildings, crevices, spaces under bark, and snags. Caves are used primarily as night roosts. Roosts singly or in small groups.	Conformance with construction hours as prescribed in the project mitigation measures (i.e., day work hours) will ensure that work does not occur during foraging hours for the species. In addition, preconstruction bat surveys will be required to ensure that no bat roosts have become established since project surveys were completed and site construction begins.
Fisher *Pekania pennanti*	CT/d/ BLM: S CDFW: SSC USFS: S	Uncommon permanent resident of the Sierra Nevada. Occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure. Use cavities in large trees, snags, logs, rock areas, or shelters provided by slash or brush piles for cover. Dense, mature stands of trees also provide cover, especially in winter. Suitable habitat for fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy closure. Fishers are largely carnivorous. Active yearlong. Mostly active at night and dawn/dusk.	P - The nearest CNDDB record is approximately 4.5 miles from the project site. Most records of this species date from 1916-1974. The site, post-Rim Fire no longer supports the large-tree stages of coniferous forest with high canopy closure preferred by the species. It is anticipated that Sawmill Mountain rock outcroppings off-site to the west could provide some shelter for the species. Neither the species nor species indicators (scat or footprints) were observed during surveys. It is not expected to occur except as an accidental visitor. Mitigation measures are included to ensure that construction activities do not inadvertently injure the species should it pass through the site during construction activities and minimize the potential that it would be attracted to the site as a result of construction activities.

/a/ All information for non-plant species from CDFW, CNDDB Rarefind 5 and CDFW Wildlife habitat relationship system unless otherwise specified

/b/ Plant species information from California Native Plant Society (CNPS)

/c/ The Xerces Society, including: Rich Hatfield, Sarina Jepsen, Sarah Foltz Jordan, Michele Blackburn, Aimée Code. 16 October 2018. A Petition to the State of California Fish and Game Commission https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=161902&inline

/d/ Fisher - West Coast DPS 1) The subspecies *M. p. pacifica* is no longer considered a valid subspecies. The west coast population of the fisher is now considered to be a distinct population segment (DPS) by the USFWS. 2) The West Coast DPS of fisher was proposed threatened by the USFWS in 2014, then withdrawn in 2016. 3) The Fish and Game Commission Notice of Findings from 4/20/2016 notes that the Southern Sierra Nevada ESU (defined as south of the Merced River) is recognized as Threatened, while the Northern California ESU was not warranted.

KEY:

State of California

CT: California Endangered Species Act listed threatened

CE: California Endangered Species Act listed endangered

C-T: California Endangered Species Act Candidate for listing as threatened

FPS: Fully protected species – California Fish and Game Code

CDFW-SSC: California Department of Fish and Wildlife Species of Special Concern

- S1: Critically Imperiled. Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.

TABLE 4.3-3 SPECIAL-STATUS SPECIES, THEIR STATUS, AND POTENTIAL OCCURRENCE ON THE PROJECT SITE

Name	*Status	Habitat	Potential for Occurrence on the Project Site (O = Present on Site (Occupied), U = Unlikely to Occur, P = Potential to Occur, P/F= Potential to Occur in the future)

- S2: Imperiled. Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.

Rare: Rare (plants)

United States

FE: Federal Endangered Species Act listed endangered
FT: Federal Endangered Species Act listed threatened
E: Federal Endangered Species Act petitioned for listing endangered
BLM-S: U.S. Bureau of Land Management Sensitive Species
USFWS BCC: United States Fish and Wildlife Service Bird of Conservation Concern
USFS-S: United States Forest Service Sensitive Species
BGEPA: Bald and Golden Eagle Protection Act

Other Organizations

WBWG: Western bat working group
- H: High Priority
- M: Moderate Priority

IUCN–V: International Union for the Conservation of Nature - Vulnerable
CNPS: California Native Plant Society
- List 1B: Rare, threatened, or endangered in California and elsewhere
- List 1B.1 - Seriously endangered in California
- List 1B.2 – Fairly/Moderately endangered in California
- List 1B.3 - Not very endangered in California
- List 4.2 - Plants of limited distribution - Watch list - Moderately threatened in California (20-80 percent of occurrences threatened / moderate degree and immediacy of threat)
- List 4.3 – Plants of limited distribution - Watch list – Not very threatened in California

AFS: American Fisheries Society
- TH – Threatened
- EN - Endangered

Source: Augustine Planning Associates, Inc., December 2019, Terri Vi Lodge Yosemite Biological Study Report, page 27.

Field Survey Species Findings

Review of Existing Data and Previous Surveys

Before commencing field surveys, reviews of the California Natural Diversity Database/Rarefind, USFWS species lists, National Wetlands Inventory, CalFlora plant list, and California Native Plant Society (CNPS) plant list, were conducted. The Ascension Mountain USGS 7.5' Topographic Map and Google Earth were reviewed to determine the potential for drainages, wetlands, clearings, and access points. Species lists from the field survey are included in Attachment A of the project biological study (see Appendix D).

Site Surveys

Site surveys were conducted by foot on the following dates: May 9th, 2018, March 29th, 2019, May 25th, 2019, June 23rd, 2019, and July 4th, 2019. Surveys were conducted using Canon Image Stabilizer 10 X 30 binoculars, Nikon D3300 digital camera (18- 55mm and 70-300mm lens), and standard field and collection supplies.

Botanical and animal reconnaissance surveys were conducted on foot. For botanical surveys, photos of representative vegetation were taken throughout the pedestrian surveys. If botanical species could not readily be identified in the field, plant specimens were inspected with a hand lens, sketched and, if necessary, collected and preserved then keyed in-house using a dissecting microscope and Jepson Manual.

For animal surveys, both live and dead trees were inspected with special attention to any potential denning or nesting opportunities. Potential roosts and structures were inspected for any signs of whitewash. Inspections of mud and sand for signs of animal tracks and structures were examined for whitewash, scat, hair and absence/presence of spider webs across openings. Dirt trails were also observed for animal tracks. Matted or flattened grasses indicating potential bedding areas were inspected for animal scat and hair.

Biological Study Area

For this study, the BSA is the area surveyed for biological resources and evaluated for potential direct and/or indirect and cumulative impacts to common and special-status species and their habitats is illustrated in Figure 4.3-1 and detailed as follows:

- Construction Staging areas: All construction staging areas are assumed to be within parcel boundaries and outside of the existing 21-acre open space zoned area. Staging areas were surveyed intensively for sensitive resources.
- Plants: All areas within the project boundaries were surveyed intensively for special-status plant species except for areas within the existing Open Space Zoning District which will remain undeveloped.
- Raptors and medium-to-large mammals: All areas within the BSA, including the intensive study area and secondary study area, were surveyed using binoculars and listened to for existing/potential raptor

nests or activity associated with nesting. Where identified, rock outcrops were surveyed for potential animal dens.

- Amphibians/Special Study Area: The drainage located on USFS property to the west of the project boundaries was surveyed on foot for special-status amphibians and special-status plants due to its proximity to the site and the potential to support special-status species.[29]

Conditions that May Influence Results

The site was decimated in the 2013 Rim Fire (see Figures 4.3-2 and 4.3-3). Pre-fire, the site was a mixed conifer heavily wooded habitat. Post-fire, the site was largely barren ground with isolated stands of trees. During field studies, new trees (especially ponderosa pines) and shrubs were sprouting, and the largely open site supported an abundance of wildflowers. Bird species diversity was relatively low. As the tree canopy matures on-site, the vegetation and species supported are expected to change significantly and the findings herein should be considered a snapshot in time.

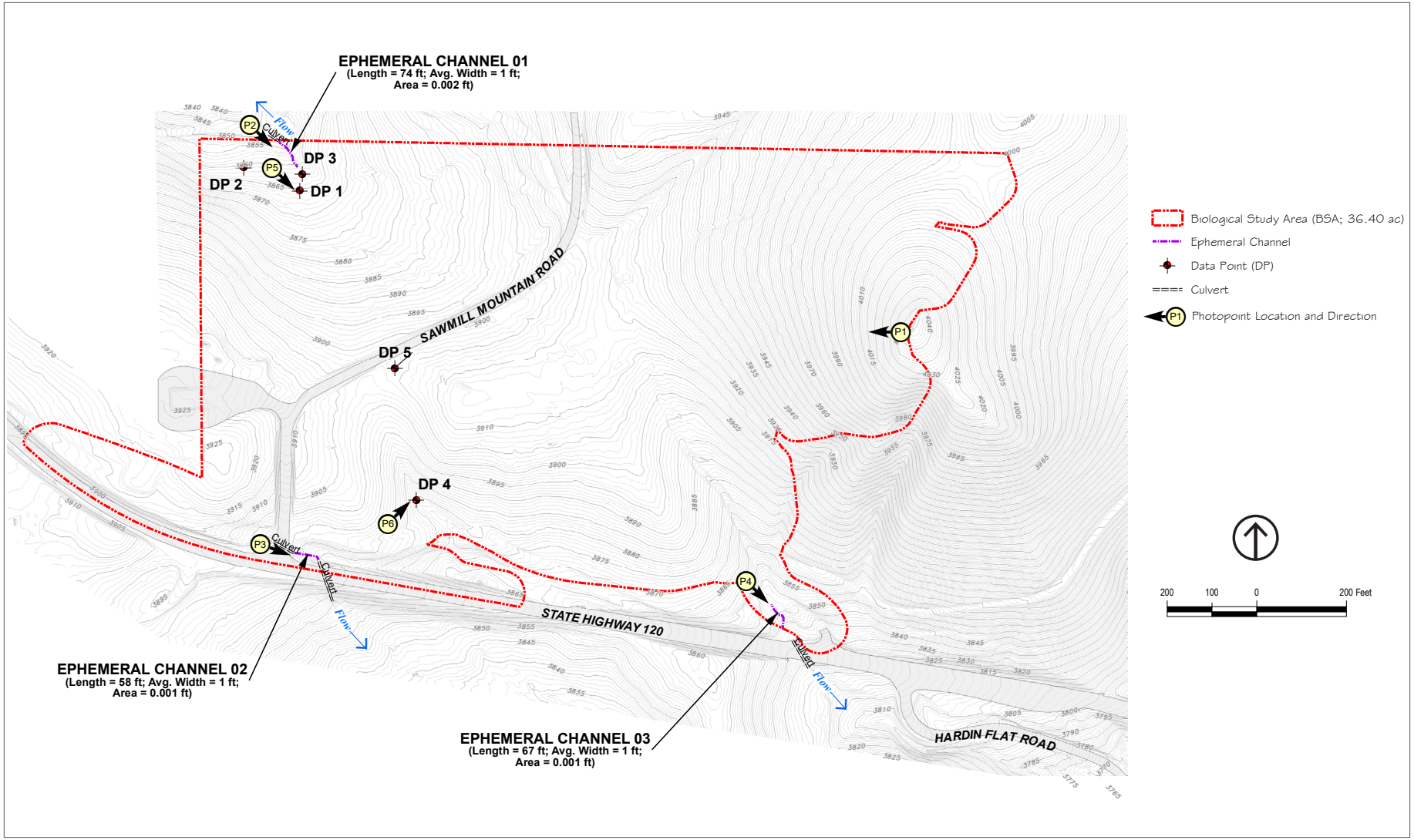
Surveys were conducted during optimal blooming periods for special-status plants over two blooming seasons and are considered reliable at present. However, given the fast-changing vegetative cover post-fire, species diversity and presence and absence of specific plant species are expected to change over time.

Wetlands and Riparian Habitats

Under the recent Navigable Water Protection Rule of the federal CWA, one of the four clear categories of waters that are considered “waters of the United States” are adjacent wetlands. Adjacent wetlands are defined as wetlands that touch other jurisdictional waters, are separated from a “water of the United States” by only a natural berm, bank, or dune, are inundated by flooding from a “water of the United States” in a typical year, are physically separated from a jurisdictional water by an artificial barrier so long as that structure allows for a direct hydrologic surface connection between the wetlands and the jurisdictional water in a typical year; and is jurisdictional in its entirety when a road or similar artificial structure divides the wetland, so long as the structure allows for a direct hydrologic surface connection through or over that structure in a typical year.[30] The aquatic study area for the project site is identified in Figure 4.3-4 and excludes the protected open space zoned area. Therefore, the potential perennial drainage located in the southeastern-most tip of the project is not included in the delineation.

[29] United States Fish and Wildlife Service, 2012, National Wetlands Mapper, https://www.fws.gov/wetlands/data/mapper.html, accessed January 22, 2019.

[30] United States Environmental Protection Agency, 2020, Overview of the Navigable Waters Protection Rule, available online at https://www.epa.gov/sites/production/files/2020-01/documents/nwpr_fact_sheet_-_overview.pdf, accessed March 24, 2020.



Source: Sycamore Environmental Consultants, Inc., 2019.

Figure 4.3-4
Aquatic Resources Delineation Map

The National Wetlands Inventory (NWI) online map was consulted and identified no aquatic features within the project boundaries. The nearest NWI mapped aquatic feature is a Freshwater Emergent Wetland (FEW) located outside of the project boundaries, at approximately 300 feet to the northwest.[31] However, based on site visits, there are three ephemeral channels, all potential Waters of the U.S., totaling .004 acre identified within the project boundaries. As described under Section 4.3.1.1, federal regulations pertaining to ephemeral drainages have recently changed and are in flux. For the purposes of this document, the three drainages are considered potential waters of the U.S. There were no wetlands identified within the boundaries of the project site.

A detailed evaluation of any waters pursuant to the current definition of waters of the U.S. and their potential jurisdiction under Section 404 of the CWA (33 U.S.C. 1344) is the project wetland delineation found in Appendix E of this Draft EIR.[32]

4.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant biological resources impacts if it would:

1. 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 plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

[31] United States Fish and Wildlife Service, 2012, National Wetlands Mapper, https://www.fws.gov/wetlands/data/mapper.html, accessed January 22, 2019.

[32] United States Environmental Protection Agency, 2019, Section 404 of the Clean Water Act. Available online https://www.epa.gov/cwa-404/clean-water-laws-regulations-and-executive-orders-related-section-404, accessed March 9, 2020.

4.3.3 IMPACT DISCUSSION

BIO-1	**The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

For species which are listed or candidates for listing under the CESA or FESA; any potential harm to a single individual either directly (habitat modification, killing, harassing, harming) or indirectly (habitat modification) is assumed to be a significant impact.

For species which are identified as sensitive or special status, but which are not listed or candidates for listing, the potential to harm an individual during a critical life stage or remove habitat necessary for that life stage (e.g., breeding, colonial nesting, rearing young, foraging, migrating) is considered a significant impact.

Special-Status Animal Species

Delta smelt

Delta smelt are federally listed as threatened under FESA. This species occupies tributaries and rivers of the Sacramento-San Joaquin Delta. Delta smelt occurs seasonally in Suisun Bay, the Carquinez Strait and San Pablo Bay. The project site is deemed outside the range of Delta smelt (i.e., Don Pedro Dam forms a barrier to the species passage), and no suitable habitat exists on or adjacent to the project site. Therefore, the proposed project would have *no impact* to Delta smelt.

California red-legged frog (Rana draytonii)

The California red-legged frog (CRLF) is federally listed as threatened and is a CDFW species of special concern.

CRLF prefers quiet pools of streams, occasionally ponds, and marshes. Foothills and lowlands in or nearby permanent sources of deep water with shrubby, dense, or emergent riparian vegetation. CNDDB records for the species in Tuolumne County place its range within the County between 1,500± and 5,030± feet in elevation. CRLF requires 11-20 weeks of permanent water and access to estivation habitat. The species was not present during field surveys.

The nearest CNDDB record for the species is more than five miles north of the project site near the Tuolumne River, dated from 1922. The project site lacks the suitable habitat combination of dense or shrubby riparian vegetation with quiet, relatively deep pools with permanent water for 11-20 weeks. CRLF was not found during site surveys and a review of the history and status of the species in the Sierra

Nevada confirms that the BSA is not historically or currently known to support CRLF.[33] Therefore, the species is not expected to occur on-site and the proposed project would have *no impact* to the California red-legged frog.

Foothill yellow-legged frog (Rana boylii)

The Foothill yellow-legged frog (FYLF) is a candidate for listing as threatened under the CESA. The species is also a US Bureau of Land Management and U.S. Forest Service sensitive species and a CDFW species of special concern.

FYLF occur in or near rocky streams in valley-foothill hardwood- conifer, valley-foothill hardwood, valley-foothill riparian, mixed conifer, ponderosa pine, mixed chaparral, and wet meadow types. Per the CDFW, unlike most other ranid frog species in California, FYLFs are rarely encountered far from permanent water, not even on rainy nights, seasonally, or to and from breeding areas. Normal ranges for the CRLF are believed to be less than 33 feet with only occasional long-distance movements up to 165 feet during periods of high water. In California, breeding and egg laying may commence any time between mid-March to May, depending on local water conditions.

The nearest CNDDB record for the FYLF is less than one mile from the project site dating back to 1948 with a second occurrence less than two miles from the project site dating back to 1962. Marginally rocky substrate in valley-foothill riparian habitat exists within a steep drainage primarily off-site, touching the corner of the project site through the Open Space Zoning District. The creek was surveyed from the highway, extending to approximately 2,000 feet upstream to the west of the project site and no FYLFs were identified. The species usually does not wander more than a few meters from its native stream and, therefore, is unlikely, if present, to leave the drainage and enter the project site. Therefore, *no impact* to the species, and unlikely to be present, are anticipated.

Willow flycatcher (Empidonax traillii)

The Willow flycatcher species is State-listed endangered, a US Forest Service Sensitive Species and a USFWS bird species of conservation concern.

The species is a rare to locally uncommon, summer resident in montane riparian and wet meadow habitats ranging in elevation from 2000± to 8000± feet within the Sierra Nevada range. The species most often occurs in broad, open river valleys or large mountain meadows consisting of lush shrubby willow growth.

The nearest CNDDB record of the species occurs more than four miles from the project site. The project site lacks the lush willow growth and meadow habitat preferred by the species. The species was not present during field surveys and it is predicted that it is not likely to occur. Therefore, the proposed project would have *no impact* to the Willow flycatcher.

[33] Barry, Sean J. and Gary M. Fellers. 2013. History and Status of the California Red-Legged Frog (Rana draytonii) in the Sierra Nevada California, USA. Herpetological Conservation and Biology 8(2):456-502, Published 15 September 2013. 46 pps.

Bald eagle (Haliaeetus leucocephalus)

The bald eagle is a state-listed endangered species, a US Bureau of Land Management and U.S. Forest Service Sensitive Species, California Department of Forestry Sensitive Species, a USFWS Bird of Conservation Concern, a CDFW Fully Protected Species, and is protected under the Bald and Golden Eagle Protection Act.[34][35]

The species habitat requirement includes large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches. The year-round range extends into the western half of Tuolumne County with wintering range including the higher elevation eastern portion of the County. The nearest CNDDB record for the Bald eagle is more than 10 miles from the project site. The project site lacks suitable habitat consisting of large bodies of water and rivers. Although the species could temporarily roost during its movements throughout the County; given the species' high mobility, it can readily relocate and impacts to the species are not anticipated. It was not present during focused field surveys and is unlikely to occur based on database review. Therefore, the proposed project would have *no impact* to the Bald eagle.

Crotch bumble bee (Bombus crotchii)

The species is a state candidate for listing as endangered. It inhabits open grassland and scrub habitats and occurs primarily in California, including within the foothills. The Crotch bumble bee was historically common in the Central Valley of California, but it now appears to be absent from most of it, especially within the center of its historic range. The species primarily nests underground and its nutrient food plant genera include *Antirrhinum* (snapdragon), *Phacelia*, *Clarkia*, *Dendromecon* (bush poppy)*, Eschscholzia* (poppy), and *Eriogonum* (buckwheat).

The nearest CNDDB occurrence is of uncertain location dating back to 1927 less than two miles west of the project site. The project site is not characteristic of open grassland; however, it has some limited scrub habitat and supports at least one preferred plant genera (e.g., *Clarkia*). There is no evidence of underground nesting identified on-site during biological surveys. Consistent with most bumble bees, this species typically nests underground in abandoned rodent burrows or other cavities remaining from old squirrel or other animal nests. Nest locations tend to occur in open west to southwest slopes bordered by trees, although they are occasionally found above-ground among railroad ties or in logs. Generally, bumble bee populations require plants that bloom and provide adequate pollen and nectar throughout the colony's life cycle, which generally occurs from early February to late November.

Despite its absence during biological surveys, the Crotch bumble bee could be located on-site prior to project construction. The destruction of an active nest for the species could result in the death of individuals of the species, which would be considered a *significant* impact.

[34] United States Fish and Wildlife Service, 2004, Bald and Golden Eagle Protection Act, available online at https://www.fws.gov/le/USStatutes/BEPA.pdf, accessed March 9, 2020.

[35] Electronic Code of Federal Regulations, 2020, Eagle Permits, available online at https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/Title50/50cfr22_main_02.tpl, accessed March 9, 2020.

Significance without Mitigation: Significant.

Impact BIO-1.1: The project has the potential, through habitat modification, to adversely affect the Crotch bumble bee, a species identified as a candidate for listing as endangered under the CESA.

Mitigation Measure BIO-1.1a: Preconstruction Bee Surveys. Prior to issuance of grading permits or any staging, construction, or ground disturbing activities between February 1 and November 30th of the construction year, a qualified biologist shall survey the project boundaries for active Crotch bumble bee nests. If identified, CDFW shall be consulted for guidance on buffer distances to avoid colony disturbance (e.g., buffer surrounding the nest itself, entry/exits, and avoiding direct disturbance). If full avoidance cannot be achieved through buffers, no construction shall occur until the nest is no longer occupied. No pesticides or herbicides shall be used so long as the species occupies the site.

This measure shall be incorporated into the project bid package and contract. The measure is the responsibility of the qualified biologist under contract to either the County or construction contractor.

Mitigation Measure BIO-1.1b: Environmental Awareness Training. All contractors involved in site development, applicable County department staff, and environmental specialists (e.g., biologist) shall attend a mandatory Environmental Awareness Training prior to any site disturbances. The program shall address proper implementation of mitigation measures contained herein.

This measure shall be incorporated into the project bid package and contract and implemented throughout project construction. The project biologist shall have the authority to stop work or remove any construction worker on-site that has not completed training. The measure is the responsibility of the qualified biologist under contract to either the County or construction contractor.

Significance with Mitigation: Less than significant.

*Fisher (*Pekania *pennant)*

The species is State listed as threatened, however, the Fish and Game Commission Notice of Findings from April 20th, 2016 notes that the Southern Sierra Nevada ESU (defined as south of the Merced River) is recognized as threatened, while the Northern California ESU was not warranted. The project site is located north of the Merced River and, therefore, not within the area where the species is listed as threatened. The species also is a CDFW species of special concern and a US Bureau of Land Management and US Forest Service sensitive species. To be consistent with this report, the species is addressed here.

The Fisher is an uncommon permanent resident of the Sierra Nevada range and it occurs primarily in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high canopy closure percentage. The Fisher uses cavities in snags, rock areas, logs, large trees, or shelters provided by slash or brush piles for cover. Especially in winter, dense and mature stands of trees also provide cover. Suitable habitat for the Fisher consists of large areas of mature, dense forest stands with snags and canopy closure greater than 50 percent. Fishers are mostly carnivorous and active yearlong largely at night and at dawn/dusk.

The nearest CNDDB record for the species is approximately 4.5 miles from the project site. Most records of this species date from between 1916-1974. The site, post-Rim Fire, no longer supports large-tree stages of coniferous forest with high canopy closure preferred by the species. It is anticipated that Sawmill Mountain rock outcroppings off-site towards the east could provide some shelter for the species. Neither the species nor species indicators, including footprints or scat were observed during surveys. It is not expected to occur on the project site except as an accidental visitor.

Should the species wander through the site during construction activities, the potential exists for the species to become trapped in excavations or construction materials. This would be a *significant* impact if it resulted in injury or harm to one or more individuals.

Significance without Mitigation: Significant.

Impact BIO-1.2: The project has the potential, through habitat modification, to adversely affect the Fisher, a species state-listed as threatened under the CESA.

Mitigation Measure BIO-1.2a: Implement Mitigation Measure BIO-1.1b.

Mitigation Measure BIO-1.2b: Avoid Inadvertent Animal Trapping During Construction. To avoid inadvertently trapping special-status or common animal species during construction, all excavated steep-walled holes or trenches more than two feet deep shall be covered at the end of each working day with plywood or similar material, or provided with one or more escape ramps constructed of earth fill or wooden planks, or equivalent, at each end of the trench. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped animal is discovered, the contractor shall place an escape ramp or other appropriate structure to allow the animal to escape. Alternatively, the contractor shall contact the project biologist or California Department of Fish and Wildlife for assistance. Similarly, stored pipes or other materials providing potential cover for animals shall be inspected prior to installation or use to ensure that they are unoccupied.

Mitigation Measure BIO-1.2c: Food and Trash Disposal. All food and food-related trash shall be enclosed in sealed trash containers at the end of each workday and removed completely from the construction site every day to avoid attracting wildlife. This measure shall be implemented throughout project construction. The measure is the responsibility of the construction contractor.

Mitigation Measure BIO-1.2d: Construction Hours. Project construction shall be limited to 7:00 a.m. to 7:00 p.m. unless an emergency exists.

Significance with Mitigation: Less than significant.

Spotted bat (Euderma maculatum)

The spotted bat is a U.S. Bureau of Land Management sensitive species and CDFW species of special concern. It is also at high risk as identified by the Western Bat Working Group. The species occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. It feeds over water and along washes almost entirely on moths and requires rock crevices in cliffs or caves for roosting.

The nearest CNDDB record occurs within approximately 1 mile of the project site to the south. The project site lacks rock crevices and cliffs preferred for roosting. However, "washes" occur on-site and water is present at the stream to the southeast and count attract foraging species roosting off-site in Sawmill Mountain rock outcroppings. Disturbance of foraging habitat for the species could result in a *significant* impact to the species.

Significance without Mitigation: Significant.

Impact BIO-1.3: The project has the potential, through habitat modification, to adversely affect the spotted bat (*Euderma maculatum*).

Mitigation Measure BIO-1.3: Implement Mitigation Measure BIO-1.2d.

Significance with Mitigation: Less than significant.

Western mastiff bat (Eumops perotis californicus)

The bat is a U.S. Bureau of Land Management sensitive species and CDFW species of special concern. It is also at high risk as identified by the Western bat working group.

This species occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, annual and perennial grasslands, chaparral, and urban areas. The species requires crevices in cliff faces, high buildings, tunnels, and trees for roosting. When this species is roosting in rock crevices, it needs vertical faces to drop off to take flight. Nursery roosts are described as tight rock crevices at least 35 inches deep and two inches wide, or crevices in buildings. Records in Tuolumne County vary from elevations ranging from 250± to 9,613± feet. The species catches and feeds on insects in flight, feeding from ground to tree-level. However, over rugged terrain these bats typically forage at a much greater height, approximately 195 ft above the ground.

The nearest CNDDB record for this species occurs within approximately one mile of the project site to the south.

The site itself generally lacks rock crevices or man-made structures high enough to accommodate roosting. However, extensive rock outcroppings off-site in association with Sawmill Mountain granite outcroppings provide potential roosting habitat and, therefore, the species could forage on-site. The species was not identified during surveys; however, the species could forage on-site. Disturbance of foraging habitat for the species could result in a *significant* impact to the species.

Significance without Mitigation: Significant.

Impact BIO-1.4: The project has the potential, through habitat modification, to adversely affect the Western mastiff bat (*Eumops perotis californicus*).

Mitigation Measure BIO-1.4: Implement Mitigation Measure BIO-1.2d.

Significance with Mitigation: Less than significant.

Silver-haired bat (Lasionycteris noctivagans)

The bat is at high risk as identified by the Western Bat Working Group. It exists along the Sierra Nevada range. Summer habitats include montane coniferous forests and its habitat range is generally below 9000 feet. The bat feeds mainly on moths and other soft-bodied insects, but it also eats beetles and hard-shelled insects. Generally, it feeds less than 20 feet above forest streams, ponds, and open brushy areas and roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. The species needs suitable drinking water nearby for survival.

The nearest CNDDB record occurs within approximately one mile of the project site. The site includes brushy habitat and the stream to the southeast could provide foraging habitat. In addition, the site has suitable habitat in the form of trees with exfoliating bark and abandoned woodpecker holes along the western and eastern-most edges for roosting. Therefore, while the species was not present during biological surveys, potential roost sites could be occupied prior to commencing site work.

Disturbance of roosting, nursery, or foraging habitat for the species could result in a *significant* impact to the species.

Significance without Mitigation: Significant.

Impact BIO-1-5: The project has the potential, through habitat modification, to adversely affect the Silver-haired bat (*Lasionycteris noctivagans*).

Mitigation Measure BIO-1.5a: Preconstruction Surveys Suitable Bat Roosting (or Nursery) Areas and Provisions for Protection, if Identified. The project sponsor or contractor shall implement the following measures:

- 15 days or fewer before commencing ground-disturbing activities between April and September of the construction year, a qualified biologist shall survey snags, trees, rock crevices and other suitable cavities and structures on the site for roosting bats or bat nurseries.
- If bats are not found and there is no evidence of bat use, construction may proceed.
- If bats are found or evidence of use by bats is present, CDFW shall be consulted for guidance on measures to avoid or minimize disturbance to the colony or nursery. Subject to CDFW approval, measures may include excluding bats from roosts before construction begins. If nurseries are discovered, no work shall occur within buffer areas as established by CDFW until all young are self-sufficient and have left the nursery.
- This mitigation measure shall be incorporated into the project bid package and contract. Surveys shall occur within 15 days of commencing construction that occurs between April and September.

Mitigation Measure BIO-1.5b: Implement Mitigation Measure BIO-1.2d.

Significance with Mitigation: Less than significant.

Hoary bat (Lasiurus cinereus)

The hoary bat is a moderate risk species as identified by the Western Bat Working Group. It is the most widespread North American bat and its breeding habitat includes all woodlands and forests with dense foliage and medium to large-size trees. The species requires water, feeds primarily on moths, and occurs in Tuolumne County at an elevation between 850± and 9,613± feet.

The nearest CNDDB record occurs within approximately 1 mile of the project site to the south. The stream to the southeast provides potential foraging habitat. The project site has suitable roosting or breeding habitat where post-fire woodlands and forest remain towards the project's eastern and western-most edges.

The species was not identified during biological surveys; however, the species could roost or breed along the project margins prior to commencement of project construction. Disturbance of roosting, nursery, or foraging habitat for the species could result in a *significant* impact to the species.

Significance without Mitigation: Significant.

Impact BIO-1.6: The project has the potential, through habitat modification, to adversely affect the Hoary bat (*Lasiurus cinereus*).

Mitigation Measure BIO-1.6: Implement Mitigation Measures BIO-1.5a and BIO-1.2b.

Significance with Mitigation: Less than significant.

Long eared myotis (Myotis evotis)

The Long eared myotis bat is a moderate risk species as identified by the Western Bat Working Group and is a US Bureau of Land Management Sensitive Species.

This species is widespread in California but is generally believed to be uncommon in most of its range. The bat occurs in the Sierra Nevada range and in nearly all woodland, brush, and forest habitats, from sea level to at least 9,000 feet, but forests and coniferous woodlands seem to be preferred. The bat feeds on beetles, moths, flies, and spiders and forages among trees, over water, and over shrubs usually less than 40 feet above the ground. The species roosts in buildings, crevices, spaces under bark, and snags and caves are used primarily as night roosts. The bat typically roosts singly or in small groups.

The nearest CNDDB record occurs within approximately one mile of the project site. The site has suitable habitat in the form of trees with exfoliating bark and snags for roosting and potentially breeding near the project's western and eastern-most edges. The project site, with its current shrub stage vegetation and stream to the southeast, also could provide foraging habitat. The species was not identified during biological surveys; however, the potential exists for the species to occupy the project site prior to construction commencing. Disturbance of roosting or nursery habitat for the species and its associated foraging habitat could result in a *significant* impact to the species.

Significance without Mitigation: Significant.

Impact BIO-1.7: The project has the potential, through habitat modification, to adversely affect the Long eared myotis (*Myotis evotis*).

Mitigation Measure BIO-1.7: Implement Mitigation Measures BIO-1.2d and BIO-1.5a.

Significance with Mitigation: Less than significant.

Olive-sided flycatcher (Contopus cooperi)

The species is a USFWS bird species of conservation concern and a CDFW species of special concern.

The species is an uncommon to common, summer resident in a wide variety of woodland and forest habitats below 9000± feet throughout California exclusive of the Central Valley, deserts, and other lowland valleys and basins. Preferred nesting habitats include montane hardwood-conifer, mixed conifer, redwood, red fir, Douglas-fir, and lodgepole pine.

There are no CNDDB records for the species in Tuolumne or Mariposa Counties. Preferred nesting habitat for the species was largely destroyed by the 2013 Rim Fire. Therefore, the species is not likely to occur except for potential presence in the marginal habitat along the western and eastern-most edges of the site. The species was not identified on-site, however, due to the changing nature of on-site vegetation and that project construction could commence several years in the future, habitat could evolve that attracts the species prior to commencing project construction. Construction could adversely impact nesting species through noise and vibrations, and this would be a *significant* impact on the species' population.

Significance without Mitigation: Significant.

Impact BIO-1.8: The project has the potential, through habitat modification, to adversely affect the special-status olive-sided flycatcher (*Contopus cooperi*).

Mitigation Measure BIO-1.8: Pre-Construction Bird/Raptor Survey. Prior to issuance of grading permits for construction occurring between February 1st and August 30th (e.g., excavation, ground disturbance, or vegetation removal) a preconstruction survey for nesting birds shall be conducted in accordance with the CDFW guidelines and a no-disturbance buffer shall be established, if necessary.

If equipment staging, site preparation, vegetation removal, grading, excavation or other project-related construction activities are scheduled during the avian nesting season (generally February 1 through August 30), a focused survey for active nests would be conducted by a qualified biologist within 15 days prior to the beginning of project-related activities.

Following initial pre-construction surveys in year one of project construction, bird surveys shall be repeated annually so long as outside construction continues. Surveys shall be repeated within 15 days prior to resuming outdoor construction activities for the first time between February 1st and August 30th whenever outdoor construction activities have ceased for more than one month (e.g., if outdoor construction shuts down for the season due to winter rains in late November, preconstruction bird surveys would occur again within 15 days prior to recommencing outdoor site

work between February 1st and August 30th. If work recommences in January and continues without interruption through August 30th, then no additional preconstruction survey is required).

Surveys shall be conducted in all suitable habitat in the BSA. If an active nest is found, the bird shall be identified to species and the approximate distance from the closest work site to the nest estimated. No additional measures need be implemented if active nests are more than the following distances from the nearest work site: (a) 300± feet for raptors; or (b) 75± feet for other non-special-status bird species. Disturbance of active nests shall be avoided to the extent possible until it is determined that nesting is complete and the young have fledged. For species protected under the California Fish and Game Code (CFGC), if active nests are closer than those distances to the nearest work site and there is the potential for bird disturbance, CDFW shall be contacted for approval to work within 300± feet of raptors, or 75± feet of other non-special-status bird species.

This measure shall be incorporated into the project bid package and contract. Surveys shall occur within 15 days of commencing construction that occurs between February 1st and August 30th.

Significance with Mitigation: Less than significant.

American peregrine falcon (Falco peregrinus anatum)

The species is a California Department of Forestry and Fire Protection sensitive species, a CDFW fully protected species and a USFWS bird species of conservation concern.

The species is a very uncommon breeding resident, and uncommon as a migrant within the project area. Active nesting sites are known in the Sierra Nevada range and in other mountains of northern California with migrations occurring in the western Sierra Nevada range in spring and fall. The species breeds mostly in forest, coastal, and woodland habitats. Riparian areas and coastal and inland wetlands are also important habitats yearlong, especially in nonbreeding seasons.

The nearest CNDDB record occurs within two miles of the project site in association with rocky, north-facing cliffs in a Mixed Conifer-Hardwood Forest within a steep canyon. This type of habitat does not occur on-site; however, suitable habitat may occur to the north and east of the project area or along parcel boundary edges where some tree stands survived the rim fire. Given the range of this species, it could occasionally roost temporarily on-site. Disturbance to the species during nesting season could adversely impact its nesting success and this would be a *significant* impact.

Significance without Mitigation: Significant.

Impact BIO-1.9: The project has the potential, through habitat modification, to adversely affect the special-status American peregrine falcon (*Falco peregrinus anatum*).

Mitigation Measure BIO-1.9: Implement Mitigation Measure BIO-1.8.

Significance with Mitigation: Less than significant.

California Gray owl (Strix nebulosi)

The species is State-listed endangered and is a California Department of Forestry and US Forest Service sensitive species. This species is a rarely seen resident at 4500-7500 feet in the Sierra Nevada range and south to the Yosemite region. Most recent records of the species are from the Merced and Tuolumne River drainages of Yosemite National Park. The owl breeds in mixed conifer, old-growth red fir, or lodgepole pine habitats, always in the vicinity of wet meadows. It uses trees in dense forest stands for roosting cover and small trees and snags in, or on the edge of, meadows are used for hunting perches. The owl nests in large, broken-topped snags, usually greater than 60 centimeters (24 inches) dbh, however it builds no nest.[36] The CNDDB identifies an unmapped occurrence of this species in the Ascension USGS Quadrangle, however, the project site lacks old-growth trees in proximity to a wet meadow favored by the species. Furthermore, the species was not present during biological surveys and is deemed not likely to occur. Therefore, the proposed project would have *no impact* on the California Gray owl.

California spotted owl (Strix occidentalis occidentalis)

The species is a USFWS bird species of conservation concern, a US Bureau of Land Management and US Forest Service sensitive species and a CDFW species of special concern.

The species is an uncommon, yet permanent resident in suitable habitat. In northern California, the species resides in dense, old-growth, multi-layered mixed conifer, Douglas-fir, and redwood habitats, from sea level up to 7600 feet. The species may move downslope in winter, along the western and eastern slopes of the Sierra Nevada range, and in other areas.

CNDDB records for the species occur within one mile of the project site and include nesting habitat, however, no nesting sites have been identified on-site and any potential suitable nesting trees were destroyed in the Rim Fire. Species movements documented for owls do not intersect with the project site. Give the proximity of the species, it could occasionally roost temporarily on-site. Disturbance to the species during nesting season would be a *significant* impact.

Significance without Mitigation: Significant.

Impact BIO-1.10: The project has the potential, through habitat modification, to adversely affect the special-status California spotted owl (*Strix occidentalis occidentalis*).

Mitigation Measure BIO-1.10: Implement Mitigation Measure BIO-1.8.

Significance with Mitigation: Less than significant.

[36] Winter, J. 1980. The status and distribution of the great grey owl in California. Calif. Dept. Fish and Game, Sacramento. Final Rep. Proj. W-54-R-12. 37pp.

Other Birds

Common bird species protected pursuant to the provisions identified in Section 4.3.1.1 within the BSA during surveys are included in Appendix A of the project biological study (see Appendix D of this Draft EIR). These species cannot be disturbed during nesting. Disturbance to a species protected species during nesting season would be a *significant* impact.

Significance without Mitigation: Significant.

Impact BIO-1.11: The project has the potential, through habitat modification, to adversely affect protected bird species.

Mitigation Measure BIO-1.11: Implement Mitigation Measure BIO-1.8.

Significance with Mitigation: Less than significant.

Other Animal Species

The proposed project is expected to involve construction materials including pipes and open trenching. Common and special-status wildlife species may be attracted to the site by food or may use construction materials as cover and smaller species may fall into trenches and become trapped. This is a *significant* impact that is anticipated primarily during the construction phase of the project.

Significance without Mitigation: Significant.

Impact BIO-1.12: The project has the potential to interfere substantially with the movement of native resident wildlife species.

Mitigation Measure BIO-1.12: Implement Mitigation Measures BIO-1.2b, BIO-1.2c, and BIO-1.2d.

Significance with Mitigation: Less than significant.

Special-Status Plant Species

Yosemite onion (Allium yosemitense)

The Yosemite onion species is state listed as rare and is a US Forest Service sensitive species and a California Native Plant Society list 1B.3 species, a classification which is deemed not very endangered in California.

The species occupies broad-leafed upland chaparral, forest, cismontane woodland and lower montane coniferous forests. This plant species generally occurs in pockets of wet soil or in wet cracks of metamorphic rock as well as on slopes and walls. This species occurs between 1750 feet and 7200± feet in elevation and generally blooms from April to July.

The nearest CNDDB record is 2.4± miles south of the project site above 5,000 feet in elevation. Marginal suitable habitat exists on-site in the rocky knoll portions of the site; however, rock on-site is not similar to

normal gravelly metamorphic rock deemed preferable by the species. Given that there is low competition from other plant species post-fire, the species had a high likelihood of occurrence if present. The species was not identified during botanical surveys conducted during the blooming period for this species. Therefore, the species is considered unlikely to occur and the project would have *no impact* to the Yosemite onion.

Small's southern clarkia (Clarkia australis)

The species is a California Native Plant Society List 1B.2 plant, deemed fairly/moderately endangered in California, and a US Bureau of Land Management and US Forest Service sensitive species.

The species occurs in cismontane woodlands and lower montane coniferous forests on open rocky sites in conifer forests or oak woodlands at elevations ranging from 2600± to 6800± feet. It generally blooms from May through August.

The nearest CNDDB record is shown within 0.2 mile of the site, however it was mapped as a "best guess" by CNDDB. Due to the proximity of the CNDDB record to the site, and presence of suitable habitat on-site, targeted botanical surveys for the species were conducted on multiple occasions during the blooming season. *Clarkia rhomboidea*, a species visually similar to *C. australis* was found throughout the project site and multiple individuals were keyed using the Jepson manual and all were confirmed to be *C. rhomboidea*. Therefore, the species is considered absent from the site at present, however, given the changing post-fire landscape, the potential for future occupation of the site by this species cannot be ruled out. Elimination of a population of this species could result in a *significant* impact on the status of the population.

Significance without Mitigation: Significant.

Impact BIO-1.13: The project has the potential, through habitat modification, to adversely affect the special-status Small's southern clarkia (*Clarkia australis*).

> Mitigation Measure BIO-1.13: Pre-Construction Botanical Survey. Surveys shall occur the bloom season prior to issuance of grading permits during the bloom period for *Clarkia australis* (May through August) and *Erythranthe filicaulis* (April through August). If found, the location of special-status plant populations shall be clearly identified in the field by staking, flagging, or fencing prior to the commencement of activities that may cause disturbance. A buffer surrounding the populations shall be established by a qualified botanist based on the plant species, its habitat, and the nature of the proposed project activity. No activity shall occur within the buffer area. If sensitive plant species cannot be avoided, transplanting (perennial species), seed collection and dispersal (annual species) may be undertaken by a qualified botanist. If transplanting or seed collection/dispersal is employed, ongoing monitoring for 5 years shall be conducted to assess the effectiveness of mitigation. The performance standard for mitigation is no net reduction in the size or viability of the local plant population. Prior to salvaging plants, written permission shall be obtained from the landowner and CDFW shall be notified 10 days prior to salvage activities or, for emergency situations, CDFW shall be notified within 14 days following salvage activities consistent with the provisions of the California Native Plant Protection Act (California Fish and Game Code Sections 1912 and 1913) and California Penal Code Section 384a. Salvage shall be in accordance with California Fish and Game Code Sections

1912 and 1913(c) including CDFW notification. The performance standard for this mitigation measure is no net reduction in the size or viability of local sensitive plant populations.

This measure shall be incorporated into the project bid package and contract. Surveys shall occur the bloom season prior to commencing construction during the bloom period for *Clarkia australis* (May through August) and *Erythranthe filicaulis* (April through August).

Significance with Mitigation: Less than significant.

Slender-stemmed monkeyflower (Erythranthe filicaulis)

The species is a California Native Plant Society List 1B.2 plant, deemed fairly/moderately endangered in California, and a US Bureau of Land Management and US Forest Service sensitive species.

This species occupies lower montane coniferous forests, cismontane woodlands, upper montane coniferous forests and meadows and seeps, and areas within the transition zone of the Sierra Nevada range. The species prefers moist granitic sand and meadow edges and vernally mesic sites at elevations which range from 2,900± to 9,000± feet. The monkeyflower generally blooms from April through August.

The nearest CNDDB record is shown less than one half mile from the site in a similar area also burned during the Rim Fire. Due to the proximity of the species and presence of suitable habitat on-site, targeted botanical surveys for the species were conducted on multiple occasions during the blooming season. *Diplacus torreyi*, a species visually similar to *E. filicaulis* was found on moist, south facing slopes of the project site and multiple individuals were keyed using the Jepson manual and all were confirmed to be *D. torreyi*. No *E. filicaulis* were found, however, given the changing post-fire landscape, the potential for future occupation of the site by this species cannot be ruled out. Elimination of a population of this species could result in a *significant* impact on the status of the population.

Significance without Mitigation: Significant.

Impact BIO-1.14: The project has the potential, through habitat modification, to adversely affect the special-status Slender-stemmed monkeyflower (*Erythranthe filicaulis*).

Mitigation Measure BIO-1.14: Implement Mitigation Measure BIO-1.13.

Significance with Mitigation: Less than significant.

Indirect Impacts

Project Lighting and Noise

The proposed emergency helipad would allow for the introduction of helicopters to the project site, which would be new sources of noise and lighting. As the helipad would be used only for emergency response, and its use would therefore be sporadic and infrequent, this is not considered to be a significant impact.

Lighting introduced by the proposed project could alter the activities of nocturnal species that rely on the darkness commonly associated with typical nighttime conditions. Project lighting would be designed to minimize light spillage following Dark-Sky influenced design, through aiming lights downward and by fully shielding lights, and through following the California Title 24 Building Energy Efficiency Standards, including use of high efficiency LED lighting.

As noted previously and due, in part, to the Rim Fire, only marginally suitable habitat remains for many of the nocturnal species that might use the project site around the project edges. Therefore, nocturnal species are more likely to limit their movements to the extreme western and eastern portions of the project site where human activities are limited, vegetative cover exists, and minimal or no lighting is proposed.

Owls and birds are more likely to avoid establishing nests near project structures due to human habitation rather than the presence of light at night. Similarly, many nocturnal species are more unlikely to forego nesting, denning, or roosting in proximity to Highway 120 due to noise and a lack of appropriate habitat rather than lighting.

The most likely species to be affected by the addition of project lighting are bats, because their major food source, insects, are attracted to ultraviolet wavelengths in lights. However, recent studies indicate that some insects attracted to conventional lighting are not attracted to LED lighting because they do not emit UV light.[37] Consequently, some bats are not attracted to LED lighting because their favored food source is not attracted to the lighting. Conversely, some bats thought to be light sensitive are attracted to LED lighting and benefit. In summary, the addition of lighting in association with the project in this particular case and based on the types of species expected to inhabit the site, lighting is not expected to create an adverse impact on special-status or common species in and around the project site. It could, however, benefit some bat species. Therefore, this is a *less than significant* impact.

Food and Trash Enclosures

Unlike the addition of lighting, the presence of food and trash associated with the proposed development may attract nocturnal animals and result in human/animal interactions that could harm either or both and result in the destruction of nuisance animals which is a *significant* impact.

Impact BIO-1.15: The project has the potential to interfere substantially with the movement of native resident wildlife species.

> Mitigation Measure BIO-1.15: Food and Trash Enclosures. Trash shall be stored in an animal-resistant enclosure, or bear shed throughout the life of the project. Trash enclosure design shall be approved by the project biologist prior to installation. The project proponents are encouraged to visit http://www.waste101.com/bear-aware/, or contact Tahoe Truckee Sierra Disposal or a similar entity, for appropriate designs.

[37] Ecology and Evolution, 2016, Experimentally comparing the attractiveness of domestic lights to insects: Do LEDs attract fewer insects than conventional light types?, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5108255/, accessed March 24, 2020.

This measure shall be implemented prior to issuance of an occupancy permit. The measure is the responsibility of the construction contractor. A Notice of Action shall be filed with the County Clerk on the project parcels including the project conditions specifying that this measure shall be continued throughout the life of the project.

Significance with Mitigation: Less than significant.

BIO-2	**The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Riparian Habitat or Other Sensitive Natural Communities

The project site lacks suitable habitat characterized by shrubby or dense riparian vegetation. The nearest riparian habitat exists in a steep drainage primarily off-site touching the corner of the project site through open space (i.e., land designated for preservation on-site). Therefore, the proposed project would not result in a significant adverse effect on riparian habitat and the impact would be *less than significant*.

Both freshwater marsh and seasonal wetlands, which are considered sensitive habitats, are present on the project site; impacts on these features are addressed under impact discussion BIO-3, below.

Significance without Mitigation: Less than significant.

Non-Native and Invasive Plant Species

One species on the project landscaping plan (Cotoneaster) is listed by the California Invasive Plant Council as an invasive species.[38] Several non-native, invasive plant species occur in the California annual grassland and mixed hardwood conifer forest habitats located throughout the project site (non-native species are listed in Appendix B of the project biological study in Appendix D of this Draft EIR). Invasive species can spread quickly and can be difficult to eradicate and many non-native, invasive plant species produce seeds that germinate readily following disturbance. The project site experienced heavy disturbance through the 2013 Rim Fire, which left the mixed hardwood conifer forest burned, leaving the area highly susceptible to colonization by non-native, invasive species that occur locally, or whose propagules are transported by vehicles, personnel, and other equipment. Activities such as trampling, equipment staging, and vegetation removal are all factors that would contribute to disturbance. Areas of disturbance could serve as the source for promoting the spread of non-native species, which could degrade the ecological values of sensitive communities, which include riparian, woodland, and wetlands, and adversely affect native plants and wildlife that occur there. Invasive species can have an adverse effect on native species and habitats in several ways, including by altering nutrient cycles, fire frequency and/or intensity, and hydrologic cycles; by creating changes in sediment deposition and erosion; by dominating habitats and displacing native

[38] California Invasive Plant Council, https://www.cal-ipc.org/plants/profile/cotoneaster-franchetii-profile/, accessed March 31, 2020.

species; by hybridizing with native species; and by promoting non-native animal species.[39] This would be a *significant* impact.

Significance without Mitigation: Significant.

Impact BIO-2: The project has the potential to spread invasive plant species.

Mitigation Measure BIO-2: Minimize the spread of invasive plant species through the following:

- The project landscaping planting palette shall be revised to ensure that all plantings are non-invasive species.
- All hay, straw, hay bales, straw bales, seed, mulch or other material used for erosion control on the project site shall be free of noxious weed seeds and propagules (Food and Agriculture Code Sections 6305, 6341 and 6461).
- All equipment brought to the project site shall be thoroughly cleaned of all dirt and vegetation prior to entering the site to prevent importing noxious weeds and shall be cleaned of all dirt and vegetation prior to exiting the site to prevent exporting noxious weeds. (Food and Agriculture Code Section 5401).
- All material brought to the site, including rock, gravel, road base, sand, and topsoil, shall be free of noxious weeds and propagules. (Food and Agriculture Code Sections 6305, 6341 and 6461).

Significance with Mitigation: Less than significant.

BIO-3	**The project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

Wetlands are a subset of waters of the U.S. jurisdictionally under the CWA. Wetlands, as defined by the Corps for regulatory purposes, are identified using a three-parameter test that considers whether hydrophytic vegetation, hydric soils, and wetland hydrology are present.[40]

In a typical year, an ephemeral tributary has flowing water only during and for a short duration after precipitation events. Ephemeral tributary beds are located above the water table year-round and groundwater is not a source of water for the tributary; rather, runoff from rainfall is the primary source of water for tributary flow. An intermittent tributary has flowing water during certain times of the year, in particular, when groundwater provides water for tributary flow. During dry periods, intermittent

[39] Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds., 2000, Invasive Plants of California's Wildlands. University of California Press, Berkeley, California.

[40] US Army Corps of Engineers, 1987, Corps of Engineers Wetlands Delineation Manual, https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf, accessed February 26, 2020.

tributaries may not have flowing water, while runoff from rainfall during a wet year is a supplemental source of water for stream flow. A perennial tributary has flowing water year-round during a typical year.[41]

The aquatic study area is identified in Figure 4.3-4 and excludes established open space areas, such as protection areas, already incorporated in the project. Therefore, the potential perennial drainage located in the southeastern-most tip of the project is not included within the wetland delineation.

Before beginning the study, the National Wetlands Inventory (NWI) online map was consulted and did not identify any aquatic features within the project boundaries.[42] The nearest NWI mapped aquatic feature is a Freshwater Emergent Wetland (FEW) located outside of the project boundaries, approximately 300 feet to the northwest.

Based on site visits three ephemeral channels totaling .004 acre were identified within the project boundaries.[43] Federal regulations applying to ephemeral drainages are currently being updated. For the purposes of the analysis within this document, all three drainages are considered potential waters of the U.S. However, the project would be required to comply with federal CWA regulations in effect at the time of site disturbance. No wetlands were identified on the project site.

A detailed evaluation of waters pursuant to the current waters of the U.S. definition and their potential jurisdiction under Section 404 of the CWA (33 U.S.C. 1344) is found in the project wetland delineation (see Appendix E).

Ephemeral Channel 1 (EC-01): EC-01 begins in the northwest corner of the project site. Flow in the channel is ephemeral and the primary source of hydrology is precipitation runoff from surrounding uplands. During storms, water in EC-01 flows to the northwest through a culvert beneath a gravel road as it leaves the project boundaries. The USGS Ascension Mountain quad map (photo-inspected 1992) shows a spring located outside the project boundaries, 300± feet to the north (the same off-site aquatic feature shown in the NWI map). On the quad map, the spring flows into an unnamed perennial channel that flows northwest into the Middle Tuolumne River and, based on topography, EC-01 also would be expected to flow into the same off-site perennial channel 300± feet north of the project boundaries and subsequently to the Middle Fork Tuolumne River.

Ephemeral Channel 2: EC-02 occurs immediately east of the intersection of Sawmill Mountain Road and State Highway 120 along the southern edge of the project site. Flow in the channel is ephemeral and the primary source of hydrology is precipitation runoff from surrounding uplands and paved roads. Runoff concentrates as it enters the culvert beneath Sawmill Mountain Road, resulting in a defined channel at the culvert outlet. During storms, water travels 58± feet east before exiting the project to the south through a culvert beneath State Highway 120. The USGS Ascension Mountain quad map shows a spring or seep located off-site, 500± feet south and downslope of the project site. Water in EC-02 flows to the southeast

[41] Federal Register, 2002, https://www.govinfo.gov/content/pkg/FR-2002-02-13/pdf/02-3683.pdf, accessed February 26, 2020.

[42] United State Fish and Wildlife Service, 2020, National Wetlands Inventory, https://www.fws.gov/wetlands/data/Mapper.html, accessed February 26, 2020.

[43] Augustine Planning Associates, Inc., December 2019, Terri Vi Lodge Yosemite Biological Study Report, page 66.

near or through this seep, then into the South Fork Tuolumne River via ponds and interconnected drainages at Hardin Flat.

Ephemeral Channel 3: EC-03 occurs near the southeast corner of the project site. Flow in the channel is ephemeral and the primary source of hydrology is precipitation runoff from surrounding uplands and dirt roads. During storms, water flows 67± feet south before exiting the project site to the south through a culvert beneath State Highway 120. Water then flows southeast along the south side of Hardin Flat Road into a series of ponds and interconnected drainages at Hardin Flat before entering the South Fork Tuolumne River.

In summary, there is 0.004 acre of potential waters of the U.S. in the project boundaries with no wetlands. All waters of the U.S. originate as surface runoff and, therefore, do not rely on groundwater and would not be impacted by well-drilling on-site (see Table 4.3-4).

Aquatic features pursuant to the 2015 Clean Water Rule (33 CFR 328.3) are listed in Table 4.3-5.

TABLE 4.3-4 SUMMARY OF JURISDICTIONAL WATERS

Feature[a]	Hydrology	Cowardin Code[b]	Length (feet)	Avg. Width (feet)	Area[c] (acres)
Ephemeral Channel 1	Ephemeral	R6	74	1	0.002
Ephemeral Channel 2	Ephemeral	R6	58	1	0.001
Ephemeral Channel 3	Ephemeral	R6	67	1	0.001
		Total Waters:	**199**	**--**	**0.004**

Notes:
a. Feature names are described and mapped in the project wetland delineation (see Appendix E).
b. Codes are from the Classification of Wetlands and Deepwater Habitats of the United States (Cowardin 1979).
c. Dimensions and acreages were calculated with ESRI ArcMap functions and pertain only to portions of features in the BSA.
Source: Augustine Planning Associates, Inc., December 2019, Terri Vi Lodge Yosemite Biological Study Report, page 68.

TABLE 4.3-5 REGULATORY SUMMARY

Feature	33 CFR 328.3 Classification	Significant Nexus[1]	Waters of the U.S.	Non-Jurisdictional Waters
Ephemeral Channel 01	(a)(5) – Tributary	–	0.002	–
Ephemeral Channel 02		–	0.001	–
Ephemeral Channel 03		–	0.001	–
Total		–	0.004	0

[1] A "significant nexus" analysis only applies to 33 CFR 328.3(a)(7) or (8) waters, none of which occur in the BSA.
Source: Augustine Planning Associates, Inc., December 2019, Terri Vi Lodge Yosemite Biological Study Report, page 69.

Potential impacts to State or federally protected wetlands, for which mitigation measures are required include:

- Ephemeral Channel 1 is in the extreme northwestern corner of the site where no site alterations are planned. However, should site preparation work or staging occur in the vicinity, the potential exists to inadvertently alter the channel, a *significant* impact.
- Improvements to the intersection of Highway 120 and Sawmill Mountain Road could require enlargement of the encroachment and require fill of Ephemeral Channel 2, a *significant* impact.
- Ephemeral Channel 3 is located within established open space boundaries where no site alterations are anticipated. However, mitigation is necessary to ensure that no site alterations or staging inadvertently occur within the existing open space boundaries, and that site runoff does not impact the drainage within the open space. This is considered a *significant* impact without mitigation.
- For all drainages and on-site open space, the introduction of machinery and construction materials to the site has the potential to introduce non-native invasive species. Construction has the potential to generate silt-laden runoff that could enter off-site drainages and open space indirectly impacting water quality—a *significant* impact.

Significance without Mitigation: Significant.

Impact BIO-3.1: The project has the potential to degrade waters of the U.S. indirectly by degrading water quality through construction activities.

Mitigation Measure BIO-3.1: Install Temporary Environmentally Sensitive Area (ESA) Fencing to Protect Sensitive Drainages during Construction Activities that Disturb Soils. Prior to issuance of grading permits, the project contractor shall implement the following:

- Install high-visibility/ESA fencing (e.g., orange construction safety fencing) a minimum of 50 feet from the centerline of both sides of Ephemeral Channel-1 (Northwest corner of the project site) during any time when disturbing soils within 50 feet of the drainage channel (fencing is not required when soil disturbances are not occurring so long as erosion control from any prior soil disturbances within 50 feet has been installed). Fencing shall be of flexible material that allows for deer passage. Install silt fencing, fiber rolls, or equivalent erosion and sediment control devices on the project side of the ESA fencing to prevent disturbances and erosion into the adjacent drainage. Silt fencing or other materials, as required, shall be installed consistent with the applicable water quality requirements specified in the project's Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP). Fencing or other erosion control materials or devices shall be shown on the final construction documents.
- No construction-related materials, equipment, trash or other related debris shall be allowed, stored or staged within the fenced area. ESA Fencing shall remain in place until soil disturbances within 50 feet have been completed and erosion control measures have been installed in accordance with approved plans. Fallen fencing shall immediately be repaired as necessary to remain visible during all construction activities.
- Fenced areas shall be avoided throughout project construction (i.e., active soil disturbing activities) and shall be monitored by the project manager throughout construction.

- This measure shall be incorporated into the project bid package and contract.
- All ESA Fencing shall be removed from the site after construction activities are completed.

Significance with Mitigation: Less than significant.

Impact BIO-3.2: The project has the potential to fill waters of the U.S. totaling 0.001 acre.

Mitigation Measure BIO-3.2: Comply with Section 404 of the federal Clean Water Act. Within the Caltrans right-of-way, the applicant shall secure an encroachment permit from Caltrans and comply with all conditions of the Caltrans encroachment permit including the following as it applies to Ephemeral Channel-2:

- Prior to issuance of grading permits, comply with Section 404 and Section 401 of the Clean Water Act and comply with all current regulations (i.e., at the time of disturbance) pertaining to fill of Ephemeral Channel-2 (0.001 acre).
- If regulations in place at the time of site disturbance require permits from the USACE for filling an ephemeral drainage: the acreage, location, and method(s) for compensation for fill shall be determined during the permitting process in accordance with USACE standards. The project shall adhere to a "no net loss" standard for waters of the U.S. and waters of the State. Suitable habitat shall be restored, enhanced, and/or replaced at an acreage and location and by methods approved by the USACE and Central Valley Regional Water Quality Control Board, as jurisdictionally appropriate. The replacement of waters will be equivalent to the nature of the habitat lost and will be provided at a suitable ratio to ensure that, at a minimum, there is no net loss of habitat acreage or value. The replacement habitat will be set aside in perpetuity for habitat use.
- Compensation may also include purchasing credits from a Corps and/or state or federally approved mitigation bank at a ratio prescribed in the applicable Section 404 Permit as necessary to achieve no net loss of waters of the U.S. For waters of the state, compensation may be through the National Fish and Wildlife Foundation Sacramento District California In-Lieu Fee Program.
- Alternatively, if final project plans allow for full avoidance and no fill of Ephemeral Channel 2 pursuant to the determination of the project's wetlands biologist; Mitigation Measures BIO-3.1 and BIO-3.2 may be substituted to ensure avoidance.
- This measure shall occur prior to issuance of grading permits. All permit provisions shall be implemented and maintained in accordance with the applicable permits.

Significance with Mitigation: Less than significant.

Impact BIO-3.3: The project has the potential to adversely impact waters of the U.S. indirectly by degrading water quality through construction activities.

Mitigation Measure BIO-3.3: Best Management Practices (BMPs) to Protect Water Quality (Including NOI/NPDES/SWPPP). Prior to issuance of grading permits, the project contractor shall implement the following:

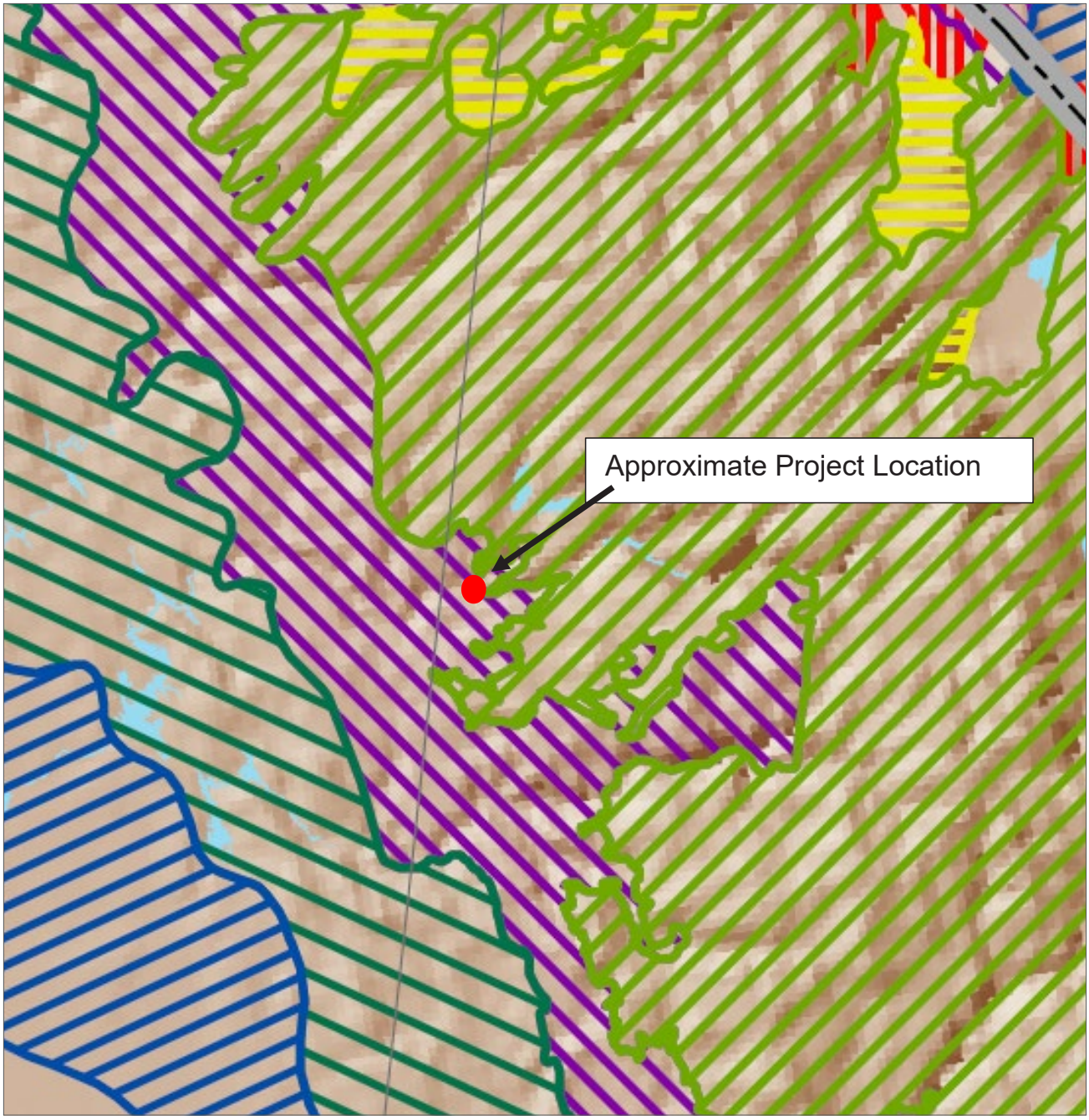
- Prepare an Erosion Control Plan for implementation for any construction to take place between October 15 and May 15 of any year. In the absence of such an approved plan, all construction shall cease on or before October 15, except that necessary to implement erosion control measures. If necessary, the plan shall be submitted to the County Public Works Department for review and approval.
- Submit to the State Water Resources Control Board Storm Water Permitting Unit, a Notice of Intent (NOI) to obtain coverage under the General Construction Activity Storm Water Permit-California's National Pollution Discharge Elimination System (NPDES) general permit for construction related storm water discharges for the disturbance of one acre or more. Disturbances of less than one acre may also require an NOI for coverage under the NPDES General Permit for construction-related storm water discharge and the State Water Resources Control Board Permitting Unit shall be contacted for determination of permit requirements. Commercial and Industrial developments may require an NOI even if less than one acre is to be disturbed. Obtain coverage or an exemption from these requirements. [Federal Water Pollution Control Act, Section 401, California Clean Water Act]. The permit may include preparation of a Stormwater Pollution Prevention Plan (SWPPP).
- This measure shall be incorporated into the project bid package and contract.

Significance with Mitigation: Less than significant.

BIO-4	**The project could interfere with the movement of a 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.**

The project site is within the range of mule deer (*Odocoileus hemionus californicus*), a species belonging to the Yosemite Deer Herd. In general, elevations below 4,500 feet amsl are considered winter range for the species. The site's elevation ranges between approximately 3,800 and 4,100 feet and, therefore, is within the deer winter range (see Figure 4.3-5). Members of native deer herds are less tolerant of humans and more easily disturbed by them, unlike year-round resident deer populations at lower elevations. Areas of known importance to the Yosemite Deer Herd for wintering within 5 miles of the general project vicinity include: Sawmill Mountain; Spinning Wheel area; Gravel Range, Big Creek Basin, Packard Canyon; and Pilot Ridge.[44] Figure 4.3-6 illustrates the location of the project site in proximity to the nearest known wintering deer concentration areas for the Yosemite Deer Herd: Sawmill Mountain, Pilot Ridge, and the Gravel Range.

[44] CDFW Deer Management Program, Zone D-6 2014 and 2019 Deer Hunting Information



Limited Range: Includes habitat which are occasionally inhabitated and/or contain small population of scattered mule deer.

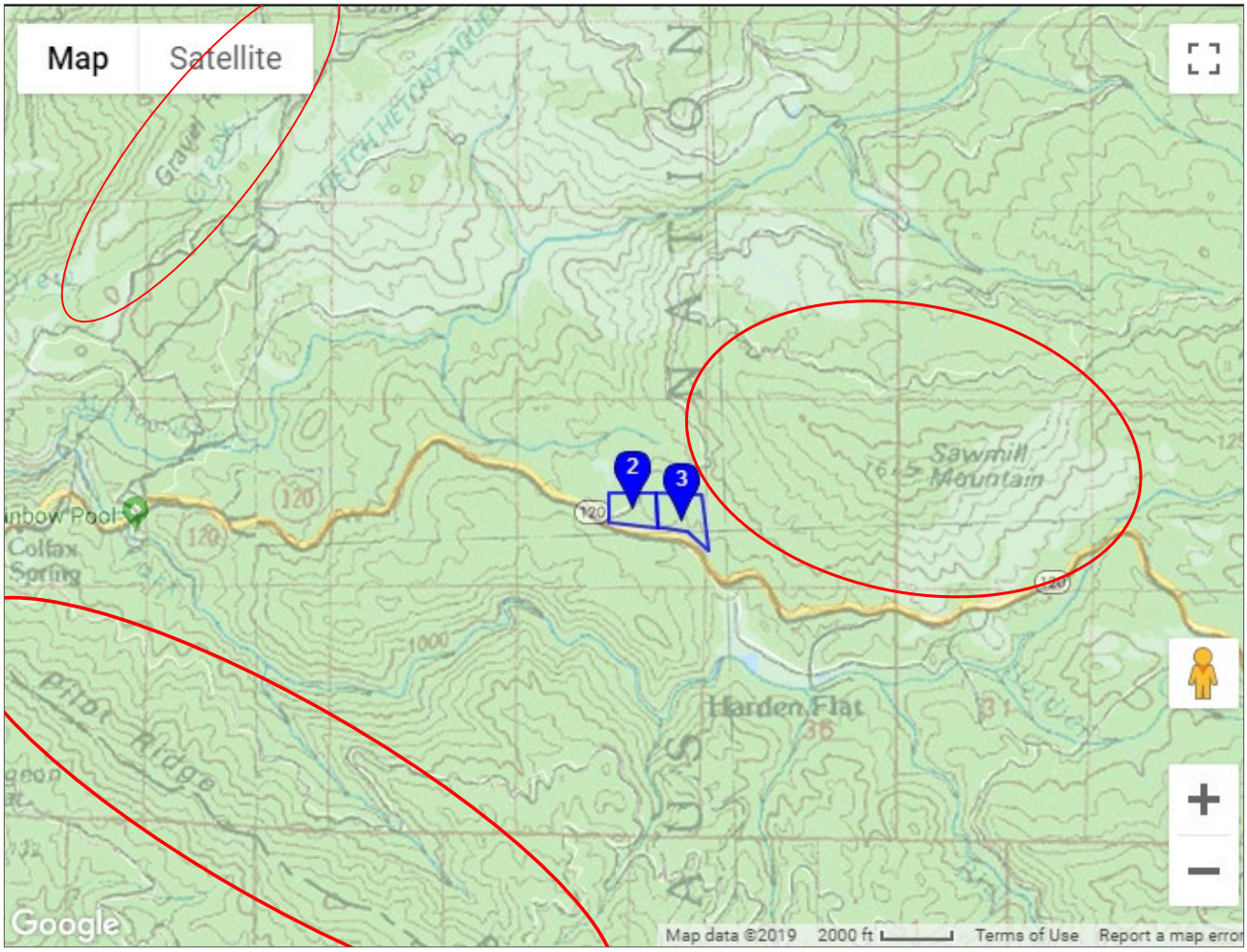
Year-round Population: An area that provides year-round range for a population of mule deer. The resident mule deer use all of the area all year; it cannot be subdivided into seasonal ranges although it may be included within the overall range of the larger population.

Summer Range: That part of the overall range where 90% of the individuals are located between spring green-up and the first heavy snowfall.

Winter Range: That part of the overall range where 90 percent of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site-specific period of winter. A subset of this definition would include a "severe winter range" definition to include areas within the winter range where 90% of the individuals are located when annual snow pack is at its maximum and/or temperatures are at a minimum in the two worst winters our of ten.

Source: Hansji Corporation, 2019. Remote Sensing and GIS Laboratory, Mule Deer of the Western United States. 2005. Utah State University, Logan, Utah. http://www.gis.usu.edu

Figure 4.3-5
Mule Deer Habitat of the Western U.S.



Source: Hansji Corporation, 2020.

0 4,000
Scale (Feet)

Approximate Project Site Boundary

Figure 4.3-6
Mule Deer Winter Concentration Areas Surrounding the Project Site

Figure 4.3-7 identifies known population centers of the Yosemite Deer Herd (non-wintering). Deer may begin migrating to lower elevations from summer to winter ranges through historic corridors near mid-October. The Management Plan for the Yosemite Deer Herd tracked deer movements and identified migration routes as well as holding areas for the herd as they move from summer to winter ranges.[45] These deer corridors are shown in Figure 4.3-8.

Based on the mule deer migration habits, the project site has the potential to be wintering grounds and/or provide a movement corridor for the Yosemite Deer Herd as the species migrates between known population centers and wintering grounds. The following section evaluates the site's importance as both wintering habitat and as a corridor.

Mule Deer Wintering Habitat

Characteristics of deer winter range suited to winter survival are warm southern openings (including lava cap areas), stands of brush (particularly areas vegetated with different age classes and species of brush), stands of mature oak, stands of large conifers (to escape from storms and cold wind), and available water. In general, the more diverse the habitat composition, the better the winter range. The most critical survival period for wintering mule deer is approximately November 30th through April 30th.[46,47]

The CDFW provides a model of Mule Deer Habitat suitability. Per the CDFW model, the site has moderate habitat suitability for mule deer (see Figure 4.3-9). Based on the dates of vegetative layers used, the values were assigned post Rim Fire.[48]

Post-Rim Fire, the project site no longer contains stands of mature oaks or large conifers; the site also lacks available water. The current post-fire vegetative condition does include some brush, but of a uniform age class. Based on the desirable habitat components of deer winter range and the results of the CWHR model, the site has moderate value to the deer herd, but does not provide high value/critical winter habitat for mule deer.

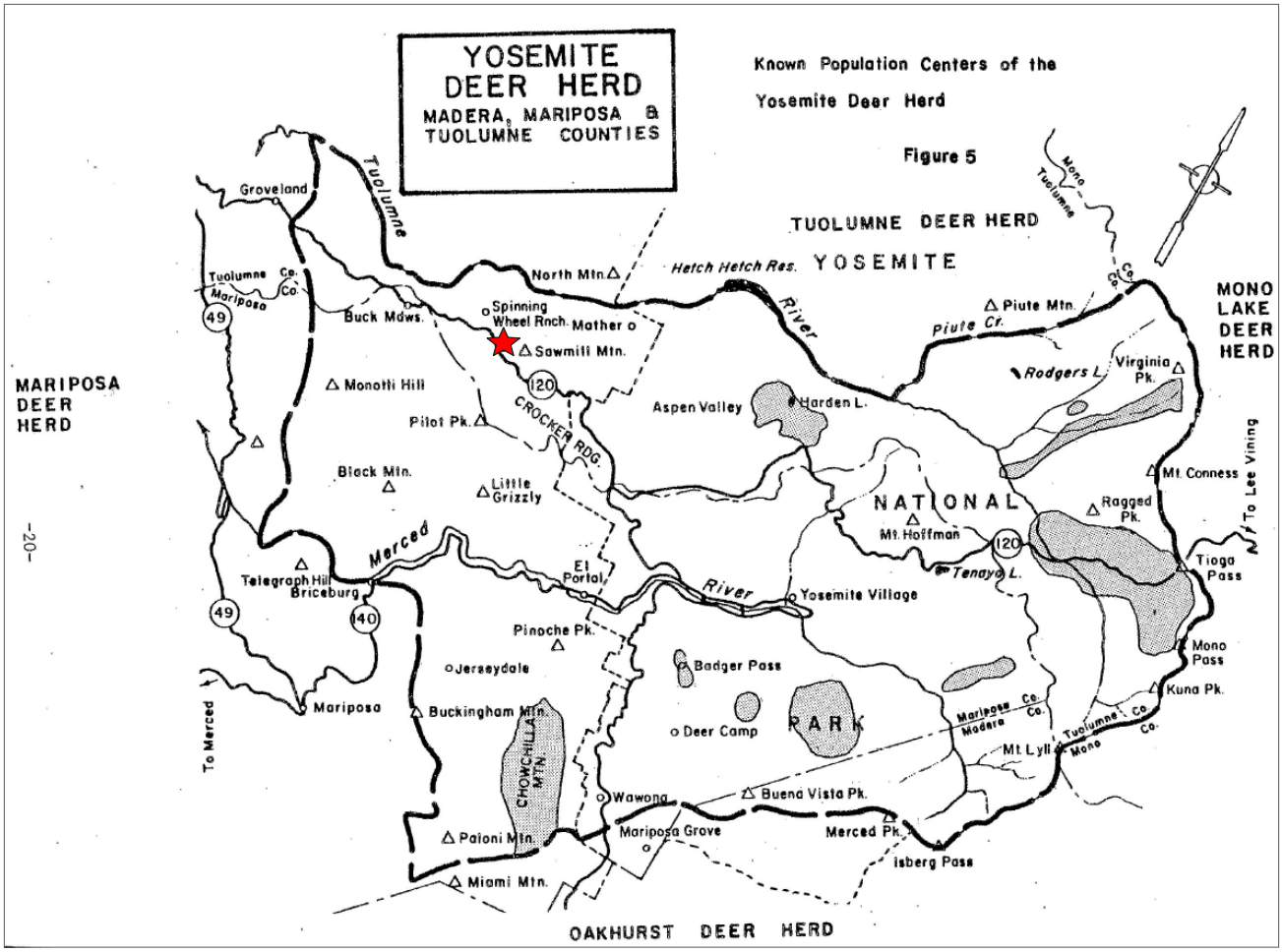
Highway 120 to the south further reduces the habitat value, because it presents a barrier to dispersal for the species. To the north of the project site, there are minimal dispersal barriers, with exception to some scattered private inholdings developed within residences.

[45] CDFG, USDA, YNP, 1981, Management Plan for the Yosemite Deer Herd. P. 1-44.

[46] Mule Deer Working Group, 2007, Habitat Guidelines for Mule Deer California Woodland Chaparral Ecoregion, Western Association of Fish and Wildlife Agencies.

[47] Mule Deer Working Group, 2016, Winter Range Disturbance Fact Sheet #17, sponsored by the Western Association of Fish and Wildlife Agencies with support from the Mule Deer Foundation.

[48] California Department of Fish and Wildlife BIOS, 2017, Mule Deer Predicted Habitat, https://apps.wildlife.ca.gov/bios/, accessed February 28, 2020.

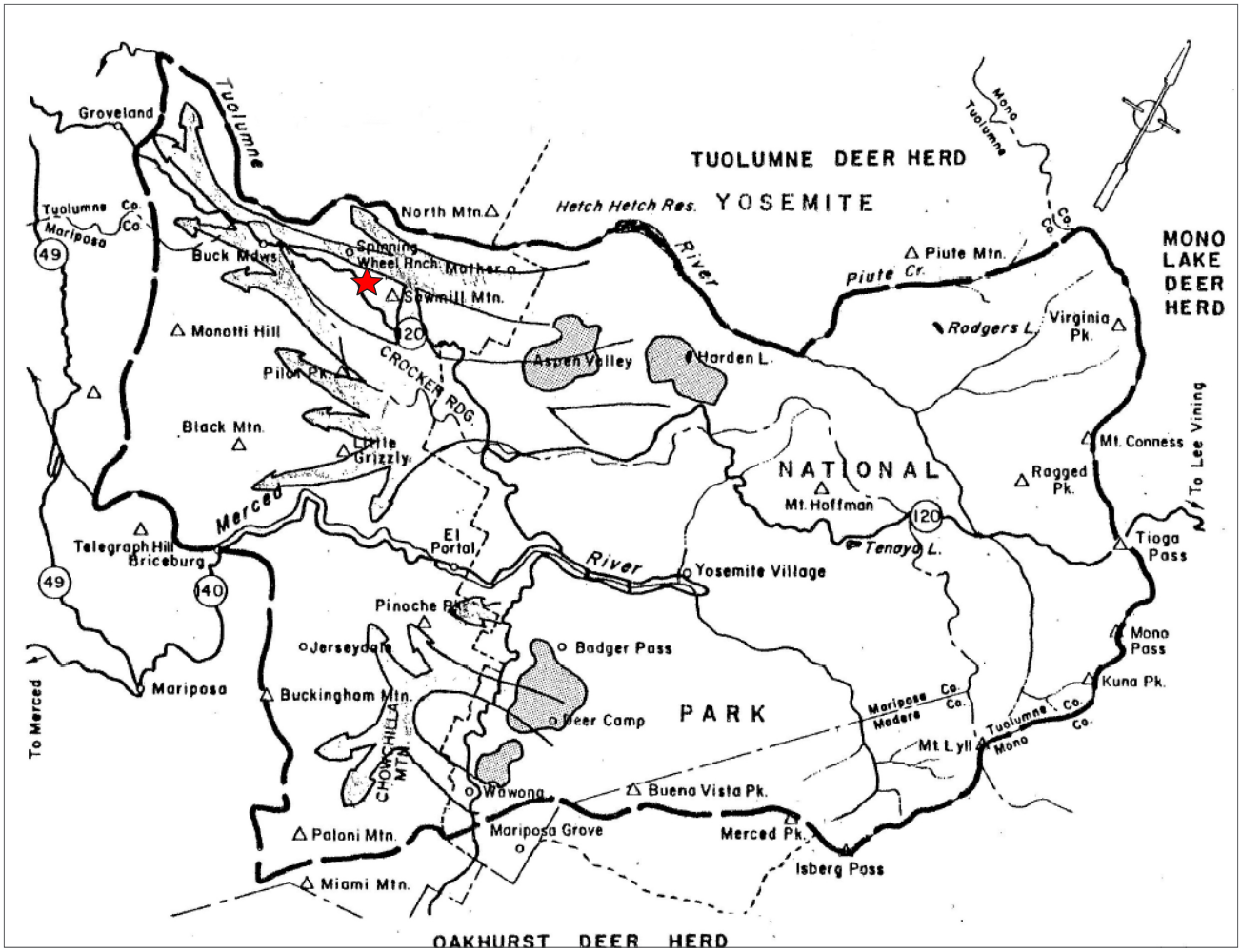


Source: Hansji Corporation, 2020.

Approximate Project Site

Figure 4.3-7

Yosemite Deer Herd Concentration Areas (Non-Winter) – 1981

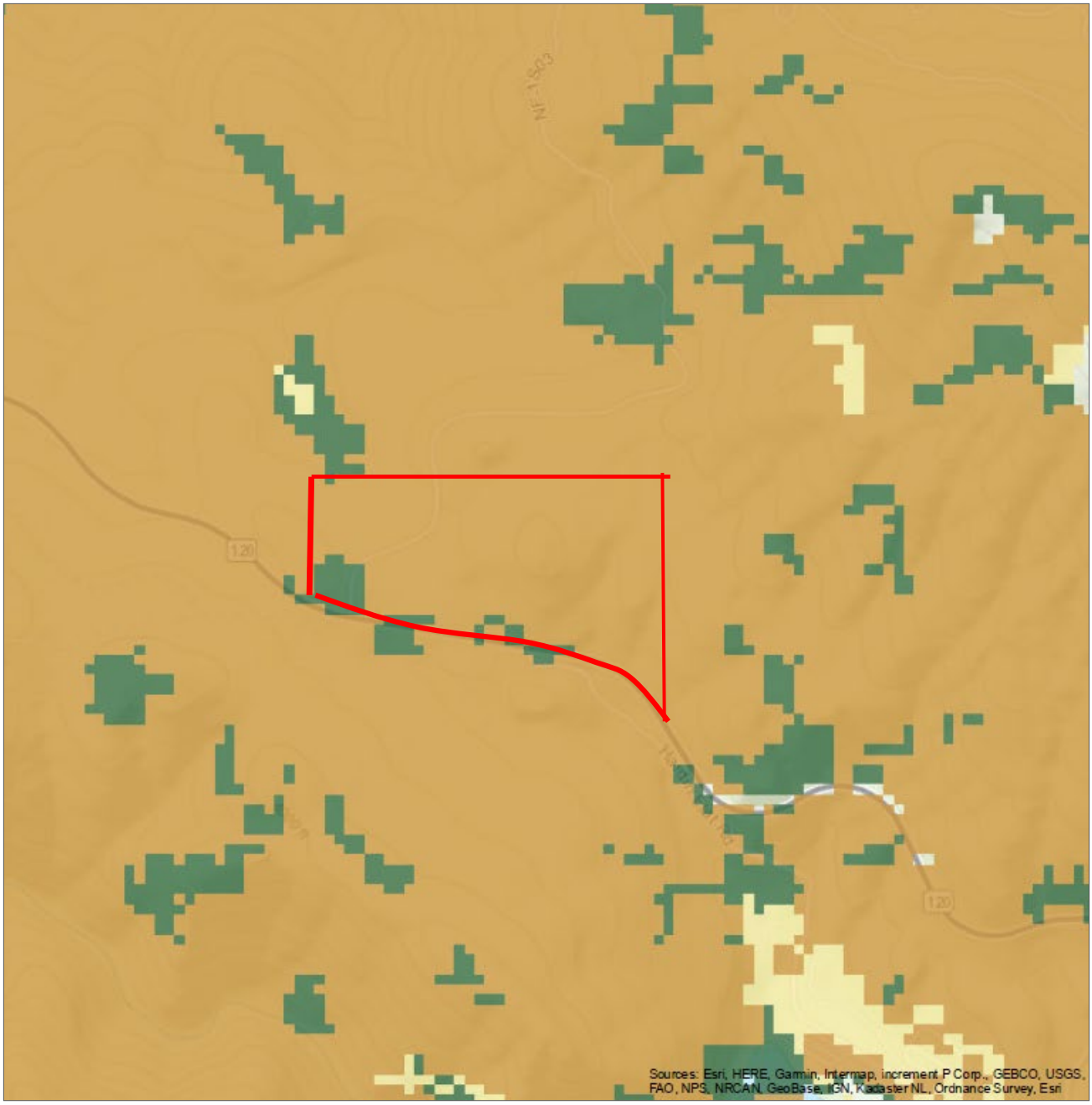


Source: Hansji Corporation, 2020.

★ Approximate Project Site

Figure 4.3-8

Migration Routes (Summer to Winter Range) and Holding Areas Yosemite Deer Herd (1981)



Source: Hansji Corporation, 2020.

0 .3
Scale (Miles)

Mule Deer Predicted Habitat

- Low
- Medium
- High

Approximate Project Site

Figure 4.3-9
Mule Deer Predicted Habitat

However, post Rim Fire, the removal of even moderate value winter habitat for mule deer may have an incremental indirect impact on the species given the combination of the impacts of the Rim Fire, the addition of people and pets, project-associated increases in traffic, and additional developments proposed in the area. It is estimated that the project may leave approximately 43.4 acres as no longer able to regenerate naturally due to the proposed development, based upon the project acreage of approximately 64 acres minus acreage within the existing Open Space Zoning District to be retained in its natural state and estimated at approximately 20 acres. This would be a *significant* impact.

Numerous groups exist that are undertaking Rim Fire restoration activities, including deer habitat enhancement activities, such as Yosemite Stanislaus Solutions, which consists of a wide variety of local county stakeholders including environmental organizations, business leaders, as well as the timber industry, while others are seeking funding to improve data on deer movements, ranges, and holding areas. Another group, the Rim Fire Technical Team includes representatives from national and state environmental organizations, other government entities with a vested interest, and the timber industry. Other groups involved with Rim Fire restoration activities include the Central Sierra Environmental Resource Center (CSERC), Tuolumne Band of Me-Wuk Indians, Sierra Club, CDFW, Audubon Society, logging companies, sawmills, Tuolumne County Supervisors, and Sierra Nevada Conservancy.[49] Project support for these wildlife-focused activities could directly contribute to improving the management of mule deer and assist in off-setting impacts that are associated with the project. Plantings incorporated as part of the Granite Planting for Rim Fire reforestation were estimated at approximately $2,000 per acre.[50] It is assumed that reforestation efforts aim to achieve high value habitat rather than moderate value habitat. Therefore, to offset impacts of moderate value habitat, it is estimated that restoration planting costs would be approximately half ($1,000 per acre) that cost plus a 10 percent inflator for planning and environmental, for a total per acre cost of approximately $1,100. Alternatively, using such funding to update data on deer movements and land use patterns in the area could significantly improve deer herd management strategies. Funding would be allocated towards studies conducted by groups or organizations already involved with Rim Fire restoration activities, as those described previously within this section.[51]

Significance without Mitigation: Significant.

Impact BIO-4.1: The project has the potential to indirectly interfere with the movement of native resident mule deer traveling to and from winter range through the introduction of additional people, pets and traffic.

> Mitigation Measure BIO-4.1a: Enhance Rim Fire Burned Deer Winter Range and/or Data. Prior to issuance of a certificate of occupancy, the project proponents shall contribute $1,100 per acre for approximately 43.4 acres to a non-profit (e.g., Yosemite Stanislaus Solutions) to be used for activities

[49] United States Department of Agriculture, 2016,Rim Fire Reforestation Environmental Impact Statement, Pg. 15, available online at https://www.fs.usda.gov/nfs/11558/www/nepa/100111_FSPLT3_3034971.pdf, accessed March 29, 2020.

[50] Tuolumne County, 2019, Natural Resource Committee, February 26, 2019, available online at https://www.tuolumnecounty.ca.gov/AgendaCenter/ViewFile/Agenda/_02262019-1338, accessed March 29, 2020.

[51] United States Department of Agriculture, 2016,Rim Fire Reforestation Environmental Impact Statement, Pg. 15, available online at https://www.fs.usda.gov/nfs/11558/www/nepa/100111_FSPLT3_3034971.pdf, accessed March 29, 2020.

associated with either enhancing deer winter range or providing updated research data to support herd management within the footprint of the Rim Fire.

Mitigation Measure BIO-4.1b: Keep Dogs Leashed. The project sponsor shall implement the following:

- Dogs shall be kept on leash or otherwise prohibited from running free outdoors. Signs shall be posted along all project trails stating that dogs shall be kept on leash.
- The project website, booking site, and/or brochures shall advise visitors of this requirement. A Notice of Action shall be filed with the County Clerk on the project parcels including the project conditions specifying that this measure shall be continued throughout the life of the project.

Mitigation Measure BIO-4.1c: Stay on Trails/Education. The project sponsor shall implement the following:

- Visitors shall be required to stay on designated trails at the project site when hiking within the project boundaries to minimize wintering deer/human interactions. Signs shall be posted along all project trails stating that visitors shall stay on trails and shall not approach deer (in particular between November 30 and April 30 when deer are expected to be migrating to and from their wintering grounds). In consultation with the project biologist, the project proponents shall prepare an interpretive trail sign/plaque or signs/plaques describing the life history of the Yosemite Deer Herd, the area's importance as wintering deer habitat and as a migratory corridor, and the necessity to avoid approaching non-resident deer during their winter migrations.
- The project website, booking site, and/or brochures shall advise visitors of the requirement to avoid approaching non-resident deer during winter migrations.

Significance with Mitigation: Less than significant.

Mule Deer Habitat Connectivity

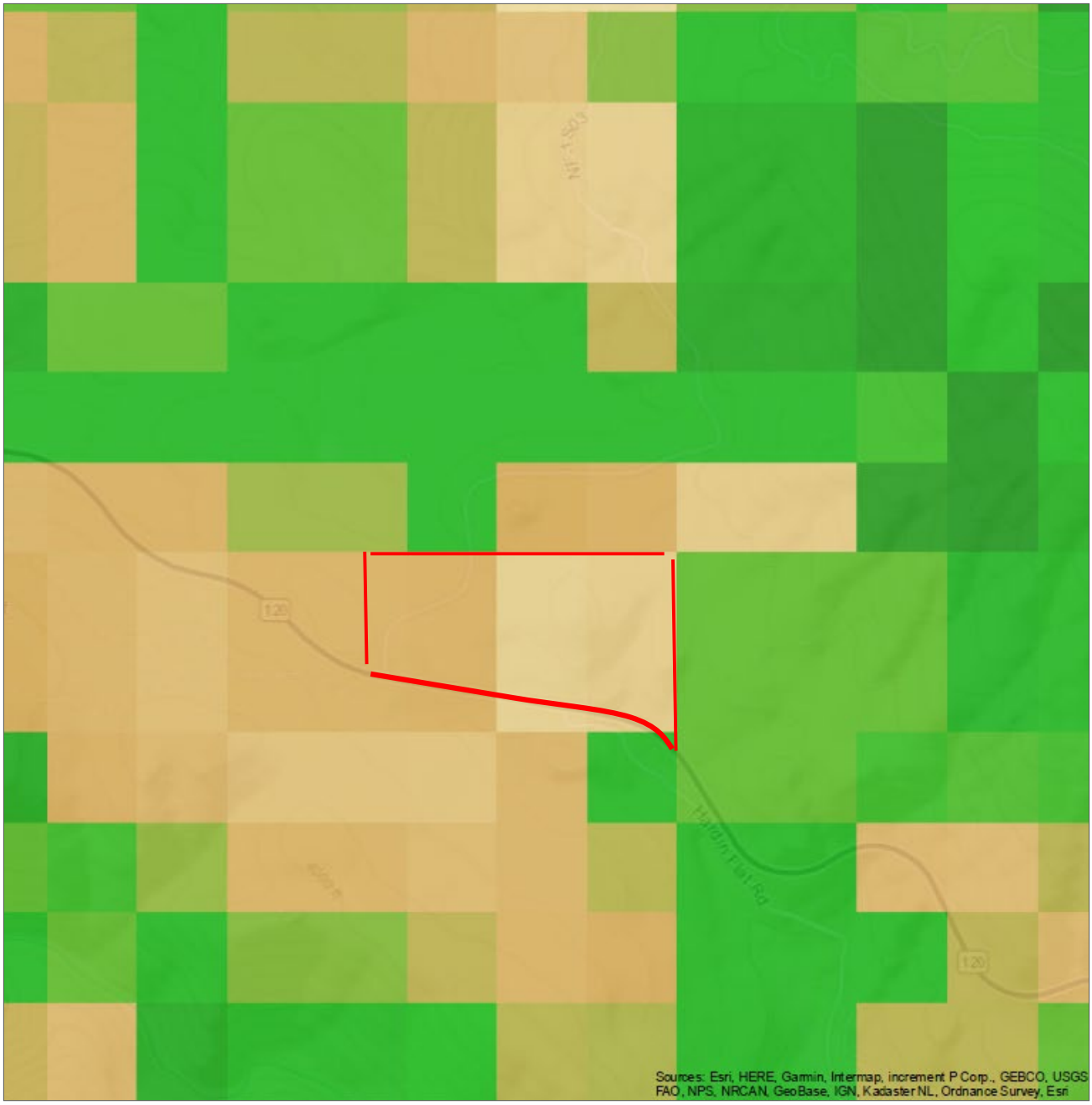
The CDFW provides a model of Mule Deer Habitat suitability for connectivity. The model evaluates vegetation, distance to water, and elevation to predict habitat suitability. The results of the model for connectivity suitability surrounding the project site are shown in Figure 4.3-10. As illustrated, the project site has a low-to-moderate suitability as a deer movement corridor. High value connectivity corridors are located on National Forest and privately held lands north and east of the project site.[52]

Based on the preceding, although the site is not located within a high value deer migration corridor, it may be used by deer passing from summer to winter range.

Increased traffic resulting from the proposed project could increase car versus deer collisions—a potentially significant safety hazard for people as well as deer– a *significant* impact.

Significance without Mitigation: Significant.

[52] California Department of Fish and Wildlife BIOS, 2017, Mule Deer Predicted Habitat, https://apps.wildlife.ca.gov/bios/, accessed February 28, 2020.



Source: Hansji Corporation, 2020.

0 .3
Scale (Miles)

Mule Deer Habitat Model

High : 100

Low : 45.5857

Approximate Project Site

Figure 4.3-10
Deer Connectivity Map

Impact BIO-4.2: If there is fencing associated with the project, it has the potential to trap, injure, or impede deer movements, resulting in deer injuries or fatalities. This would indirectly interfere with the movement of native resident mule deer traveling to and from winter range.

Mitigation Measure BIO-4.2a: Deer-Friendly Fencing. Prior to issuance of a final certificate of occupancy, the project contractor shall implement the following:

- To prevent trapping, injuring, or impeding deer movement; barbed wire fencing is prohibited. Non barb-wired fencing immediately surrounding structures (e.g., storage facilities, swimming pools) where deer are less likely to travel is permitted. Additional Fencing design shall be subject to review and approval by the project biologist following one of the recommended designs found in a Landowner's Guide to Wildlife Friendly Fences: How to Build a Fence with Wildlife in Mind. 2nd edition, 2012 (or as may be updated) by the Montana Dpt. of Fish Wildlife and Parks. Alternative fencing designs shall be approved by CDFW prior to installation.
- A Notice of Action shall be filed with the County Clerk on the project parcels including the project conditions specifying that this measure shall be continued throughout the life of the project.

Mitigation Measure BIO-4.2b: Implement Mitigation Measures BIO-4.1b and BIO-4.1c.

Significance with Mitigation: Less than significant.

BIO-5	**The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Oak Woodlands

The mixed hardwood conifer habitat on-site was largely destroyed by the Rim Fire and, therefore, few oaks remain, although new oaks are sprouting on-site. Oaks currently present on-site include primarily black oaks and live oaks.

California Public Resources Code 21083.4 addresses the conversion of oak woodlands statewide and is used as the applicable threshold of significance herein. Impacts to oak woodlands protected pursuant to PRC 21083.4 shall be considered potentially significant. PRC 21083.4 requires counties, as part of the CEQA process to determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment and, if a county determines that there may be a significant effect to oak woodlands, to mitigate pursuant to the guidelines in that section.[53] Tuolumne County currently does not have a formally adopted program for implementing PRC Section 21083.4; however, Tuolumne County General Plan (2018) Implementation Program 16.B.j. *Establish*

[53] California Legislative Information, 2004, SB-1334 Oak woodlands conservation: environmental quality, http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200320040SB1334, accessed February 28, 2020.

thresholds of significance under the California Environmental Quality Act (CEQA) for the conversion of oak woodlands in Tuolumne County provides guidelines for implementation.[54]

Pursuant to PRC 21083.4 an "oak" is a native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is five inches or more in diameter at breast height. [55][56] For Tuolumne County, that includes all native species of *Quercus* occurring in the county, excepting California black oak (*Quercus kelloggii*)—a designated commercial species.

Therefore, oak woodlands composed of the following in pure or mixed stands are subject to PRC 21083.4: Canyon live oak (*Quercus chrysolepis*), live oak (*Quercus wislizeni*), scrub oak (*Quercus berberidifolia*), Oregon oak (*Quercus garryana*), blue oak (*Quercus douglasii*), Valley oak (*Quercus lobata*) and other native oaks. An oak woodland is a group of these trees with a canopy cover of at least 10 percent encompassing at least two acres. [57][58]

Because of destruction resulting from the Rim Fire, the original oak species make-up of the mixed hardwood conifer canopy is unknown. Based on sprouting oaks, the species were primarily black oak (exempt from PRC 21083.4), live oak (*Q. wislizeni*) and Canyon live oak (*Q. chrysolepis*). Today, scattered black oaks in excess of five inches dbh exist on-site. A limited number of live and Canyon live oak in excess of five inches dbh remain; however, a majority of these are located within the existing Open Space Zoning District where they will remain protected and in the northwestern portion of the project site where no development is proposed. Therefore, the remaining oak canopy does not meet the standards requiring mitigation pursuant to PRC 21083.4.[59] Given the destruction of native oaks on the site due to the Rim Fire, it is recommended, but not required, that landscaping plans for the project incorporate native plants, including native oaks.

Damage to individual native oaks being retained on-site may occur as a result of storing spoils, construction materials, or heavy equipment within the driplines of individual oaks. This would be a *significant* impact.

Significance without Mitigation: Significant.

[54] Tuolumne County General Plan, 2018, Volume I: General Plan Policy Document, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11266/Vol-I-Goals-Policies-Programs, accessed February 28, 2020.

[55] California Legislative Information, 2004, SB-1334 Oak woodlands conservation: environmental quality, http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200320040SB1334, accessed February 28, 2020.

[56] California Legislative Information, 1973, https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=4.&title=&part=2.&chapter=8.&article=2., accessed February 28, 2020.

[57] California Legislative Information, 2004, SB-1334 Oak woodlands conservation: environmental quality, http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200320040SB1334, accessed February 28, 2020.

[58] University of California Agriculture and Natural Resources, 2008, *Oak Woodland Impact Decision Matrix*, https://ucanr.edu/sites/oakplanner/files/71734.pdf, accessed February 25, 2020.

[59] California Legislative Information, 2004, SB-1334 Oak woodlands conservation: environmental quality, http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200320040SB1334, accessed February 28, 2020.

Impact BIO-5.1: The project has the potential to conflict with Public Resources Code 21083.4 related to oak tree protection.

Mitigation Measure BIO-5.1a: Implement Mitigation Measure BIO-1.1b.

Mitigation Measure BIO-5.1b: Native Oak Tree Protection. Throughout project construction, for native oak trees greater than 5 inches diameter at breast height (DBH), to be retained, to the maximum extent feasible:

- Limit ground-disturbing activities to outside the dripline of native oaks and preferably outside 1-1/2 times the dripline.
- No storage equipment, supplies, vehicles, debris, construction wastewater, paint, stucco, concrete or any other clean-up waste, and temporary or permanent structures shall be placed within the driplines.
- Avoid cutting oak roots.
- Use boring, rather than trenching, within driplines.
- Avoid equipment damage to limbs, trunks, and roots of oaks trees.
- Do not attach signs, ropes, cables or other items to trees.

Significance without Mitigation: Less than significant.

Open Space Zoning

Tuolumne County has, in the past, used the 1987 Tuolumne County Wildlife Handbook to guide mitigation for biological resources.[60] The Wildlife Handbook indicates that open space zoning shall be used on sites that are of value to wildlife. Typically, the Wildlife Handbook recommends that up to 20 percent of a site be preserved as open space; the exact amount varies based on habitat quality and mitigation measures. Approximately 21 acres of the eastern project site parcel (APN 068-120-061) are within the O (Open Space) Zoning District; the area within the Open Space Zoning District represents approximately one third of the total project site.

The proposed project would not require a rezoning or place any new development within the area of the site within the Open Space Zoning District. The only project activities that would occur within the Open Space Zone are vegetation management for the purpose of wildfire hazard reduction and maintenance of the existing trail that runs through this area. Although the proposed project does not include development within the Open Space Zoning District, mitigation is recommended to ensure that project construction does not adversely affect the land within the Open Space Zoning District. Therefore, this impact is considered to be *significant*.

Significance without Mitigation: Significant.

[60] Tuolumne County Wildlife Project, 1987, Wildlife Handbook, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/206/Wildlife-Handbook?bidId=, accessed February 28, 2020.

Impact BIO-5.2: Although not planned to do so, construction activities have the potential encroach within open space boundaries intended to protect wildlife habitat.

Mitigation Measure BIO-5.2: Install ESA Fencing along the existing Open Space Zoning District boundaries where active construction will occur within 50 feet of the boundaries. The project contractor shall install ESA fencing along existing open space boundaries where active construction will occur within 50 feet of existing open space boundaries. Fencing shall be shown on the final construction documents.

This measure shall be incorporated into the project bid package and contract and implemented prior to issuance of grading permits.

Significance with Mitigation: Less than significant.

BIO-6	**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.**

Tuolumne County does not have an adopted Habitat Conservation or Natural Community Conservation Plan. Therefore, the proposed project is not inconsistent with these plans and *no impact* is anticipated.

As discussed under impact discussion BIO-5, California black oaks scattered on-site are a designated commercial species in Tuolumne County and are not subject to PRC 21083.4.[61] Live oaks sprouting on-site fail to meet the threshold size of five inches diameter at breast height. Further, due largely to the Rim Fire, remaining oaks on-site fail to meet the definition of an oak woodland due to destruction of the oak canopy.[62] Therefore, the site's remaining oak canopy outside of existing designated open space, to be preserved, does not meet the standards requiring mitigation pursuant to PRC 21083.4 and *no impact* would occur.

Significance without Mitigation: No impact.

4.3.4 CUMULATIVE IMPACTS

BIO-7	**The proposed project could contribute to significant cumulative biological resource impacts.**

There are four cumulative projects included in this analysis, including the Yosemite Under Canvas project, the Berkeley Tuolumne Camp Restoration project, the Thousand Trails/Yosemite Lakes RV Expansion project, and the Mountain Sage Conditional Use Permit project. The Mountain Sage Conditional Use

[61] California Legislative Information, 2004, SB-1334 Oak woodlands conservation: environmental quality, http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200320040SB1334, accessed February 28, 2020.

[62] University of California Agriculture and Natural Resources, 2008, *Oak Woodland Impact Decision Matrix*, https://ucanr.edu/sites/oakplanner/files/71734.pdf, accessed February 25, 2020.

Permit project involves limited site modifications to allow for uses such as events and farmer's markets, many of them seasonal. This site is not located in the immediate vicinity of the Terra Vi project and is located on a developed site in Groveland; it would not, in combination with the Terra Vi project, result in any cumulatively considerable impacts.

The three other projects in the vicinity have the potential to impact biological resources. These projects are detailed in the project biological study in Appendix D of this Draft EIR.The cumulative projects, together, could cumulatively result in:

- Approximately 104.4 acres of direct habitat conversion from montane hardwood conifer and montane conifer habitats—approximately half already destroyed by the Rim Fire.
- Impacts to nesting birds including impacts to spotted owl habitat (direct impacts to potential nesting habitat may occur at Berkeley Tuolumne Camp and Thousand Trails based on CNDDB records).
- Impacts to roosting habitat for special-status bat species.
- Potential cumulative impacts to winter deer corridors and winter habitat.

General Habitat/Montane Hardwood Conifer/Montane Conifer

The Rim Fire destroyed approximately 50 percent of montane hardwood conifer habitat and montane conifer habitat within the footprint of the existing and proposed developments. Cumulatively, the proposed project plus proposed new development is expected to convert approximately 104 acres of montane hardwood conifer and montane conifer habitats, of which 50 percent were decimated by the Rim Fire, which would both reduce their existing habitat and prevent the regeneration of these woodlands affected by the fire. The Tuolumne County Wildlife Handbook (1987) considers both montane hardwood conifer and montane conifer habitats to be third priority (common habitats) and recommends that 20 percent of these habitats be preserved as open space to avoid potentially cumulative adverse impacts to these common habitats. The project boundary for Terra Vi includes an already-established open space zoned area on more than 20 acres. Furthermore, the area of the project site that would remain undeveloped represents an additional area comprising of more than 20 percent of the site, and it would also be preserved. Therefore, the project would not contribute to a potentially significant cumulative adverse impact to montane hardwood conifer habitat in the region.

Special-Status Species

Compliance with existing regulations and proposed mitigation measures would reduce the project's contribution to potential cumulative impacts to bird species to a less-than-significant level. Impacts to protected bird species at the Berkeley Tuolumne Camp Restoration project would be similarly avoided through mitigation measures included in the 2018 Final Mitigated Negative Declaration/Initial Study prepared for the project. Although the Thousand Trails project site may contain suitable habitat based on CNDDB records, a detailed project application has not yet been received for this project and therefore the potential site-specific impacts for this project cannot be determined.

Deer

The Rim Fire destruction of winter habitat for mule deer, together with the approximately 104 acres of new development footprint could result in a cumulatively significant adverse impact to mule deer wintering habitat and migration corridors. Increased traffic from the proposed project in combination with proposed adjacent projects could increase deer fatalities along Highway 120 within the project vicinity, resulting in a cumulatively significant adverse impact to interfere with migrating native mule deer. Therefore, the cumulative impact is considered to be *significant*.

Significance without Mitigation: Significant.

Impact BIO-7: Increased traffic from the proposed project in combination with proposed adjacent projects could increase deer fatalities along Highway 120 within the project vicinity, interfering with migrating native mule deer.

Mitigation Measure BIO-7: Implement Mitigation Measures BIO-4.1a and BIO-4.2a.

Significance with Mitigation: Less than significant.

4.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

This chapter describes the regulatory framework and existing conditions on the project site related to cultural and tribal cultural resources (TCRs), and the potential impacts of the project on cultural resources and TCRs.

The information and analysis in this section is based primarily on the Cultural Resources Study for the Terra Vi Lodge Yosemite, Tuolumne County, California, January 2020 (herein referred to as the "project cultural resources study"), prepared by Patrick GIS Group, Inc. The findings in the project cultural resources study are informed by 22 texts and six maps, as well as site visits and consultation with local Native American tribal representatives. The project cultural resources study is available for review by qualified professionals at the Tuolumne County Community Development Department.[1]

The following list defines terms and phrases used in this chapter:

- Archeological Resource: Material remains of past human life or activities. As defined by Public Resources Code Section 21083.2(g), a "unique archeological resource" is 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 contains information needed to answer important scientific research questions, is the oldest of its type or the best available example of its type, or directly associated with a scientifically recognized prehistoric event or person.
- Historical Resource: A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (California Register); a resource included in a local register of historical resources or identified as significant in a historical resources survey; or any object, building, structure, site area, record, or manuscript that 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.[2]
- Paleontological Resource: Preserved remains of traces of animals, plants, or other organisms.[3]
- Tribal Cultural Resources (TCRs): As defined by Public Resources Code 21074, defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included or determined to be eligible for inclusion in the California Register of Historical Resources; included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1; or is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

[1] Section 14.04.360 of the Tuolumne County Ordinance Code provides the definitions for "qualified professional," including standards necessary for persons to meet in order to conduct cultural resource studies for projects requiring archaeological, historical, and architectural expertise.

[2] 2019 CEQA Statue and Guidelines, Section 15064.5, Determining the Significance of Impacts to Archaeological and Historical Resources

[3] United States Congress, 2009, Public Law 111-11, Title VI - Department of Interior Authorizations, Subtitle D - Paleontological Resources Preservation. https://www.congress.gov/111/plaws/publ11/PLAW-111publ11.pdf, accessed February 10, 2020.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

This section summarizes existing federal, State, and local policies and regulations that apply to cultural resources and TCRs in Tuolumne County.

Federal Regulations

National Historic Preservation Act

The National Register of Historic Places (National Register), established by the National Historic Preservation Act of 1966, as amended, recognizes properties that are significant at local, State, and national levels. Designated historical resources include districts, sites, buildings, structures, and objects.

For a property to be eligible for listing in the National Register, it must be significant in American history, architecture, archaeology, engineering, or culture, and must retain integrity in terms of location, design, setting, materials, workmanship, feeling, and association.[4] Resources less than 50 years in age, unless of exceptional importance, are not eligible for the National Register. Though a listing in the National Register does not prohibit demolition or alteration of a property, the California Environmental Quality Act (CEQA) requires the evaluation of project effects on properties that are listed in the California Register of Historic Resources, which includes properties listed in the National Register.[5,6]

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 codifies the generally accepted practice of limited vertebrate fossil collection and limited collection of other rare and scientifically significant fossils by qualified researchers. Researchers must obtain a permit from the appropriate State or federal agency

[4] United States Department of the Interior, 1997, How to Apply the National Register Criteria for Evaluation. https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf, accessed February 10, 2020.

[5] 2019 CEQA Statute and Guidelines, 2019, Section 15064.5, Determining the Significance of Impacts to Archaeological and Historical Resources.

[6] Office of Historic Preservation, 2002, California Office of Historic Preservation Technical Assistance Series #3. https://ohp.parks.ca.gov/pages/1069/files/03%20cal_%20reg_%20q_and_a.pdf, accessed February 10, 2020.

and agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers.

State Regulations

California Environmental Quality Act

Section 15064.5 of the CEQA Guidelines states that a project that may cause a substantial adverse change in the significance of a historical resource is considered a project that may have a significant impact on the environment. The CEQA Guidelines define four ways that a property can qualify as a significant historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code (PRC), or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g) of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.
- The lead agency determines that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5) which means, in part, that it may be eligible for the California Register.

In addition, PRC Section 21083.2 and Section 15126.4 of the CEQA Guidelines specify lead agency responsibilities to determine whether a project may have a significant effect on archaeological resources. If it can be demonstrated that a project would damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The PRC also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to identify the most likely descendant and mediate any disputes regarding disposition of such remains.

California Health and Safety Code

California Health and Safety Code Section 7052 states that it is a felony to disturb Native American cemeteries. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the County Coroner can determine whether the remains are those of a

Native American. Section 7050.5(b) outlines the procedures to follow should human remains be inadvertently discovered in any location other than a dedicated cemetery. The section also states that the County Coroner, upon recognizing the remains as being of Native American origin, is responsible to contact the NAHC within 24 hours. The NAHC has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant.

Native American Historic Resource Protection Act

A recent addition to the CEQA process is the Native American Historic Resource Protection Act (Assembly Bill (AB) 52), which is intended to minimize conflict between Native American and development interests. AB 52 adds TCRs to the specific cultural resources protected under CEQA, and it requires lead agencies to notify relevant tribes about development projects. It also mandates lead agencies to consult with tribes if requested by the tribe and sets the principles for conducting and concluding consultation.

Under AB 52, a TCR is defined as a site, feature, place, cultural landscape (must be geographically defined in terms of size and scope), sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources, or the lead agency chooses at its discretion with substantial supporting evidence to treat the resource as a TCR.[7]

Local Regulations

Chapter 13, Cultural Resources, of the Tuolumne County General Plan includes goals, policies, and implementing programs which preserve historic, cultural, and TCRs within the county. It includes procedures and criteria for cultural resources evaluations and investigations in order to encourage historic preservation and provides management guidelines on historic buildings and structures. Among these, the General Plan indicates that a survey for cultural resources for discretionary permits shall be required if the project site contains or is adjacent to a parcel containing known archeological or historic sites, includes indications of mining or historic-era activities, contains physical evidence of prehistoric and/or historic features, or is within 328 feet of a river, spring, or perennial or intermittent stream.

4.4.1.2 EXISTING CONDITIONS

This section provides an overview of the methodology and history of Tuolumne County and resources of historical, cultural, and tribal cultural significance that may be affected by the project.

Prehistoric Context

The Terra Vi Lodge project site is located in the central portion of the central Sierra Nevada territory known as a unique geographical nexus between two well-defined prehistoric cultural areas to the east and west. Dispersal of Great Basin pre-Washoe and Washoe subsistence patterns spread from the eastern higher elevations to the lower elevation foothills. Trade with and migration of people inhabiting the Central Valley to the west can be seen in site assemblages, which reveal an extension of the known

[7] Public Resources Code Sections 21074(a)(1) and (2).

cultural horizon sequence. Prior to the Sonora sequence, the chronological framework for the region focused on neighboring regions to inform the archaeological record of the Central Sierra. The Sierra Sequence was built on the results of over 100 sites in Tuolumne, Stanislaus, Calaveras, and Mokelumne watersheds. Chronological units identified from the Sierra Sequence include the following in calibrated years before the present (cal BP):

- Early Archaic: 11,500 to 7,000 cal BP
- Middle Archaic: 7,000 to 3,000 cal BP
- Late Archaic: 3,000 to 1,100 cal BP
- Recent Prehistoric I: 1,100 to 610 cal BP
- Recent Prehistoric II: 610 to 100 cal BP

Early inhabitants of the region are known to be mobile hunters and gatherers with a highly specialized flaked stone toolkit developed for hunting and processing megafauna. The Paleoindian diet consisted of any and all resources available, including various plants. With the extinction of the megafauna approximately 10,000 year ago, the Paleoindian group evolved and gave way to the Archaic Period. Documented activity is primarily located near pluvial lakes of the Pleistocene, which are lakes that generated heavy rainfall during this period of glaciation. Artifacts in this region were found at Clovis points, dating back to 13,500 and 11,500 years ago. Fluted point artifacts have been located in high elevations of the Sierras as well as lower elevations in the Central Valley, the foothills of the Alpine, Amador, and Calaveras counties.

The terrain of the Middle and Late Archaic periods was consisting of hill slopes and ridges, which are primarily buried today. Middle Archaic sites are well preserved in the region, with temporary camps, gathering and processing sites, and dispersed habitation sites uncovered on hill slopes and ridges. Late Archaic camps and processing sites are more abundant on hillslopes and ridges. Archaeological exhibits of the Late and Middle Archaic periods show a toolkit of highly mobile groups which include battered and ground cobbles, formed and simple flake tools of highly varied for, large dart and spear points, and milling gear consisting of handstones and millstones which dominate the milling gear toolkit. Mortar and pestle remnants from 5,000 to 6,000 cal BP have been identified at longer-term habitation sites, however full adoption of this technology was not prominent until later during the Recent Prehistoric period. Minimal findings of obsidian suggest groups would exploit seasonal resources with a keen sense of flexibility and adaptation. Both the Middle and Late Archaic periods exhibit stable land-use, subsidence, and technology, which primarily consisted of seasonal mobility, foraging societies transitioning from foothill camps in the winter to higher elevation sites in the summer, likely influenced by resource availability. Projectile points consisting of corner-notched dart points are prevalent throughout the entire period, as well as additional items such as drilled stone ornaments, soapstone vessels, and ground quartz balls.

Dietary staples of the Middle and Late Archaic periods consist of pine nuts in the fall and winter, acorns (to a lesser degree), and seeds, fruits, bulbs, and roots in the high elevation conifer forest springs and summers. A significant period of climate instability occurred from 1050 and 600 BP in which a majority of the California Great Basin underwent droughts with intermittent periods of extreme precipitation. This climate change is reflected by a greater number of small habitation sites replacing previously large village occupations. These smaller sites were sparsely populated and located at lower elevations. There is also evidence of an increase in warfare, likely caused by the decline in resources.

The Recent Prehistoric period is largely defined by the introduction of the bow and arrow, which arrived approximately 1100 cal BP. The arrows exhibited larger point types which gave way to small, light-weight projectile points with a finer precision. Indications of Great Basin cultural exchanges appear with the transition from corner-notched and contracting-stem points from the previous period, to the desert side-notched and cottonwood points. The Recent Prehistoric period resulted in flaked stone tools evolving into finely manufactured pieces, which likely sparked a transition change in hunting prey and practices.

The millingstone toolkit underwent a major transition from handstone and millingslab to mortars and pestles in this period. The number of recorded bedrock mortars in the Sierra is significant in the Recent Prehistoric phase, a collective 4,100 pieces recorded in the Yosemite area. Further documentation reveals that the acorn transitions to the primary nut source, and the efficient processing technology provided by the mortar and pestle introduce additional food sources such as seeds and manzanita berries. This documentation in toolkit and food production evolution signifies a major shift in land and resource use. Short term dwelling locations transitioned into permanent fixtures on the landscape, in which prehistoric groups began establishing areas of long-term use which likely allowed for defining of territory and private ownership. Archaeological sites of the time support this assumption with many artifacts consisting of debris, hearths, structural remains, and bedrock mortar. Documented tools include a wider variety of flaked and ground stone tools, stone drills, bone tools, and shell beads from trade. Sites found later in this period include larger numbers of visible bedrock mortars, which were immobile features of the landscape suggesting building of privately held facilities that served as permanent dwellings.

Ethnographic Context

The project site is located within the aboriginal territory of the Eastern Miwok, specifically the Central Sierra Miwok tribe. The Central Sierra Miwok tribe was heavily disrupted by the arrival of settlers and miners, which decimated the Central Sierra Miwok population from disease and seizing of their land, morphing their traditional way of life.

The Eastern Miwok were a linguistic subfamily of Utian, a branch of Penutian language speakers, which resulted in five languages being spoken by three groups. One language group was spoken by the Bay and Plains Miwok, while the Sierra Miwok were divided into three language groups, Northern, Central, and Southern. The specific Central Sierra Miwok had two language dialects which consisted of West Central Miwok and East Central Miwok tribes. Territory of the Central Sierra Miwok stretched from the foothills into the mountains along the Stanislaus and Tuolumne River drainages. Lifestyle patterns were heavily influenced by seasonal changes.

Political organization for the Central Sierra Miwok was the “tribelet,” a territory-holding group consisting of one central permanent village surrounded by several smaller villages and temporary encampments. The tribelet fell under the jurisdiction of a headman, commonly referred to as a “chief,” which was often a hereditary position. The estimated population of the Central Sierra Miwok was approximately 2,100 people.

Structures in the higher elevations of the Sierras consisted of conical bark slab structures, with bark slabs placed three to four thick in a conical shape with no support bean or frame. In lower elevations, the Central Sierra Miwok used a conical structure made by tying tule mats to a frame of poles. Two types of

assembly houses were used by the Central Sierra Miwok, a large semi-subterranean roundhouse at 45 to 50 feet in diameter for community and religious ceremonies, and circular brush structures used for mourning ceremonies. Some villages had additional structures used for sweathouses, milling station structural covers, and acorn granaries.

The Central Sierra Miwok were hunters and gatherers prior to European contact. Subsistence was focused on seasonal availability of resources, and food procurement was often a group activity where men hunted, and women foraged. The primary food source of the Central Sierra Miwok was the acorn from the blue and black oak trees. Additional sources included various nuts, seeds, roots, greens, berries, and mushrooms. Large game hunting included deer, bear, wildcats, mountain lions, fish, rabbits, birds, insects, and the occasional pronghorn or elk. Salt was obtained from local spring sources, plants, and from trade.

Flaked stone and ground tools were used, including arrow and spear points, arrow shaft straighteners, mortars, pestles, and decorative stone ornaments. Stone tools were constructed of various materials sourced from local quarries or from trade, while the primary stone for hunting was obsidian, with the mortar and pestle being integral in the processing of acorns. The Central Sierra Miwok also made items from several perishable sources including rafts, bows, arrows, and digging sticks from wood; mats, ropes, and nets from tule; baskets, clothing, and cordage from plant fibers, and bags, clothing, blankets, bows, and various tools from animal bones, skins, and tissue. Common trade goods and ornamental items included salt and obsidian, shell, red paint, white paints, and charcoal.

The Central Sierra Miwok had very little contact with Europeans with Europeans during the Spanish exploration and Missionization Period. In 1848, the discovery of gold brought miners, trappers, and settlers into the region, which introduced new diseases and conflict which soon decimated the entire breadth of the Sierra Miwok populations, which vanished the Central Sierra Miwok culture into the past.

Historic Context

Tuolumne County, like the nearby counties, was first explored by Gabriel Moraga and his fellow explorers, followed second by General Vallejo, Jedidiah Smith, Joseph Walker, John Frémont, as well as by the 1841 Bidwell-Bartleson emigrant party. Heavy activity began in the areas soon after the discovery of gold on the American river in 1848, in what is now known as El Dorado County.

With the discovery of gold came a worldwide rush of people to the Sierra Nevada foothills, which resulted in a virtually overnight population boom, which facilitated the establishment of many of the Tuolumne County cities and towns that exist today. When California was admitted to the Union in 1850, Tuolumne County was one of the original 27 counties. The county seat has always been located in Sonora.

Once the gold deposits depleted, the economy of the Sierra foothills transitioned to ranching and hard-rock (lode) mining. The mining period in Tuolumne County experienced several slowdowns and revivals in the late nineteenth century and early twentieth century. Most mines closed with the start of World War I, and the Depression of 1929 resulted in the end of many major industries in the area including agriculture and timber. A small mining boom resurged in the mid to late 1930s. Starting with the 1948 centennial of gold discovery and statehood in 1950, Tuolumne County began to reap the benefits of nostalgic interest in the gold country, which renewed travel in the area due to the Yosemite gateway that is Tuolumne County.

4.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant cultural resources and tribal resources impacts if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.
4. Cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: i) Listed or eligible for listing in the California; ii) Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or iii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.

For purposes of CEQA, to determine whether a cultural resource could be significantly affected as a result of a proposed project, the significance of the resource itself must first be determined. Section 15065 of the CEQA Guidelines mandates that a finding of significance must be made if a project would eliminate important examples of major periods of California history or prehistory. Additionally, pursuant to Section 15064.5 of the CEQA Guidelines, a project could have a significant effect on the environment if it could result in a substantial adverse change in the significance of the historical resource. A “substantial adverse change” means the physical demolition, destruction, relocation, or alteration of the resource or the disturbance of the immediate surroundings such that the significance of the historical resource is impaired in any way. “Material impairment” means altering a resource in an inadvertent way in which the characteristics of a historical resource, that is integral in conveying its historical significance, reduces its eligibility for inclusion in the California Register of Historical Resources. Impacts to those cultural resources not determined to be significant according to the significance criteria described above are not considered significant for the purposes of CEQA.

Historical Resources

Section 15064.5 of the CEQA Guidelines notes that a historical resource (both built environment and prehistoric archaeological resources) is presumed significant if the resource is listed on the California Register of Historical Resources, or if it has been found to be eligible for listing by the State Historical Resources Commission. Historical resources may also be deemed significant if the lead agency finds that, based on substantial evidence, that the resource meets criteria for inclusion in the California Register of Historic Resources. The criteria include:

- The resource is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

- The resource is associated with lives of persons important in our past;
- The resource 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
- The resource has yielded, or may be likely to yield, information important to prehistory or history.

Unique Archaeological Resources

Section 15064.5 of the CEQA Guidelines states that archaeological resources not determined to be historical resources may still be deemed significant if they are found to be unique. Public Resources Code Section 21083.2 states that a unique archaeological resource is defined as 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 one of the following criteria:

- The resource contains information needed to answer important scientific questions and there is a demonstrable public interest in that information;
- The resource has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- The resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

A non-unique archaeological resource means an archaeological artifact, object, or site that does not meet the above criteria. Non-unique archaeological resources do not receive consideration under CEQA.

Human Remains

According to Section 15064.5 of the CEQA Guidelines, all human remains are a significant resource. Section 15064.5 of the CEQA Guidelines also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are spelled out under Public Resources Code Section 5097.

Paleontological Resources

According to Appendix G of the CEQA Guidelines, a project could have a significant effect if it would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.4.3 IMPACT DISCUSSION

Tribal Consultation

To initiate coordination with the Native American community, Patrick GIS sent a letter to the State of California's NAHC seeking information from the sacred lands files, which track Native American cultural resources, and the names of Native American individuals and groups that would be appropriate to contact regarding this project. In their reply, dated March 26,2019, the NAHC indicated there are no known Native American culturally sensitive properties on or near the project site, and it provided a list of local Native

American tribal representatives that include the Chicken Ranch Rancheria of Me-Wuk and the Tuolumne Band of Me-Wuk.

Letters and maps were sent to each of the individuals on the Native American tribal representatives list on May 9, 2019, and follow-up emails were sent on May 28, 2019. The Chicken Ranch Rancheria did not respond. A representative from the Tuolumne Band of Me-Wuk Indians (Tuolumne Band) replied to the inquiries on June 4, 2019. A field visit was arranged on June 20, 2019, in attendance by project consultants, a representative from the Tuolumne Band, and an area resident. Project consultants were granted permission from a neighboring property owner to review a previously recorded site on their property. Project consultants met with the Tribal Cultural Department for the Tuolumne Band on July 1, 2019 to further discuss the project. The Cultural Department and project consultants arranged and conducted a site visit on July 4, 2019.

In July 2019, Tuolumne Band provided a letter to project consultants with recommendations for how to proceed. As a result of this letter, project consultants assisted the project applicant with developing an Open Space designation that addresses the concerns of the tribe. This proposal was sent to the Tuolumne Band on December 9, 2019, and a follow-up email was sent on December 11, 2019. The Tuolumne Band representative acknowledged receipt of the documents on December 12, 2019, and no additional correspondence ensued. Contact with the Tuolumne Band will be maintained throughout the environmental review, entitlement and construction phases of project.

Literature Review and Records Search

A records search was conducted to identify previous studies and to determine the presence or absence of cultural resources in and within a one-quarter mile radius of the project site. The Central California Information Center (CCaIC) of California State University at Stanislaus, submitted files to Patrick GIS Group on March 20, 2019 that included the following:

- *California Inventory of Historical Resources (1976)*
- Office of Historic Preservation (OHP), Historic Property Data File, which includes:
  - National Register of Historic Places
  - California Register of Historical Resources California
  - State Historical Landmarks
  - California State Points of Historical Interest
- OHP Archaeological Determinations of Eligibility (ADOE)
- Local Inventories – *none available*
- Caltrans Bridge Survey
- Historical Literature
  - *California Gold Camp* (Gudde and Gudde 1975:151)
  - *Gold Districts of California* (Clark 1970:63)
- GLO, Historical Maps, and Rancho Plat Maps
  - General Land Office Plat T1S/R18E (sheet #44-072, dated 1855-1880)
  - *Official Map of Tuolumne County, California* (1907)
  - *1897 (1909?) Yosemite USGS 30' (1:125000)*
  - *1956 Lake Eleanor USGS 15' (1:62500)*

Through the records search, a total of 26 studies were found to have evaluated areas within a one-quarter mile radius of the project site. An additional three studies had been conducted on the project site itself. As a result of the studies, three resources were recorded, all within one-quarter miles of the project site. An additional site was identified by the Forest Service, on file with the Tuolumne Band, located within a one-quarter mile radius. There have been no documented findings of resources on the project site itself. As such, a total of four recorded resources have been previously documented, listed in Table 4.4-1.

TABLE 4.4-1 PREVIOUSLY RECORDED RESOURCES

Age	Description	Location	On Project Site?
Prehistoric	Two bedrock mortar outcrops	Within 0.25-mile radius of project site	No
Historic	Historic Big Oak Flat Road	Within 0.25-mile radius of project site	No
Prehistoric	Three bedrock mortar outcrops	Within 0.25-mile radius of project site	No
Prehistoric	Bedrock mortar	Within 0.25-mile radius of project site	No

Source: Cultural Resources Study for the Terra Vi Lodge Yosemite, Tuolumne County, California, January 2020, Patrick GIS Consulting Group, Inc.

CULT-1 The project could cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

The project site is currently undeveloped, and there are no previously recorded prehistoric or historical resources on the project site. As shown in Table 4.4-1, there is one existing historical resource in the one-quarter mile vicinity of the project site, which is the Historic Big Oak Flat Road located to the south of the project site, largely running parallel to the modern Highway 120. Three prehistoric resources exist within the one-quarter mile radius of the project site, largely consisting of mortar outcrops known to originate from the Central Sierra Miwok tribe and from later European settlers.

Based on the records search conducted for the project cultural resources study, there are no previously recorded prehistoric or historic resources on the project site. Four historic objects were discovered on the project site during the project site survey. These findings were recorded on Department of Parks and Recreation 523 forms and were determined not to be eligible for the California Register. Development as proposed would include earth disturbing activities which could expose buried, subsurface cultural resources, as the project site is located in a known area of habitation for the Central Sierra Miwok tribe and by European settlers. As such, the impact to prehistoric or historic resources is considered *significant* and mitigation measures are required.

Significance without Mitigation: Significant.

Impact CULT-1: Ground disturbing activities may result in unanticipated discoveries of cultural resources. Construction activities as part of the proposed project could impair or destroy previously undiscovered prehistoric or historical resources extracted during earth disturbing activities.

Mitigation Measure CULT-1a: Prior to the issuance of grading permits, the County shall confirm the applicant has required all construction crews to undergo adequate training for the identification of federal- or State-eligible cultural resources, and that the construction crews are aware of the potential for previously undiscovered archaeological or paleontological resources on-site, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work. Examples of prehistoric resources may include: stone tools and manufacturing debris; milling equipment such as bedrock mortars, portable mortars, and pestles; darkened or stained soils (midden) that may contain dietary remains such as shell and bone; as well as human remains. Historic resources may include: burial plots; structural foundations; mining spoils piles and prospecting pits; cabin pads; and trash scatters consisting of cans with soldered seams or tops, bottles, cut (square) nails, and ceramics.

Mitigation Measure CULT-1b: In the event that unanticipated discoveries of potentially sensitive cultural resources are encountered during the construction period, all activity should cease within 100 feet of the find until a qualified archaeologist or paleontologist, who meets federal criteria under 36 CFR 61, can determine the significance of the find and determine the appropriate mitigation. If the deposits are determined to be non-significant by a qualified archaeologist or paleontologist, avoidance is not necessary. If the deposits are determined to be potentially significant by the qualified archaeologist or paleontologist, the resources shall be avoided if feasible. If avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the archaeologist and paleontologist, in coordination with the County, local tribes, and the CEQA Guidelines Section 15126.4 (b)(3)(C), which requires implementation of a data recovery plan.

The data recovery plan shall include provisions for adequately recovering all scientifically consequential information from and about any discovered archaeological or paleontological materials and include recommendations for the treatment of these resources. In-place preservation of the archaeological or paleontological resources is the preferred manner of mitigating potential impacts, as it maintains the relationship between the resource and the archaeological or paleontological context. In-place preservation also reduces the potential for conflicts with the religious or cultural values of groups associated with the resource. Other mitigation options include, but are not limited to, the full or partial removal and curation of the resource.

The County shall confirm that the project applicant has retained a qualified archeologist and paleontologist for the preparation and implementation of the data recovery plan. The recovery plan shall be submitted to the project applicant, the County, and the Central California Information Center. A data recovery plan shall not be required for resources that have been deemed by the Central California Information Center as adequately recorded and recovered by studies already completed. Once the recovery plan is reviewed and approved by the County and any appropriate resource recovery completed, project construction activity within the area of the find may resume.

Significance with Mitigation: Less than significant.

CULT-2 The project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Based on the results of the records search conducted for the project cultural resources study, there were no previously recorded archaeological resources on the project site. Four historic objects were discovered on the project site during the project site survey. These findings were recorded on Department of Parks and Recreation 523 forms and were determined not to be eligible for the California Register. Development as proposed would include earth disturbing activities which could expose buried, subsurface archaeological resources, as the project site is located in a known area of habitation for the Central Sierra Miwok tribe and by European settlers. As such, the impact to archaeological resources is considered *significant* and mitigation is required.

Significance without Mitigation: Significant.

Impact CULT-2: Ground disturbing activities may result in unanticipated discoveries of archaeological resources.

Mitigation Measure CULT-2: Implement Mitigation Measures CULT-1a and CULT-1b.

Significance with Mitigation: Less than significant.

CULT-3 The project could disturb any human remains, including those interred outside of dedicated cemeteries.

Previously undiscovered human remains associated with pre-contact archaeological deposits may exist within the project site, as ground-disturbing activities sometimes uncover such previously unrecorded remains. The project would involve new construction and, as discussed under impact discussion CULT-1, ground-disturbing activities and excavation for the project would have the potential to uncover buried resources. It is possible that human remains may be present on the project site. Descendant communities may ascribe religious or cultural significance to such remains, making any such disturbances a *significant* impact.

Significance without Mitigation: Significant.

Impact CULT-3: Construction activities may result in unanticipated discovery of human remains interred outside of dedicated cemeteries.

Mitigation Measure CULT-3: If human remains are encountered during ground-disturbing activities within the project site, the project contractor and/or on-site supervisor shall immediately halt all work within 100 feet of the discovery and the project contractor shall immediately notify the Tuolumne County Coroner (Coroner), and the Tuolumne County Community Development Department. In coordination with the County, the project applicant and contractor shall contact a qualified archaeologist meeting federal criteria under 36 CFR 61 to assess the situation and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner shall notify the

NAHC within 24 hours of this identification. The NAHC will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment or disposition, with proper dignity, of the remains and any associated grave goods. Upon completion of the assessment, the qualified archaeologist shall prepare a report documenting the background to the finds and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to the project applicant, the County, and the Central California Information Center. Once the report is reviewed and approved by the County, and any appropriate treatment completed, project construction activity within the area of the find may resume.

Significance with Mitigation: Less than significant.

CULT-4	**The project could cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is: i) Listed or eligible for listing in the California; ii) Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or iii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of the Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance to a California Native American tribe.**

A TCR is defined in CEQA Section 21074 as a site, feature, place, or cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources, or if the County, acting as the Lead Agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR.

As discussed under impact discussions CULT-1 through CULT-3, ground-disturbing activities and excavation for the project would have the potential to impact previously undiscovered resources, including TCRs. This would be a *significant* impact.

Significance without Mitigation: Significant.

Impact CULT-4: Implementation of the proposed project may cause a substantial adverse change in the significance of a TCR, as defined in Public Resources Code Section 21074.

Mitigation Measure CULT-4a: Implement Mitigation Measures CULT-1a and CULT-1b.

Mitigation Measure CULT-4b: Prior to the initiation of any construction activities, the project applicant shall provide one-time site access to a Tuolumne Band representative(s) to remove native plants for the purpose of transplanting them to the Four Seasons Native Plan Nursery on the Tuolumne Rancheria.

Mitigation Measure CULT-4c: The project site plan shall be amended to identify a 50-foot buffer around the top of the knoll (see Figure 4.4-1 of this Draft EIR) as a Me-Wuk Open Space area. This area will be available for quiet enjoyment for the following uses: guest/visitor recreational activities, guest/visitor assembly, and guest/visitor programs. The project developer shall not construct or otherwise place any permanent structures or improvements within the 50-foot buffer.

Mitigation Measure CULT-4d: Prior to the initiation of any construction activities, the project applicant shall provide one-time site access to a Tuolumne Band representative(s) to gather firewood on the project site.

Significance with Mitigation: Less than significant.

4.4.4 CUMULATIVE IMPACTS

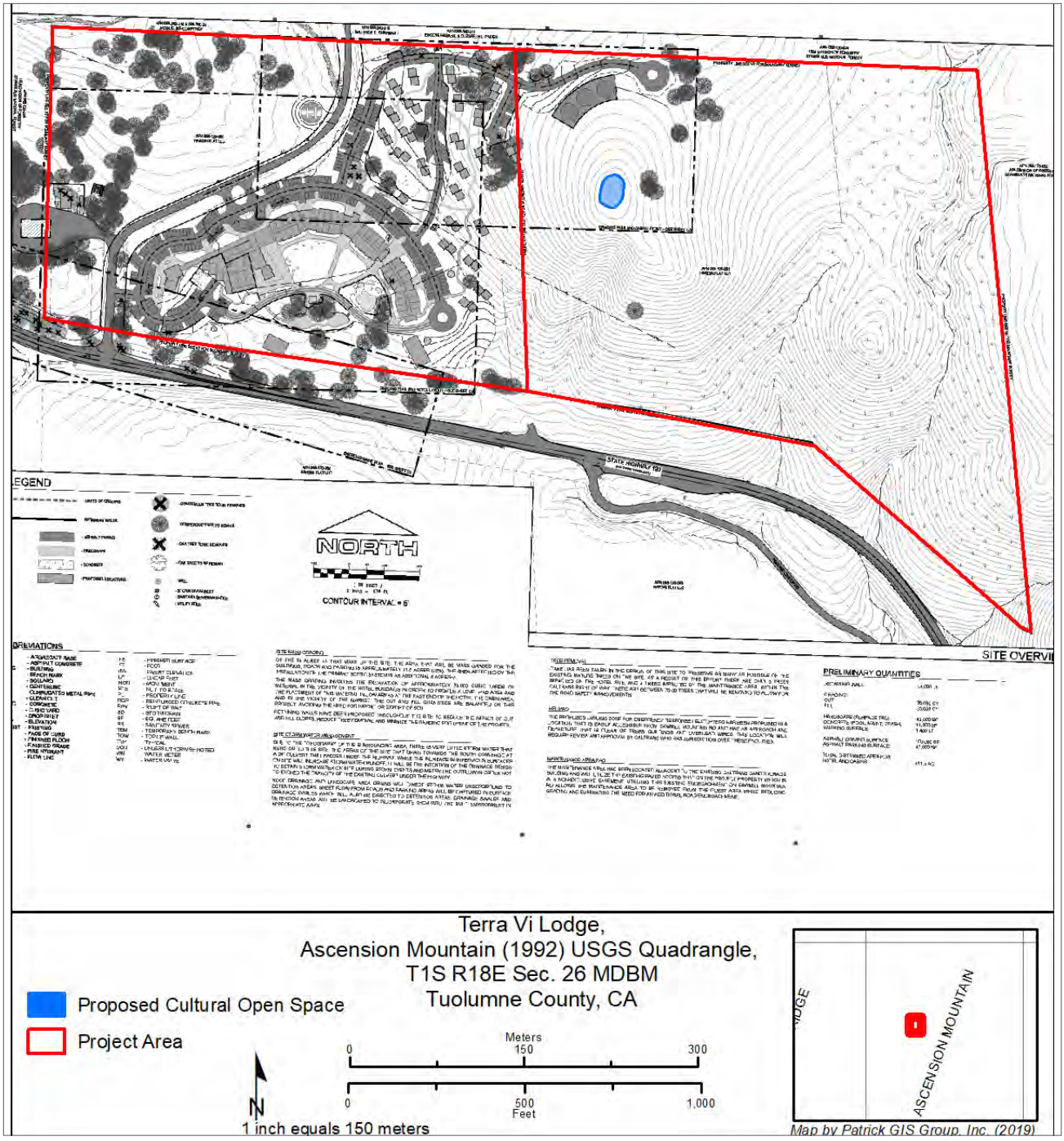
CULT-5	**The project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to cultural resources and Tribal Cultural Resources.**

Cumulative cultural resource impacts would occur when a series of separate and otherwise unrelated actions leads to the cumulative loss of a substantial type of site, building, or resource. For example, while the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. For example, changes to the setting or atmosphere of an area by adding modern structures on all sides of a historically significant building, thus altering the aesthetics of the streetscape, would create a significant impact. Destruction or relocation of historic buildings would also significantly impact the setting.

The project site is not located within a historic district, nor is there any development on the project site. As there are no significant historic structures and no paleontological resources, or human remains on the project site, development of the project would not create or contribute to a cumulative impact on cultural resources. Existing federal, State, and local regulations and policies help to protect any as-yet-undiscovered cultural resources in the County.

Through tribal consultation with the Tuolumne Band of Me-Wuk Indians, potential tribal concerns regarding the proposed project were identified and would be addressed through Mitigation Measures CULT-1a, CULT-1b, CULT-2, CULT-3, and CULT-4a through CULT-4d. Many of these concerns are site-specific, such as loss of access to native plants, firewood, and the top of the knoll. These concerns are not cumulatively considerable.

CULTURAL AND TRIBAL CULTURAL RESOURCES



Source: Cultural Resources Study for the Terra Vi Lodge Yosemite, Patrick GIS Group, Inc., January 2020.

0 1,000
Scale (Feet)

Figure 4.4-1
Proposed Cultural Open Space

Mitigation Measures CULT-1a and CULT-1b would allow for tribal monitoring of ground-disturbing activities and would ensure that, in the event that unknown cultural resources are discovered, work is stopped and proper procedures are followed. With these mitigation measures, the project would not contribute to any cumulative loss or damage to cultural resources. Other development in the vicinity of the project site, including the Yosemite Under Canvas project, the Berkeley Tuolumne Camp Restoration project, the Thousand Trails/ Yosemite Lakes RV Expansion project, and the Mountain Sage Conditional Use Permit project, would have the same potential as the proposed project to unearth previously undiscovered resources during construction. These projects would be expected to avoid impacts to cultural resources through similar procedures to protect potential unearthing or disturbing significant resources.

These measures would ensure that the project would not contribute to any potential cumulative impacts. Therefore, in combination with past, present, and reasonably foreseeable projects, the project would result in a *less-than-significant* cumulative impact with respect to all cultural resources.

Significance without Mitigation: Less than significant.

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4.5 ENERGY

In order to assure that energy implications are considered in project decisions, Appendix F, Energy Conservation, of the CEQA Guidelines, requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. There are two specific thresholds of significance for potential energy impacts in the State CEQA Guidelines. This section provides a general description of the regulatory setting addressing existing electric and natural gas services and infrastructure, and supply and demand in Tuolumne County and the project site, and impact analysis from Appendices F and G of the CEQA Guidelines.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 REGULATORY FRAMEWORK

Federal Regulations

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. It also seeks to improve the energy performance of the federal government. The Act sets increased Corporate Average Fuel Economy Standards; the Renewable Fuel Standard; appliance energy efficiency standards; building energy efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration.[1]

Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under SB 1078 and was amended in 2006, 2011 and 2018. The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. The California Public Utilities Commission is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the State. Based on the 3rd quarter 2014 report, the three largest retail energy utilities provided an average of 20.9 percent of its supplies from renewable energy sources. Since 2003, 8,248 megawatts (MW) of renewable energy projects have started operations.[2] SB 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by

[1] United States Environmental Protection Agency, 2019, May 6 (updated). Summary of the Energy Independence and Security Act Public Law 110-140 (2007). https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act, accessed February 27, 2020.

[2] California Public Utilities Commission, 2016, Renewables Portfolio Standard Quarterly Report: 4th Quarter 2016. https://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/Q4_2016_RPS_Report_to_the_Legislature_FINAL.pdf, accessed February 27, 2020.

2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. SB 100 (de Leon) passed in 2018 puts California on the path to 100 percent fossil-fuel-free electricity by the year 2045.[3]

State Alternative Fuels Plan

AB 1007 requires the California Energy Commission (CEC) to prepare a plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan was prepared by the CEC with the California Air Resources Board and in consultation with other federal, state, and local agencies to reduce petroleum consumption; increase use of alternative fuels (e.g., ethanol, natural gas, liquefied petroleum gas, electricity, and hydrogen); reduce greenhouse gas (GHG) emissions; and increase in-state production of biofuels. The State Alternative Fuels Plan recommends a strategy that combines private capital investment, financial incentives, and advanced technology that will increase the use of alternative fuels; result in significant improvements in the energy efficiency of vehicles; and reduce trips and vehicle miles traveled through changes in travel habits and land management policies. The Alternative Fuels and Vehicle Technologies Funding Program legislation (AB 118, Statutes of 2007) proactively implements this plan.[4]

Appliance Efficiency Regulations

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods.[5]

Title 24, Part 6, Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2019 (California Code of Regulations Title 24, Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of

[3] California Energy Commission, 2017, January, 2016 Appliance Efficiency Regulations, https://ww2.energy.ca.gov/2017publications/CEC-400-2017-002/CEC-400-2017-002.pdf, accessed February 27, 2020.

[4] California Energy Commission, 2007, December, State Alternative Fuels Plan, https://ww2.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CMF.PDF, accessed February 27, 2020.

[5] California Energy Commission, 2017, January, 2016 Appliance Efficiency Regulations, https://ww2.energy.ca.gov/2017publications/CEC-400-2017-002/CEC-400-2017-002.pdf, accessed February 27, 2020.

three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements.[6] Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient.[7] When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.[8]

Title 24, Part 11, Green Building Standards

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (California Code of Regulations Title 24, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. It includes mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to (1) reduce GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2016. The 2016 Standards became effective on January 1, 2017. On October 3, 2018, the CEC adopted the voluntary standards of the 2019 CALGreen, which became effective January 1, 2020.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impact during and after construction. CALGreen contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.[9]

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger

[6] California Energy Commission, 2018, News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation, accessed February 27, 2020

[7] California Energy Commission, 2018, 2019 Building Energy and Efficiency Standards Frequently Asked Questions, http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed February 27, 2020.

[8] California Energy Commission, 2018, 2019 Building Energy and Efficiency Standards Frequently Asked Questions, http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed February 27, 2020.

[9] California Energy Commission, 2019, 2019 California Code of Regulations Title 24, Part 11, https://www.ladbs.org/docs/default-source/publications/code-amendments/2013-california-green-building-standards-code.pdf?sfvrsn=5, accessed February 27, 2020.

vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles. In January 2012, the California Air Resources Board approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.[10]

Local Regulations

Tuolumne County General Plan

The Climate Change Element is contained in Chapter 18 of the Tuolumne County General Plan. Below is Policy 18.A.1 from this Element, with the addition of amendments from General Plan Amendment GPA13-005(3), dated December 4, 2019:

> Prepare a Climate Action Plan (CAP), or similar GHG emission reduction plan, that establishes a GHG reduction target consistent with the Senate Bill (SB) 32 goal to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030 and taking into consideration the Executive Order S-3-05 goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. The County will first update the baseline inventory of jurisdiction-wide greenhouse gas emissions. The CAP shall identify specific measures to reduce countywide emissions consistent with the established target and will also include adaptation strategies for the County to appropriately adjust to the environmental effects of climate change. Many of the measures in the CAP will overlap with and help implement goals, policies, and implementation programs identified in this General Plan.

Tuolumne County does not yet have a CAP at the time of preparation of this Draft EIR. Prior to adoption of a CAP, Policy 18.A.2 states to continue implementation of the 2012 Tuolumne County Regional Blueprint Greenhouse Gas Study, which is to reduce GHG emissions to 1990 levels by 2020 pursuant to Assembly Bill 32. This will be superseded by the CAP when the CAP is implemented.

2012 Tuolumne County Regional Blueprint Greenhouse Gas Study

Adopted by the County Board of Supervisors in January 2012, the Tuolumne County Regional Blueprint Greenhouse Gas Study was drafted by the Tuolumne County Transportation Council to evaluate the effects of future land uses on transportation, housing, local economy, quality of life, and the environment. It includes a countywide GHG emissions inventory of 2010 emissions and projected emissions through 2040 for three different growth scenarios. In addition, it includes policies to be implemented to reduce GHG emissions within the region, including those regarding energy. The energy conservation strategies would offer alternative and renewable energy policies and, overall, would reduce GHG emissions by 14,664 metric tons of carbon dioxide equivalent in the region by 2020.

[10] California Air Resources Board, 2017, January 11 (reviewed), Clean Car Standards - Pavley, Assembly Bill 1493, https://ww3.arb.ca.gov/cc/ccms/ccms.htm, , accessed February 27, 2020.

4.5.1.2 EXISTING CONDITIONS

There are no structures or land uses that currently consume electricity or natural gas on-site.

Electricity

Grid electricity and natural gas service in Tuolumne County is provided by Pacific Gas & Electric (PG&E). PG&E is a publicly traded utility company that generates, purchases, and transmits energy under contract with the California Public Utilities Commission. PG&E's service territory is 70,000 square miles in area, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada mountain range to the Pacific Ocean.[11]

PG&E's electricity distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines. PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy such as wind turbines and photovoltaic plants or "solar farms." "The Grid," or bulk electric grid, is a network of high-voltage transmission lines link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

PG&E produces or buys its energy from a number of conventional and renewable generating sources, which travel through PG&E's electric transmission and distribution systems. The power mix PG&E provided to customers in 2016 consisted of non-emitting nuclear generation (24 percent), large hydroelectric facilities (12 percent) and eligible renewable resources (33 percent), such as wind, geothermal, biomass, solar and small hydro.[12] The remaining portion came from natural gas (17 percent) and unspecified power (14 percent). Unspecified power refers to electricity that is not traceable to specific generation sources by any auditable contract trail. In addition, PG&E has plans to increase the use of renewable power. For instance, PG&E purchases power from customers that install small-scale renewable generators (e.g., wind turbines or photovoltaic cells) up to 1.5 megawatts in size. In 2016, PG&E served 28 percent of their retail electricity sales with renewable power. PG&E's percentage of renewable power currently under contract for 2020 is 33 percent.[13]

In 2015, PG&E's preliminary projected average annual electricity demand growth (mid-demand forecast) between 2015 and 2026 is 1.02 percent.[14] Within the San Francisco Bay planning area (Zone 1) of PG&E's service area the preliminary projected average annual electricity demand growth between 2015 and 2026 is 1.05 percent. Energy providers in the State project demand by assuming future economic growth and taking into account projects such as the proposed project.

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[11] Pacific Gas & Electric, 2012, Company Info, http://www.pge.com/about/company/profile/ accessed February 27, 2020.

[12] Pacific Gas & Electric, 2016, PG&E's 2016 Power Mix, https://www.pge.com/pge_global/local/assets/data/en-us/your-account/your-bill/understand-your-bill/bill-inserts/2017/november/power-content.pdf, accessed February 27, 2020.

[13] Pacific Gas & Electric, 2018, Exploring Clean Energy Solutions, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page, accessed February 27, 2020.

[14] California Energy Commission, 2016, California Energy Demand Updated Forecast 2017-2027, Electricity Demand Forecast, December 2016, https://ww2.energy.ca.gov/2016_energypolicy/documents/, accessed February 27, 2020.

Natural Gas

There is no natural gas consumption in Tuolumne County; however, there is propane consumption.

Renewable Energy

PG&E obtains electricity from conventional and renewable sources. In 2017, 20 percent of PG&E's electricity was generated from natural gas and other fuels; 18 percent from large hydroelectric plants; 27 percent from nuclear power; 33 percent from renewable energy sources; and 2 percent from market purchases.[15,16]

4.5.2 STANDARDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Based on CEQA Guidelines Appendix F, Energy Conservation, in order to ensure energy implications are considered in project decisions, EIRs include a discussion of the potential impacts of proposed projects, with particular emphasis on avoiding or reducing wasteful, unnecessary, or inefficient use of energy resources. Environmental effects may include the proposed project's energy requirements and its energy use efficiencies by amount and fuel type during demolition, construction, and operation; the effects of the proposed project on local and regional energy supplies; the effects of the proposed project on peak- and base-period demands for electricity and other forms of energy; the degree to which the proposed project complies with existing energy standards; the effects of the proposed project on energy resources; and the proposed project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable.

[15] Renewable sources of electricity generation are solar, wind, biomass and waste, small hydroelectric, and geothermal.

[16] Pacific Gas & Electric, 2018, Where your electricity comes from, https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2018/10-18_PowerContent.pdf, accessed February 27, 2020.

4.5.3 IMPACT DISCUSSION

ENE-1	**The project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.**

Short-Term Construction Impacts

Construction of the proposed project would create temporary increased demands for electricity and vehicle fuels and would result in short-term transportation-related energy use.

Electrical Energy

Construction of the proposed project would require electricity use to power the construction equipment. The electricity use during construction would vary during different phases of construction, where the majority of construction equipment during demolition and grading would be gas-powered or diesel-powered, and the later construction phases would require electricity-powered, such as interior construction and architectural coatings. Overall, the use of electricity would be temporary in nature and would fluctuate according to the phase of construction. Additionally, it is anticipated that the majority of electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities. Therefore, project-related construction activities would not result in wasteful or unnecessary electricity demands and impacts would be *less than significant*.

Natural Gas Energy

It is not anticipated that construction equipment used for the proposed project would be powered by natural gas and no natural gas demand is anticipated during construction. Therefore, *no impact* would occur with respect to natural gas usage.

Transportation Energy

Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that the majority of off-road construction equipment, such as those used during demolition and grading, would be gas- or diesel-powered. In addition, all construction-equipment would cease upon completion of project construction. Thus, impacts related to transportation energy use during construction would be temporary and would not require expanded energy supplies or the construction of new infrastructure. Furthermore, to limit wasteful and unnecessary energy consumption, the construction contractors are anticipated to minimize nonessential idling of construction equipment during construction, in accordance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

Energy consumption during construction (2021 through 2023) was calculated using the information provided in Appendix C and data from the EMFAC2017 (v. 1.0.2) and OFFROAD2017 (v. 1.0.1) databases. The results are shown in Table 4.5-1.

TABLE 4.5-1 CONSTRUCTION-RELATED FUEL USAGE

	Gasoline		Diesel		Electricity	
Proposed Project	VMT	Gallons	VMT	Gallons	VMT	kWh
Construction Worker Commute	927,245	35,916	6,851	161	7,504	2,481
Construction Vendor Trips	8,068	1,709	130,532	19,670	0	0
Construction Truck Haul Trips	0	0	0	0	0	0
Construction Off-Road Equipment	N/A	13,022	N/A	42,769	N/A	0
Total	**935,313**	**50,647**	**137,383**	**62,600**	**7,504**	**2,481**

Notes: VMT=vehicle miles traveled; kWh=kilowatt hour
Source: Appendix C (Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, March 20, 2020); EMFAC2017 v. 1.0.2; OFFROAD2017 v. 1.0.1.

The proposed project would not result in wasteful, inefficient, or unnecessary use of energy during construction. It is anticipated that the construction equipment would be well maintained and meet the appropriate tier ratings per CALGreen or EPA emissions standards, so that adequate energy efficiency level is achieved. Electrical energy would be available for use during construction from existing power lines and connections, precluding the use of less efficient generators. Thus, energy use during construction of the project would not be considered inefficient, wasteful, or unnecessary. Impacts would be *less than significant*.

Long-Term Impacts during Operation

Operation of the proposed project would create additional demands for electricity and natural gas compared to existing conditions and would result in increased transportation energy use. Operational use of energy would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems, use of on-site equipment and appliances; and indoor, outdoor, perimeter, and parking lot lighting.

Electrical Energy

The proposed project would involve construction of a hotel and public market as well as associated parking lots and employee apartments on the project site. Electrical service to the proposed project would be provided by PG&E through connections to existing offsite electrical lines and new on-site infrastructure. The proposed electricity consumption for the project site is shown in Table 4.5-2.

TABLE 4.5-2 ELECTRICITY CONSUMPTION

Land Use	Electricity (kWh/year)[a]
Public Market	37,856
Hotel	1,364,820
Parking Lot	83,853
Employee Housing	52,063
Total	**1,538,592**

Notes:
a. Accounts for total electricity use from proposed buildings.
Source: Appendix C (Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, March 20, 2020)

As shown on the table, electricity use at the project site is estimated to be 1,538,592 kWh/year. This is primarily due to the proposed hotel and associated parking lot electricity use.

While the proposed project would increase energy demand at the site compared to existing conditions, it would be required to comply with the current Building Energy Efficiency Standards and CALGreen. Because the proposed project would be consistent with the requirements of these energy-related regulations, it would not result in wasteful or unnecessary electricity demands. Therefore, the proposed project would result in a *less-than-significant* impact related to electricity usage.

Propane Energy

As seen in Table 4.5-3, the proposed project would generate an average propane demand of 41,225 gallons per year, due to consumption associated with the proposed hotel, residences, and market. However, because the proposed project would be built to meet the Building Energy Efficiency Standards, it would not result in wasteful or unnecessary propane demands. Therefore, operation of the proposed project would result in *less-than-significant* impacts with respect to propane usage.

TABLE 4.5-3 PROPANE CONSUMPTION

Land Use	Propane Consumption (Gallons/year)[a]
Public Market	214
Hotel	40,241
Parking Lot	0
Employee Housing	770
Total	**41,225**

Notes:
a. Assumes propane and natural gas use would be equivalent and a conversion factor of 91.647 gallons of propane per cubic foot of natural gas. Accounts for total propane use from proposed buildings.
Source: Appendix C (Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, March 20, 2020)

Transportation Energy

The proposed project would consume transportation energy during operations from the use of motor vehicles. Because the efficiency of the motor vehicles in use, such as the average miles per gallon for motor vehicles involved with the proposed project are unknown, estimates of transportation energy use is assessed based on the overall VMT and related transportation energy use. The proposed project-related VMT would primarily come from future residents. As seen in Table 4.5-4, the estimated total annual VMT for the proposed project is 3,447,078 miles. While the proposed project would result in an increase in VMT, it would offer more employment opportunities within Tuolumne County and employee housing in the area, which would have the potential to reduce VMT and associated transportation energy use. These features and aspects of the proposed project would contribute in minimizing VMT and transportation-related fuel usage. Thus, it is expected that operation-related fuel usage associated with the proposed project would not be any more inefficient, wasteful, or unnecessary than similar development projects. Therefore, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

TABLE 4.5-4 PROJECT ANNUAL OPERATION-RELATED FUEL USAGE

	Gasoline		Diesel		CNG		Electricity	
Proposed Project	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual Gallons	Annual VMT	Annual kWh
Passenger Vehicles	3,133,559	134,424	278,216	23,904	951	163	34,353	11,294

Source: EMFAC2017 v. 1.0.2. Annual VMT for existing conditions and project operations are based information found in Appendix C (Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, March 20, 2020).

ENE-2 The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The proposed project would offer a number of energy-saving and sustainable design features provided as part of the Chapter 3, Project Description, and Chapter 4.16, Utilities and Service Systems. Beyond compliance with the California Building Energy Efficiency Standards (Title 24, Part 6) and CALGreen (Title 24, Part 11), these features include photovoltaic systems, lighting control systems, high efficiency mechanical infrastructure and equipment, waste disposal reductions, and electric vehicle charging stations. As these measures would reduce the project's overall energy consumption, the proposed project would not conflict with State or local plan for renewable energy or energy efficiency, and a *less-than-significant* impact is anticipated.

Significance without Mitigation: Less than significant.

4.5.4 CUMULATIVE IMPACTS

ENE-3	**The project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to energy conservation and renewable energy.**

The area considered for cumulative impacts to energy consumption is the service area of PG&E as described above in Section 4.5.1. All of the development projects within the vicinity of the project site, listed in Chapter 4, are within the service area of PG&E. All these projects would result in a long-term increase in operational energy demand for electricity and natural gas use. In addition, construction activities would require the use of energy for purposes such as the operation of construction equipment and tools, and construction of development projects may overlap. However, all projects developed within the PG&E service area would implement the requirements of the 2016 Building and Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6), the 2019 California Green Building Code (California Code of Regulations, Title 24, Part 11). New buildings would also use new energy efficient appliances and equipment. Future projects would also implement renewable energy measures as indicated in the and General Plan.

Future development would also increase annual fuel consumption. However, vehicles would be subject to the US EPA CAFE standards for vehicular fuel efficiency and average corporate fuel economy continue to increase as a result of State and federal laws, including the Pavley Advanced Clean Cars program. Vehicle turnover also improves the overall fuel economy of California's vehicle fleets.

All of these measures would contribute to minimizing inefficient, wasteful, or unnecessary energy consumption and ensure compliance with state or local plans for renewable energy, and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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4.6 FORESTRY RESOURCES

This chapter describes the agricultural and forestry characteristics of the project site and its vicinity and evaluates the potential environmental impacts that could occur by implementing the proposed project. This chapter begins with a summary of relevant regulatory settings and existing conditions, followed by a discussion of the proposed project and cumulative impacts.

4.6.1 ENVIRONMENTAL SETTING

4.6.1.1 REGULATORY FRAMEWORK

This section summarizes existing federal, State, and local laws, policies, programs and regulations that apply to forestry resources in Tuolumne County.

Federal Regulations

While the project site is located within the Stanislaus National Forest, it is privately owned. Adjacent landowners include parcels which are privately owned, as well as parcels owned by the United States Forest Service (USFS). The USFS owns the land which makes up the Stanislaus National Forest, except for select parcels which are privately owned such as the proposed project site. The USFS regulates land under their ownership, which includes natural features such as rivers, and any roadway corridor. Below are three plans applicable to the vicinity of the project site.

Stanislaus National Forest Plan Direction

The Stanislaus National Forest Plan Direction (Forest Plan) was adopted in 1991 and most recently revised in 2017. The Forest Plan includes goals, objectives, strategies, management practices to preserve and enhance the forest, and to inform the public and cooperating agencies about future programs and activities.

Tuolumne Wild and Scenic River Management Plan

The Tuolumne Wild and Scenic River Management Plan (Management Plan) provides direction for managing the federal lands within the corridor of the Tuolumne River within the Stanislaus National Forest. The Management Plan tiers from the Forest Plan, and provides direction, standards and guidelines, and management practices from the Forest Plan which are applicable to the Tuolumne River. The Management Plan includes provisions for timber management, fire management, fish and wildlife, lands, minerals, pest management, soils, visual resources, watershed, and transportation and facilities.

Stanislaus National Forest Roads Analysis

The Stanislaus National Forest Roads Analysis (Roads Analysis), adopted in 2003, provides decision-makers with critical information to develop road systems that are safe and responsive to public needs and desires, are affordable, and efficiently managed, and that have minimal ecological effects on the land. The Roads

Analysis includes a description of roadways, discussion of issues, benefits, problems, and risks, as well as opportunities, priorities, and guidelines.

State Regulations

California Forest Practice Act

The Forest Protection Act was enacted by the California Department of Forestry and Fire Protection (CAL FIRE) in 1973 to ensure that logging is done in a manner that will preserve and protect fish, wildlife, forests, and streams. Compliance with the Forest Practice Act rules apply to all commercial harvesting operations for landowners of small parcels, to ranchers owning hundreds of acres, and large timber companies with thousands of acres. For projects that are proposing the conversion of timberland to non-timberland uses, a Timberland Conversion Permit is required.

California Forest Improvement Program

The purpose of the California Forest Improvement Program (CFIP) is to encourage private and public investment in, and improved management of, California forest lands and resources. The CFIP ensures adequate high-quality timber supplies, employment and economic benefits, and the protection, maintenance, and enhancement of a productive and stable forest resource system for the benefit of present and future generations.

Public Resources Code

Section 4526

This section of the Public Resources Code defines “timberland” as land, other than land owned by the federal government and land designated as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.

Section 4621 to 4628

This section of the Public Resources Code regulates the conversion of timberland to non-timberland uses. This section establishes a graduated timberland conversion application and permit system for applying to rezone timberlands. Applicants must specify proposed alternate uses, and any additional information requested by the board. Conversions can be approved if it is approved to be in the public interest, would not cause a substantial and unmitigated adverse effect upon timberland or open space areas, if the soils, slopes, and watershed would be suitable for the proposed uses, if there is no alternate suitable land for the proposed development to occur, and if the existing use is uneconomic in character. Applications may be denied for various reasons including, but not limited to, failure or refusal of the applicant to comply with the rules and regulations of the provisions of the Section, and if the proposed alternate use in the application does not meet the findings needed for approval of the application. If an application is approved, the applicant is authorized to cut and remove any and all trees located on the subject property.

Section 4796 to 4797.5

This section of the Public Resources Code outlines forest resource improvements as required under the CFIP. This section allows for the CAL FIRE director to approve loans relating to forest resource improvement projects and describes eligibility requirements needed to receive such funds. Loans may be given to fund forest resource improvement work for nonindustrial purposes such as repairing land after damage by fire, flood, insects, disease, or other natural causes.

Section 12220(g)

This section of the Public Resources Code defines "forest land" for the purposes of the California Environmental Quality Act (CEQA) 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.

Government Code Section 51104(g)

This section of the Government Codes defines "Timber," "Timberland," and "Timberland Production Zone" for the purposes of CEQA and "Timberland Preserve Zone," which may be used in city and county General Plans.

(e) "Timber" means trees of any species maintained for eventual harvest for forest production purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock.

(f) "Timberland" means privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.

(g) "Timberland Production Zone" or "TPZ" means 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."

Local Regulations

The Tuolumne County General Plan, most recently updated in 2018, is a long-range guide for the future of land use in the unincorporated areas of Tuolumne County. Timberland Forest Resources are discussed in the General Plan in Chapter 16, Natural Resources Element. Although timberland resources are discussed in the General Plan, the project site does not have any timberland uses on-site.

4.6.1.2 EXISTING CONDITIONS

The project site is located in a rural location and is fully undeveloped. The site's General Plan land use designation is Parks and Recreation, which supports recreational uses of commercial nature to serve the

tourist industry. The project site is within two zoning districts: Commercial Recreation, which also supports recreational development of a commercial nature, and Open Space, which encourages preservation of natural elements on the project site. The project site is not designated as a forestry resource or as timberland.

The Stanislaus National Forest encompasses approximately 898,099 acres of land on the eastern slope of the Sierra Nevada mountain range. The project site is located in the southern portion of Stanislaus National Forest. This site is at an elevation of 4,000 feet and is approximately 5 miles west of the Yosemite National Park Big Oak Flat entrance. Access to the site is provided by Highway 120, located in the Groveland Forest Ranger District. Several properties adjacent to the project site are federally owned by the United States Department of Forestry, including properties on the entire western boundary, portions of the northern boundary, and the entire eastern boundary.

As discussed in Chapter 3, Project Description, of this Draft EIR, the project site was heavily burned in the 2013 Rim Fire, resulting in a significant burn scar that extends several acres into the site, which destroyed most of the mature trees on-site. Vegetation on-site is in various stages of regrowth after damage caused by the 2013 Rim Fire burned the majority of the brush and trees that existed on the site, which were subsequently removed. Today, the project site is primarily re-emerging vegetation that consists of sprouting ponderosa pine, shrubs, and grasses. Few oaks remain, although new oaks are sprouting on-site, which include primarily black oaks and live oaks.

4.6.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant agriculture or forestry resource impact if it would:

1. Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.
2. Result in the loss of forest land or conversion of forest land to non-forest use.
3. 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.

4.6.3 IMPACT DISCUSSION

FOR-1	**The project would not conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).**

The project site is within the Commercial Recreation and Open Space zoning districts and is designated as Parks and Recreation in the Tuolumne County General Plan, and is not designated as forestland, Timberland, or Timberland Zoned Timberland Production, and therefore would not conflict with existing zoning, or require the rezoning of any land. Therefore, there would be *no impact.*

Significance without Mitigation: No impact.

FOR-2 The project would not result in an adverse effect associated with the loss of forest land or conversion of forest land to non-forest land.

The project site is currently undeveloped, with the exception of on-site wells and a Caltrans storage garage on the southwest corner of the project site. The project site is located in the Stanislaus National Forest and contains mixed hardwood conifer forest plants on-site including sprouting black and live oaks, ponderosa pine, shrubs, and grasses;[1] however, the project site is not designated as forest land by the Tuolumne County General Plan or Code of Ordinances. While the project site is not designated as forest land or timberland, the project site is considered to be timberland because the site falls within the definition of timberland in Public Resources Code Section 4526. Additionally, pursuant to Section 1104.2 of the California Forest Practice Rules, the project would not be exempt from the State requirement for a Timberland Conversion Permit, and approval of the proposed project would require submittal of a Timberland Conversion Permit because the proposed project would develop the site for non-timber harvesting uses.

Although the proposed project would result in development of previously undisturbed land congruent with timberland as defined in Public Resources Code Section 4526, as stated above, the County does not designate or zone the site for timberland or forest land. Development of the proposed project on the western portion of the site would be consistent with zoning, and the project would leave undeveloped the 21-acre portion of the site within the Open Space Zoning District. In addition, the proposed project would include extensive plantings to help restore on-site tree cover. The proposed project would include the removal of 17 Ponderosa Pine trees during the construction phase, as well as 29 trees along Highway 120 to allow for intersection improvements, but would also include the planting of dozens of Ponderosa Pine and Giant Sequoia to help in the reforestation of an area that was burned in the 2013 Rim.

The owner of the project site entered into a CFIP contract with CAL FIRE in 2015 that preserves the site for forest and timber land uses. The CFIP requires a property owner supply protection, maintenance, and enhancement of a productive and stable forest resource system for the benefit of present and future generations in exchange for providing funds to help complete such improvements and preservation. The proposed project would result in non-compliance with this CFIP contract. However, the agreement expired on December 31, 2019, and the project applicant would be required to refund State funds awarded for the project site, consistent with the request of CAL FIRE. Therefore, the proposed project would not result in the loss or conversion of forest land and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[1] Augustine Planning Associates, Inc., December 2019, Terri Vi Lodge Yosemite Biological Study Report, page 64.

FOR-3 The project would not 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.

Properties surrounding the project site are rural in nature. As shown in Figure 3-2, the General Plan land use designations for adjacent properties include Rural Residential and Estate Residential to the north, Public to the east and west, and Parks and Recreation to the south. As shown in Figure 3-3, the surrounding zoning districts include Public to the west and east of the project site, which generally consists of lands under the jurisdiction of the United States Department of Forestry, and public utilities agencies. Zoning districts to the north of the project site include Residential Estate Two-Acre Minimum, Residential Estate Five-Acre Minimum, and General Agricultural 10-Acre Minimum. Zoning Districts to the south include Commercial Recreational and Commercial Recreational with Open Space-1. The project site is not zoned or designed by the County as forest land, and development on the privately owned site would not result in conversion of forest land that is under jurisdiction of the State of California. Further, there are no other lands in the vicinity of the project site that are zoned for commercial use and thus development of a hotel on the project site is not expected to lead to surrounding lands being developed with similar or ancillary uses. Although the project proposes addition of a hotel lodge, a majority of the project site would be maintained as open space or undeveloped areas and would not result in the conversion of forest lands. Therefore, there would be *no impact*.

Significance without Mitigation: No impact.

4.6.4 CUMULATIVE IMPACTS

FOR-4 The proposed project would result in less-than-significant cumulative impacts with respect to forestry resources.

Cumulative impacts would occur when a series of actions lead to a loss of forestry resources, which occurs when forested lands are converted to non-forest uses. This typically occurs in newly urbanized areas where development encroaches on forested areas through general plan and zoning amendments, leading to the long-term conversation of forested lands.

The analysis of cumulative impacts to forested lands is based on impacts of the proposed project plus development in the vicinity of the project site, which would include the Yosemite Under Canvas project located to the south of the project site across Highway 120, the Thousand Trails/Yosemite Lakes RV Expansion located approximately 1 mile to the southeast of the project site, the Berkeley Tuolumne Camp Restoration project located approximately 2.8 miles to the southeast of the project site, and the Mountain Sage Conditional Use Permit project located approximately 14.5 miles to the west of the project site.

As noted above, the project site would not conflict with existing zoning or cause rezoning of forestland, timberland, or timberland zoning Timberland Production; would not result in the loss of forest land or the conversion of forest land to non-forest uses; and would not involve other changes that would result in the conversion of forest land to non-forest uses. As discussed under impact discussion FOR-2, the proposed project would require a Timberland Conversion Permit because the project site fits the definition of

timberland under Public Resources Code Section 4526. Nearby cumulative development projects, including the Yosemite Under Canvas project directly to the south of the project site, are required to apply for a Timberland Conversion Permit due to project site conditions, despite the Yosemite Under Canvas site not being designated as timberland by Tuolumne County. Both projects are designed to minimize tree removal and would be only be implemented following CAL FIRE approval of the required Timberland Conversion Permits. Other nearby cumulative development projects include the Berkeley Tuolumne Camp Restoration, Thousand Trails/Yosemite Lakes RV Expansion, and Mountain Sage Conditional Use Permit projects. According to the 2018 Final Mitigated Negative Declaration/Initial Study for the Berkeley Tuolumne Camp Restoration, this project would result in reconstruction of the Berkeley Tuolumne Camp that was damaged by the Rim Fire and would be designed to operate at a capacity that matches but does not exceed pre-fire conditions. Details regarding the Thousand Trails / Yosemite Lakes RV Expansion project have not been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. Finally, the Mountain Sage Conditional Use Permit project would permit certain events, many of them seasonal, on property that is within the town of Groveland and on land that is currently zoned as General Commercial, General Commercial/Historic Combining, Residential, and Open Space. It is not zoned as forestland, timberland, or timberland zoned Timberland Production, and does not contain forest land uses, and according to the Tuolumne County Planning Commission Agenda Report dated February 19, 2020, the project would still be required to obtain a Timber Conversion Permit and Timber Harvesting Plan or waiver from the California Department of Forestry and Fire Protection prior to removal of commercial species of timber from the site. Because the proposed project would not contribute to any identified cumulative impacts associated with forestry resources, the proposed project would result in a *less-than-significant* cumulative impact with respect to forestry resources.

Significance without Mitigation: Less than significant.

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4.7 GEOLOGY AND SOILS

This chapter describes the regulatory framework and existing conditions on the project site related to geology, soils, and seismicity, and the potential impacts of the project on geology and soils. The analysis in this chapter is based in part on the following information:

- Soil and Site Field Evaluation for APN 68-120-06, Tuolumne County Environmental Health, 2018.
- Highway 120 Corridor Soils Report, Sawmill Mountain Road X State Highway 120, Groveland, APN 068-120-060, Don Myers, REHS, 2018.

Complete copies of these studies are included in Appendix F of this Draft EIR.

4.7.1 ENVIRONMENTAL SETTING

4.7.1.1 REGULATORY FRAMEWORK

State Regulations

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was signed into state law in 1972. Its primary purpose is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The act delineates “Earthquake Fault Zones” along faults that are “sufficiently active” and “well defined.” The act also requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act (SHMA) was adopted by the state in 1990 to protect the public from the effects of non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure caused by earthquakes. The goal of the act is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey (CGS) prepares and provides local governments with seismic hazard zone maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. SHMA requires responsible agencies to only approve projects within seismic hazard zones following a site-specific investigation to determine if the hazard is present, and if so, the inclusion of appropriate mitigation(s). In addition, the SHMA requires real estate sellers and agents at the time of sale to disclose whether a property is within one of the designated seismic hazard zones.

California Building Code

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The

publication date of the CBC is established by the California Building Standards Commission and the code is also known as Title 24, Part 2 of the California Code of Regulations. The most recent building standard adopted by the legislature and used throughout the state is the 2019 version of the CBC (effective January 1, 2020). This code provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock on-site, and the strength of ground shaking with specified probability of occurring at a site.

Soils Investigation Requirements

Requirements for soils investigations for new construction are in California Health and Safety Code Sections 17953–17955, and in Section 1803 of the California Building Code. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

California Public Resources Code

Paleontological sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA. PRC Division 5, Chapter 1.7, Section 5097.5, and Division 20, Chapter 3, Section 30244 states:

> 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.

This statute prohibits the removal, without permission, of any paleontological site or feature from lands under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. As a result, local agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others. PRC Section 5097.5 also establishes the removal of paleontological resources as a misdemeanor and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, and district) lands.

Local Regulations

Requirements for the construction of on-site wastewater treatment systems treatment and disposal are outlined in Chapters 13.04 and 13.08, respectively, of the Tuolumne County Ordinance Code. In addition,

requirements for greywater[1] systems are also outlined in Chapter 13.08 of the Tuolumne County Ordinance Code. A soil profile test is required to assess soil depth and determine the most permeable strata to discharge effluent.

Requirements for grading are outlined in Tuolumne County Ordinance Code Chapter 12.20, which is also known as the Tuolumne County Grading Code. A soil engineering report is a requirement for a grading permit within the county. Soil engineering refers to the application of principles of soil mechanics in the evaluation and design of civil work involving the use of earth materials, inspection, and testing of construction feasibility. This analysis is typically included in a soil engineering report, conducted by a certified soils engineer. A soil engineering report has not yet been prepared for the project.

4.7.1.2 EXISTING CONDITIONS

Geologic Setting

The site is situated in the Sierra Nevada Geomorphic Province. This geomorphic province is a tilted fault block that encompasses an area that extends approximately 400 miles, from near Lassen Peak in the north to the Garlock Fault in the south. Its gently sloping western slope is contrasted with the precipitous eastern front. In the southern end of the province, the Sierra Nevada grades into the Tehachapi Mountains. The Sierra Nevada Geomorphic Province ranges between 40 to 100 miles wide, and elevations vary from 400 feet above mean sea level (amsl) at the Great Valley boundary to the west to summits of more than 14,000 feet amsl adjacent to the Basin Ranges Geomorphic Province to the east.[2,3] In general, the province consists largely of igneous and metamorphic units of diverse composition and age, including volcanic and metasedimentary interlayered rocks. The granitic rocks of the Sierra Nevada batholith constitute 60 percent of the exposed rock in the central and southern Sierra Nevada.

The site is situated atop weathered Mesozoic granitic rocks and Paleozoic marine rocks.[4] Both units have been weathered near the surface and soils extending to at least 8 feet below ground surface have been logged on the site.[5]

Faulting and Seismicity

Based on review of the referenced geologic and seismic literature, the site is not within an Alquist-Priolo Earthquake Fault Zone and the nearest is located about 46 miles east of the site for the Mono Lake Fault Zone.

[1] Greywater refers to wastewater which is produced from water waste from baths, sinks, washing machines, and other appliances. Greywater is considered treatable, however treated greywater is not made for human consumption, and is typically used as water for landscaping purposes.

[2] Norris, R. M., and R. W. Webb, 1990, Geology of California, Second Edition, New York: John Wiley & Sons, Inc.

[3] California Geological Survey, 2002, California Geomorphic Provinces, Note 36, https://www.conservation.ca.gov/cgs/Documents/Note_36.pdf, accessed January 27, 2020.

[4] Strand, R. G., 1967, Geologic Map of California, Mariposa Sheet, California Division of Mines and Geology scale 1:250,000.

[5] Tuolumne County Environmental Health, 2018, Soil and Site Field Evaluation, 68-120-06, dated April 23, 2018.

The closest active or potentially active fault is within the Foothills Fault System.[6] The Rawhide Flat East and Rawhide Flat West faults of the Foothills Fault System, located about 28 miles northwest of the site, are identified as late Quaternary age. These faults exhibit normal dip-slip movement primarily of right-lateral, strike-slip movement. Schwartz et al. (1996) assigned a maximum considered event of Magnitude 6.5 for the Foothills Fault System,[7] although Caltrans no longer includes the fault in their fault database.[8] The Pre-Quaternary Calaveras Shoo Fly Thrust Fault is located about 2.0 miles southwest of the site but is considered extremely unlikely to rupture as no evidence has been found to suggest movement since the middle Jurassic, about 176 million years before present.[9]

Earthquakes are common to California, and geologic evidence is used to determine the likelihood of future ruptures along a fault. The amplitudes of earthquake waves are measured on the Richter Scale. Each one-point increase in magnitude represents a tenfold increase in wave amplitude and a 32-fold increase in energy. That is, a Magnitude 7 earthquake produces 100 times (10 x 10) the ground motion amplitude of a Magnitude 5 earthquake, and releases over 1,000 times (32 x 32) more energy.

Strong Ground Motion

Seismic activity along the closest or more distant fault zones is likely to cause ground shaking at the site. However, since the closest fault is located about 28 miles from the site and is only capable of a Magnitude 6.5 earthquake (1997 data), only moderate ground shaking is expected at the site.

Geologic Hazards

Expansive Soils

Expansive soils shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Based on the presence of clay in some of the trenches dug on the site, there is some potential for expansive soils.[10]

Subsidence

The phenomenon of widespread land sinking, or subsidence, is generally related to substantial overdraft of groundwater or petroleum reserves from underground reservoirs. Due to its location on weathered

[6] Jennings, C. W., and W. A. Bryant, 2019, Fault Activity Map of California, California Geological Survey California Geologic Data Map Series Map No. 6, scale 1:750,000.

[7] Schwartz, D. P., W. B. Joyner, R. S. Stein, R. D. Brown, A. F. McGarr, S. H. Hickman, and W. H. Bakun, 1996, Review of Seismic Hazard Issues Associated with Auburn Dam Project, Sierra Nevada Foothills, California, United States Geological Survey Open-File Report 96-11.

[8] Shantz, T., and M. Merriam, 2009, Development of the Caltrans Deterministic PGA Map and Caltrans ARS Online, http://dap3.dot.ca.gov/ARS_Online/Tech_Docs/ARS%20Online%20and%20PGA%20Map%20Report.pdf, accessed January 27, 2020.

[9] Norris, R. M., and R. W. Webb, 1990, Geology of California, Second Edition, New York: John Wiley & Sons, Inc.

[10] Tuolumne County Environmental Health, 2018, Soil and Site Field Evaluation, 68-120-06.

bedrock and not on a groundwater basin or oil field, subsidence is not considered a significant potential hazard at the site.

Seismic Hazards

Earthquake Faults and Historic Earthquakes

Historically, the site has generally not experienced a major destructive earthquake. Based on a search of earthquake databases of the United States Geological Survey's (USGS) National Earthquake Information Center,[11] three major earthquakes (Magnitude 5.8 or greater) have been recorded within approximately 60 miles of the site since 1769. The latest was the 1990 Mono Basin earthquake of Magnitude 5.8. Table 4.7-1 summarizes the Magnitude and distance to these seismic events.

TABLE 4.7-1 HISTORICAL EARTHQUAKES WITHIN 60 MILES OF THE PROJECT SITE

Date	Location	Magnitude (M)	Approximate Epicentral Distance from the Project Site (miles)
5/25/1980	Long Valley	6.0	59
9/30/1981	Convict Lake	5.9	60
10/24/1990	Mono Basin	5.8	49

Source: USGS Earthquake Catalog, https://earthquake.usgs.gov/earthquakes/search/, accessed January 27, 2020.

Surface (Fault) Rupture

The potential for ground rupture due to fault movement is generally considered related to the seismic activity of known fault zones. Earthquake Fault Zones (formerly known as special study zones) have been established along known active faults in California in accordance with the Alquist-Priolo Earthquake Fault Zoning Act. Based on a review of the referenced geologic and seismic literature, the site is not within an Alquist-Priolo Earthquake Fault Zone and the nearest is located about 46 miles east of the site for the Mono Lake Fault Zone.

Strong Seismic Ground Shaking

The maximum magnitude earthquake (Mmax) is considered to be the largest earthquake that is expected to occur along a fault under the current tectonic framework and is based in part on various fault characteristics (length, style of faulting, and historic seismicity). The Mono Lake Fault is the dominant active fault that could be expected to affect the site.[12]

[11] United States Geological Survey, 2019, National Earthquake Information Center Earthquake Catalog, https://earthquake.usgs.gov/earthquakes/search/, accessed January 27, 2020.

[12] United States Geological Survey, 2019, Unified Hazard Tool, https://earthquake.usgs.gov/hazards/interactive/, accessed January 27, 2020.

Slope Failure

Landslides are perceptible downward movements of a mass of earth (soil and/or debris), rock, or a combination of the two under the influence of gravity. Landslide materials are commonly porous and very weathered in the upper portions and along the margins of the slide. They may also have open fractures or joints. Slope failures can occur during or after periods of intense rainfall or in response to strong seismic shaking. Areas of high topographic relief, such as steep canyon walls, are most likely to be impacted by slope failure. Based on a review of the Deep-Seated Landslide Susceptibility map by CGS, there may be some potential for slope failure on the steeper eastern portion of the site.[13]

Liquefaction and Related Ground Failure

Liquefaction is a process whereby strong ground shaking causes sediment layers that are saturated with groundwater to lose strength and behave as a fluid. This subsurface process can lead to near-surface or surface ground failure that can result in property damage and structural failure. If surface ground failure does occur, it is usually expressed as lateral spreading, flow failures, ground oscillation, and/or general loss of bearing strength. Sand boils (injections of fluidized sediment) can commonly accompany these different types of failure. In order to determine a region's susceptibility to liquefaction, the following three major factors must be analyzed:

- The intensity and duration of ground shaking.
- The age and textural characteristic of the alluvial sediments. Generally, the younger, less-well-compacted sediments tend to have a higher susceptibility to liquefaction. Textural characteristics also play a dominant role in determining liquefaction susceptibility. Sand and silty sands deposited in river channels and floodplains tend to be more susceptible to liquefaction, and floodplains tend to be more susceptible to liquefaction than coarser or finer grained alluvial materials.
- The depth to the groundwater. Groundwater saturation of sediments is required for earthquake-induced liquefaction to occur. In general, groundwater depths shallower than 10 feet to the surface can cause the highest liquefaction susceptibility.

Research and historical data indicate that loose, granular materials at depths of less than 50 feet, with silt and clay contents of less than 30 percent, and saturated by relatively shallow groundwater table are most susceptible to liquefaction. These geological conditions are typical in parts of central California including valley regions and alluvial floodplains. Based on a review of the Tuolumne County General Plan Technical Background Report, the potential for liquefaction at the site is minimal.[14]

Lateral spreading is a phenomenon where large blocks of intact, non-liquefied soil move downslope on a large liquefied substratum. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff and has been known to move on slope gradients as little as one degree.

[13] Wills, C. J., F. Perez, and C. Gutierrez, 2011, Susceptibility to Deep-Seated Landslides in California: California Geological Survey Map Sheet 58, https://maps-cnra-cadoc.opendata.arcgis.com/datasets/3cdc744bec6b45c28206e472e8ad0f89_0, accessed January 27, 2020.

[14] Tuolumne County Community Resources Agency, 2018, Tuolumne County General Plan, Volume II: Technical Background Report, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11753/Vol-II-TBR--Final, accessed January 27, 2020.

Seismically induced ground lurching occurs when soil or rock masses move at right angles to a cliff or steep slope in response to seismic waves. Structures built on these masses can experience significant lateral and vertical deformations if ground lurching occurs.

Paleontological Resources

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. These are valued for the information they yield about the history of the earth and its past ecological settings. There are two types of resources: vertebrate and invertebrate. These resources are found in geologic strata conducive to their preservation, typically sedimentary formations. Paleontological sites are areas that show evidence of pre-human activity. Often, they are simply small outcrops visible on the surface or sites encountered during grading. While the sites are important indications, it is the geologic formations that are the most important, since they may contain important fossils. Potentially sensitive areas for the presence of paleontological resources are based on the underlying geologic formation. Based on the weathered bedrock geology of the site, it is unlikely that significant paleontological resources would be found on the site.

Unique Geology

What makes a geologic unit or feature unique can vary considerably.[15] A geologic feature is unique if it:

- Is the best example of its kind locally or regionally;
- Embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally;
- Provides a key piece of geologic information important in geology or geologic history;
- Is a “type locality” of a geologic feature;
- Is a geologic formation that is exclusive locally or regionally;
- Contains a mineral that is not known to occur elsewhere in the county; or
- Is used repeatedly as a teaching tool.

The type locality is the place where a geologic feature (such as an ore occurrence, a particular igneous rock, or a particular geologic formation) was first recognized and described, and from which the feature usually takes its name. A type locality is unique and exists only at one location. These sites are the basis for categorizing geologic features and are extremely important to the field of geology.

4.7.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant geology and soils impacts if it would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; iv) landslides, mudslides, or other similar hazards.

[15] County of San Diego Department of Planning and Land Use, 2007, County of San Diego Guidelines for Determining Significance, Unique Geology.

2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
4. Be located on expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Pursuant to a 2015 California Supreme Court decision (*California Building Industry Association vs. Bay Area Air Quality Management District*, 62 Cal.4th 369), impacts of the environment on a project are now excluded from CEQA with certain exceptions. One exception is where development of a project would exacerbate an existing hazard. Two examples of this are: 1) where ground disturbance by a project could expose people and/or the environment to existing soil contamination, and 2) where a project could contribute to the potential for soil collapse by wetting soil (such as by irrigation) and/or placing a load (such as a building) on soil. However, a project attracting increased numbers of people to a place affected by an existing hazard, for instance by building structures on an active fault, is no longer an impact within the purview of CEQA. Therefore, the analysis for most of the following thresholds focuses on whether the project development would exacerbate an existing hazard.

4.7.3 IMPACT DISCUSSION

GEO-1	**The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; ii) strong seismic ground shaking; iii) seismic-related ground failure, including liquefaction; iv) landslides, mudslides, or other similar hazards.**

Seismic Hazards

The site's location and underlying geology make it unlikely to experience seismic hazards, including surface (fault) rupture and strong seismic ground shaking.

- Surface (Fault) Rupture. Seismic activity has been known to cause surface rupture, or ground displacement, along a fault or within the general vicinity of a fault zone. Surface rupturing could damage or destroy infrastructure, pipelines, roads, and bridges. Areas with known surface rupture hazards are identified as Alquist-Priolo Special Study Zones. Primary ground rupture can also be expected to spread into secondary areas. The nearest Alquist-Priolo Earthquake Fault Zone is for the

Mono Lake Fault, located about 46 miles east of the site. The project site would not experience surface rupture in the event of an earthquake.

- **Seismic Ground Shaking.** Ground shaking is responsible for most of the damage from earthquakes and can damage or destroy buildings, structures, pipelines, and infrastructure. The intensity of shaking depends on the type of fault, distance to the epicenter, magnitude of the earthquake, and subsurface geology. The Mono Lake Fault located about 46 miles east of the site is potentially capable of producing the most intense ground accelerations at the site. Due to the distance, only moderate ground shaking is likely at the site. The seismic design of buildings within the project boundaries is governed by the requirements of the most recent CBC. All site-specific seismic design parameters must be determined based on the subsurface soil conditions encountered during a geotechnical/engineering geologic investigation. Compliance with the CBC, including specific provisions for seismic design, would minimize the effects of earthquakes. The CBC has been accepted as the basic design standard in Tuolumne County.[16] Further, the project is required to have a soil engineering report prepared and submitted to the County according to Section 12.20.160 of the Tuolumne County Grading Ordinance. The design of structures in accordance with the CBC is expected to minimize the effects of ground shaking to the greatest degree feasible and to less-than-significant levels.

Secondary Effects

Secondary effects of earthquakes are nontectonic processes such as ground deformation, including fissures, settlement, displacement, and loss of bearing strength, and are the leading causes of damage to structures during a moderate to large earthquake. Secondary effects leading to ground deformation include liquefaction, lateral spreading, seismically induced landslides, and ground lurching.

Liquefaction

Based on the low likelihood of any seismicity both sufficiently large and close enough to the site to cause liquefaction effects, liquefaction susceptibility is minimal.[17]

Landslides

Marginally stable slopes (including existing landslides) may be subject to landslides caused by earthquakes. The landslide hazard depends on many factors, including existing slope stability, shaking potential, and presence of existing landslides. The terrain of the site is varied, ranging from gently sloping to hilly. Based on a review of the Deep-Seated Landslide Susceptibility map by CGS, there may be some potential for slope failure on the steeper eastern portion of the site.[18] The project would not create any structures or related facilities on the eastern portion of the site. Any grading permit must have a soil

[16] Tuolumne County Code of Ordinances, Title 15, Buildings and Construction, Chapter 15.04, Construction Code.

[17] Tuolumne County Community Resources Agency, 2018, Tuolumne County General Plan, Volume II: Technical Background Report, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11753/Vol-II-TBR--Final, accessed January 27, 2020.

[18] Wills, C. J., F. Perez, and C. Gutierrez, 2011, Susceptibility to Deep-Seated Landslides in California: California Geological Survey Map Sheet 58, https://maps-cnra-cadoc.opendata.arcgis.com/datasets/3cdc744bec6b45c28206e472e8ad0f89_0 , accessed January 27, 2020.

engineering report prepared and submitted to the County according to Section 12.20.160 of the Tuolumne County Grading Ordinance. Therefore, landslide impacts are not expected at the site.

Lateral Spreading

Based on the low likelihood of any seismicity both sufficiently large and close enough to the site to cause seismically induced lateral spreading, the potential for lateral spreading is minimal.

Settlement, Subsidence, and/or Collapse

The potential hazard posed by seismic settlement and/or collapse at the site is minimal based on the low likelihood of any seismicity both sufficiently large and close enough to the site for such conditions to occur. Strong ground shaking can cause settlement of alluvial soils underlying a site by allowing sediment particles to become more tightly packed.

Subsidence of basins attributed to overdraft of groundwater aquifers or overpumping of petroleum reserves has been reported in various parts of California. The site is located on weathered bedrock geology and is not close to any known petroleum reserves. Based on the lack of any evidence of mining activities on the site, the potential for subsidence or collapse is minimal.

Ground Lurching

Based on the low likelihood of any seismicity both sufficiently large and close enough to the site to cause ground lurching, the potential for ground lurching is minimal.

Significance without Mitigation: Less than significant.

GEO-2 The project would not result in substantial soil erosion or the loss of topsoil.

Soils are particularly prone to erosion during the grading phase of development, especially during heavy rains. The use of a Storm Water Pollution Prevention Plan (SWPPP), which specifies best management practices for temporary erosion controls, reduces the potential for erosion during construction period activities. Standard erosion control measures would be implemented as part of the SWPPP for the proposed project to minimize the risk of erosion or sedimentation during construction. The SWPPP must include an erosion control plan that prescribes measures such as phasing grading, limiting areas of disturbance, designating restricted-entry zones, diverting runoff from disturbed areas, protective measures for sensitive areas, outlet protection, and provisions for revegetation or mulching.

Mandatory compliance with existing regulations, including the preparation and submittal of SWPPP, and a soil engineering evaluation, would reduce impacts to a *less-than-significant* level. A comprehensive discussion of erosion and water quality from rain events can be found in Chapter 4.10, Hydrology and Water Quality.

Significance without Mitigation: Less than significant.

GEO-3	**The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.**

The project is required to have a soil engineering report prepared and submitted to the County according to Section 12.20.160 of the Tuolumne County Grading Ordinance. The site area is underlain by weathered Mesozoic granitic rocks and Paleozoic marine rocks.[19] Conformance with the Tuolumne County Grading Ordinance (i.e., Chapter 12.20 of the Tuolumne County Ordinance Code) would ensure that site development would not destabilize the ground, or create new landslide, lateral spread, subsidence, liquefaction or collapse susceptibility. Therefore, the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

GEO-4	**The project site contains small quantities of expansive soil, as defined by Table 18-1-B of the Uniform Building Code (1994), but would not create substantial direct or indirect risks to life or property.**

Based on the trenching performed on the site, small quantities of clay materials were observed on the site. Therefore, expansive soils are a possibility on the project site. However, since the site will be developed in conformance with the provisions of the Tuolumne County Grading Ordinance (Chapter 12.20 of the Tuolumne County Ordinance Code), the project will be sufficiently evaluated for the condition and, if present, any expansive soils would be mandatorily abated during grading. Therefore, the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

GEO-5	**The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.**

Based on the Soil and Site Evaluation conducted by Tuolumne County Environmental Health, the soils encountered in the proposed leach fields in the northwest corner of the project site are capable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. During the field investigation, a total of eighteen trenches were excavated for obtaining soil descriptions in the area of the proposed leach fields.[20] Soils were described as mostly loam and silt loam, with minor occurrences of sandy loam and silty clay loam also observed. The on-site soils were classified in the Soils Report prepared by Don Myers as good to very good for supporting septic systems.[21] According to Myers, the proposed

[19] Strand, R. G., 1967, Geologic Map of California, Mariposa Sheet, California Division of Mines and Geology scale 1:250,000.
[20] Tuolumne County Environmental Health, 2018. Soil and Site Field Evaluation, 68-120-06, dated April 23, 2018.
[21] Myers, Don, 2018, Highway 120 Corridor Soils Report, dated April 30, 2018.

leach fields for the on-site wastewater system would provide a "more than adequate" area for the system to work as designed. [22] Therefore, the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

GEO-6 The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The site area is underlain by weathered Mesozoic granitic rocks and Paleozoic marine rocks.[23] The depth of weathering on the site has been demonstrated by trenching to extend over nine feet below the surface.[24] Paleozoic marine rocks are mapped on the southwestern portion of the site, near the intersection of Highway 120 and Sawmill Mountain Road, with the remainder of the site is mapped as Mesozoic granitic rocks.[25] Paleozoic marine rock outcrops would have the potential to have paleontological resources, although the grading of the project is unlikely to extend deep enough to uncover fresh outcrops of these rocks. Granitic rocks do not have the potential for paleontological resources due to their molten origin. Therefore, the soils beneath the site are mostly the product of in-situ chemical weathering processes, and not large scale fluvial or eolian deposition. Colluvium (i.e. slope wash deposits) may be located near the bottom of steeper Mesozoic granitic slopes on the north central portion of the site, although this type of deposit is unlikely to contain paleontological resources.

Due to the weathered nature of the bedrock on the site, it is unlikely that any unique geologic feature exists on the site. Therefore, the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

4.7.4 CUMULATIVE IMPACTS

GEO-7 Project impacts are not cumulatively significant with other development projects in the vicinity.

Geology and soils impacts related to the proposed project would be specific to that site and its users and would not be common or contribute to the impacts (or shared with, in an additive sense) on other sites. Compliance with applicable State and local building regulations would be required of all development in unincorporated Tuolumne County. Individual projects would be designed and built in accordance with applicable standards in the CBC, as well as in cases where applicable the Tuolumne County building regulations, including pertinent seismic design criteria. Site-specific geologic hazards are addressed in the Soil Engineering Report as described under GEO-5. This geologic investigation to be prepared for the proposed project would identify the specific geologic and seismic characteristics of the site and provide

[22] Myers, Don, 2018, Highway 120 Corridor Soils Report, dated April 30, 2018.
[23] Strand, R. G., 1967. Geologic Map of California, Mariposa Sheet, California Division of Mines and Geology scale 1:250,000.
[24] Tuolumne County Environmental Health, 2018. Soil and Site Field Evaluation, 68-120-06, dated April 23, 2018.
[25] Strand, R. G., 1967, Geologic Map of California, Mariposa Sheet, California Division of Mines and Geology scale 1:250,000.

guidelines for engineering design and construction to maintain the structural integrity of proposed structures and infrastructure. Therefore, compliance with applicable State and local building regulations and standard engineering practices related to seismic and geologic hazard reduction would prevent significant cumulative adverse impacts associated with geologic and seismic hazards.

Impacts related to paleontological resources would have site-specific impacts, and the proposed project, combined with other cumulative projects would be required to be assessed, and mitigated, if necessary. Provided that site-specific impacts are reduced to a less than significant level, no cumulatively significant impacts are anticipated.

Impacts of the proposed project and other development projects on geology and soils would not be cumulatively considerable with compliance with existing regulations. Therefore, the impact is *less than significant*.

Significance without Mitigation: Less than significant.

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4.8 GREENHOUSE GAS EMISSIONS

This chapter describes the regulatory framework and existing conditions on the project site related to greenhouse gas (GHG) emissions, and the potential impacts of the project on GHG emissions. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough GHG emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact. Therefore, the GHG chapter measures the proposed project's contribution to the cumulative environmental impact.

The analysis in this chapter is based on the following technical study, which is included as Appendix C, and is referred to throughout this chapter as the Air Quality Study:

- Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, June 2020.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

GHGs are atmospheric gases that reflect visible light and infrared radiation back to Earth, acting as global insulators. The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming.

Table 4.8-1 describes the primary GHGs attributed to global climate change, including their physical properties.

While there are several different components of GHGs, with each contributing to climate change in varying intensities, CO_2 is the most common component. Emissions are commonly assessed in CO_2 equivalent (CO_2e) which refers to a weighted composite of several compounds expressed as the equivalent amount of CO_2. This allows for a singular measurement of GHG emissions.

GREENHOUSE GAS EMISSIONS

TABLE 4.8-1 DESCRIPTION OF GREENHOUSE GASES

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of Chlorofluorocarbons (CFCs) and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from Unites States Environmental Protection Agency (USEPA), *Overview of Greenhouse Gases*, April 11, 2018. (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); USEPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; IPCC *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; USEPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

4.8.1.2 REGULATORY FRAMEWORK

Federal Regulations

As discussed in Chapter 4.2, Air Quality, the Clean Air Act requires the United States Environmental Protection Agency (USEPA) to define ambient air quality standards (AAQS). It does not specifically regulate GHG emissions, and there are no federal regulations that establish AAQS for GHGs. However, the USEPA announced in 2009 that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The USEPA's final findings respond to the 2007 U.S. Supreme Court decision from *Massachusetts v. U.S. Environmental Protection Agency* that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission reduction requirements but allowed the USEPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.[1]

To regulate GHGs from passenger vehicles, the USEPA issued an endangerment finding.[2] The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6— that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the proposed project's GHG emissions inventory because they constitute the majority of GHG emissions.

- US Mandatory Report Rule for Greenhouse Gases (2009). In response to the endangerment finding, the USEPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 metric tons of CO_2e ($MTCO_2e$) per year are required to submit an annual report.
- Update to Corporate Average Fuel Economy Standards (2010 to 2012). The current Corporate Average Fuel Economy (CAFE) standards (for models 2011 to 2016) incorporate stricter fuel economy requirements into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. The federal government issued new standards in 2012 for model years 2017 to 2025, which will require a fleet average of 54.5 miles per gallon in 2025. The USEPA is reexamining the 2017 to 2025 emissions standards.
- USEPA Regulation of Stationary Sources under the Clean Air Act (Ongoing). Pursuant to its authority under the Clean Air Act, the USEPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the 2013 Climate Action Plan, the USEPA was directed to also develop regulations for existing stationary sources. However, the USEPA is reviewing the Clean Power Plan under the current Energy Independence Executive Order.

[1] U.S. Environmental Protection Agency, 2009. EPA: Greenhouse Gases Threaten Public Health and the Environment. https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html, accessed January 29, 2020.

[2] U.S. Environmental Protection Agency, 2009. EPA: Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean, accessed January 29, 2020.

State Regulations

The California Air Resources Board (CARB) is responsible for coordination and oversight of State and local air pollution control programs for California. There are not currently regulations that establish AAQS for GHGs, however several state legislative actions relating to climate change and GHG emissions have been established and California has passed several laws that direct the CARB to reduce GHG emissions.

Executive Order S-3-05

Executive Order S-03-05 was signed June 1, 2005, and set the following GHG reduction targets for California:

- 2000 levels by 2010.
- 1990 levels by 2020.
- 80 percent below 1990 levels by 2050.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

Assembly Bill (AB) 32 was signed in 2006 and follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05. It established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide emissions. Under AB 32, the California Air Resources Board (CARB) prepared the *2008 Climate Change Scoping Plan*, the *2014 Climate Change Scoping Plan,* and the *2017 Climate Change Scoping Plan.*

The 2008 Scoping Plan, adopted by CARB in December 2008, identified that GHG emissions in California are anticipated to be 596 million $MTCO_2e$ ($MMTCO_2e$) in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ for the state. To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted in May 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goal defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 (Intergovernmental Panel on Climate Change Fourth Assessment Report) GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 $MMTCO_2e$.[3] As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. The update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the State to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by

[3] California Air Resources Board, 2014. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006.

statewide goals.[4] CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit.[5]

Executive Order B-30-15

Executive Order B-30-15, signed in April 2015, sets a goal of reducing GHG emissions within the state to 40 percent below 1990 levels by 2030. It also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 from Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197 of 2016

Senate Bill (SB) 32 and AB 197 were signed in 2016, making the Executive Order goal for year 2030 into a statewide mandated legislative target. SB 32 amended the California Health and Safety Code to include Section 38566, authorizing the CARB to achieve the statewide reduction in GHG emissions of at least 40 percent below 1990 levels by no later than December 31, 2030. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the State. CARB adopted the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) to address the 2030 target for the State. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to the 40 percent decrease in 1990 levels by 2030.[6]

Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE vehicle buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolios Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, and utilizes near-zero emissions technology, and deployment of zero-emission vehicle trucks.

[4] California Air Resources Board, 2014, First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006.

[5] Ibid.

[6] California Air Resources Board, 2017, California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed January 29, 2020.

- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

The 2017 Scoping Plan identified local governments as essential partners in achieving the State's long-term GHG reduction goals and recommended local actions to reduce GHG emissions. CARB recommends that local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. For CEQA projects, CARB states that lead agencies have the discretion to develop evidence-based numeric thresholds consistent with the Scoping Plan and the State's long-term goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.[7] Table 4.8-2 provides GHG emissions by sector, for 1990, and the range of GHG emissions for each sector estimated for 2030, and the percent change compared to 1990 levels.

TABLE 4.8-2 2017 CLIMATE CHANGE SCOPING PLAN EMISSIONS BY SECTOR TO ACHIEVE THE 2030 GHG TARGET

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
Total	**431**	**260**	**-40%**

Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined.
Source: California Air Resources Board. 2017, California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed on January 29, 2020.

[7] California Air Resources Board, 2017, California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf, accessed January 29, 2020.

Local Regulations

Tuolumne County General Plan

The Climate Change Element is contained in Chapter 18 of the Tuolumne County General Plan. Below is Policy 18.A.1 from this Element, with the addition of amendments from General Plan Amendment GPA13-005(3), dated December 4, 2019:

> Prepare a Climate Action Plan (CAP), or similar GHG emission reduction plan, that establishes a GHG reduction target consistent with the Senate Bill (SB) 32 goal to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030 and taking into consideration the Executive Order S-3-05 goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. The County will first update the baseline inventory of jurisdiction-wide greenhouse gas emissions. The CAP shall identify specific measures to reduce countywide emissions consistent with the established target and will also include adaptation strategies for the County to appropriately adjust to the environmental effects of climate change. Many of the measures in the CAP will overlap with and help implement goals, policies, and implementation programs identified in this General Plan.

Tuolumne County does not yet have a CAP at the time of preparation of this Draft EIR. Prior to adoption of a CAP, Policy 18.A.2 states to continue implementation of the 2012 Tuolumne County Regional Blueprint Greenhouse Gas Study, which is to reduce GHG emissions to 1990 levels by 2020 pursuant to Assembly Bill 32. This will be superseded by the CAP when the CAP is implemented.

2012 Tuolumne County Regional Blueprint Greenhouse Gas Study

The Tuolumne County Transportation Council put together the Tuolumne County Regional Blueprint Greenhouse Gas Study, adopted by the County Board of Supervisors in January 2012, which includes a countywide GHG emissions inventory of 2010 emissions and projected emissions through 2040 for three different growth scenarios. The Regional Blueprint GHG Study identifies a project-level GHG emissions threshold of 4.6 $MTCO_2e$ per service population per year that can be applied evenly to future land development applications countywide to ensure new development reduces its share of emissions, consistent with AB 32 and the countywide reduction target. The service population is the sum of the number of jobs and the number of residents provided by a project. As the CARB and USEPA do not have established thresholds for GHG emissions, this is used as a significance threshold for GHG emissions analysis in the Air Quality Study and in this Draft EIR.

4.8.1.3 EXISTING CONDITIONS

Statewide

Based on the data included in the Air Quality Study, transportation, industrial, and electric power are the three largest source categories of GHG emissions in California. Relatively smaller sources of emissions include commercial and residential, agricultural, and high global warming potential activities (e.g. electricity grid losses, semiconductor manufacturing). Inventory emissions from CARB at five-year

intervals from 2002 through 2017 are listed in Table 4.8-3. This table summarizes data included in the Air Quality Study, which was obtained from the CARB's website.

TABLE 4.8-3 CALIFORNIA GHG INVENTORY FOR YEARS 2000-2017 IN MILLION TONS OF CO_2E

Source	2002	2007	2012	2017
Transportation	188.07	188.82	161.31	169.86
Industrial	96.53	90.18	91.08	89.40
Electric Power	108.64	113.93	95.52	62.39
Commercial and Residential	44.85	43.99	43.76	41.14
Agriculture	33.24	35.22	35.46	32.42
High GWP	7.08	10.83	15.54	19.99
Recycling and Waste	7.46	7.94	8.49	8.89
Total*	**485.88**	**490.90**	**451.16**	**424.10**

Notes:
*Numbers from CARB table included in Air Quality Study and available from the CARB website:
https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-17.pdf
Totals may not add up due to rounding.
Source: Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, March 20, 2020. Data from California Air Resources Board

Tuolumne County

GHG emissions from Tuolumne County result from activities and operations from residential energy consumption, non-residential energy consumption, transportation, off-road vehicles and equipment, agriculture and forestry, wastewater, and solid waste activities. Based on information presented in the Air Quality Study, in 2010, Tuolumne County emitted approximately 782,846 $MTCO_2e$ emissions. Based on three different future scenarios, GHG emissions for the county are expected to increase to between 820,300 and 821,586 $MTCO_2e$ by 2040. These scenarios were a "recent trends" scenario if planning policies remain unchanged; a "public services" scenario that places future growth emphasis on the general availability of public infrastructure and services; and a "distinctive communities" scenario allocates more dense land use growth in or near existing population centers, assuming that urban areas will attract a relatively higher rate of growth than less urbanized areas. It should be noted that the "distinctive communities" scenario was selected by the Tuolumne County Board of Supervisors and the Tuolumne County Transportation Commission as the preferred growth scenario, which included a GHG emissions increase estimate to 821,107 $MTCO_2e$ by 2040.[8] In the year 2010, and in all three of the different scenarios, transportation generated the largest amount of GHG emissions in the county, followed by residential and off-road vehicles and equipment.

[8] Tuolumne County Transportation Council, 2017, 2016 Final Regional Transportation Plan.

4.8.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant greenhouse gas emission impacts if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

In 2012, the Tuolumne County Transportation Council (TCTC) conducted a regional blueprint planning effort which evaluated existing and projected GHG emissions. The Tuolumne County *Regional Blueprint Greenhouse Gas Study* identified policies and measures Tuolumne County and land use project applicants can implement to reduce GHG emissions consistent with AB 32 goals of reducing GHG emissions to 1990 levels by the year 2020. The study identified a project-level significance threshold of 4.6 MT CO2e per service population per year that can be applied evenly to future land development applications. The *Tuolumne County Regional Blueprint Greenhouse Gas Study* and associated project-level significance threshold were adopted by the County Board of Supervisors in January 2012.

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 contains language to authorize ARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. The SB 32 emission reduction goal for 2030 is an extension of the AB 32 goal for 2020, reducing the 2020 target by 40 percent in the year 2030.

The County recognizes the adopted 4.6 MT CO2e per service population per year significance threshold is consistent with the 2020 GHG emissions goal of AB32, rather than the 2030 goal of SB 32, which is 40 percent lower. A threshold reflecting the 40 percent reduction would be 2.8 MT CO2e per service population per year (4.6 x 0.60 = 2.76). While a significance threshold of 2.8 MT CO2e per service population per year could be considered consistent with the 2030 goal of SB 32, this threshold has not been considered for adoption by the County.

In lieu of an adopted GHG significance threshold that reflects the SB 32 GHG emission goal, this EIR applies a conservatively stringent threshold of no net change in GHG emissions. That is, a project is considered to have a significant impact on GHG emissions if the project would result in a net increase in GHG emissions, measured in MT of CO2e per year.

4.8.3 IMPACT DISCUSSION

4.8.3.1 METHODOLOGY

As described in more detail in Chapter 4.2, Air Quality, under Section 4.2.3.1, Methodology, the Air Quality Study analyzed construction- and operation-related air quality impacts using CalEEMod emissions modeling software version 2016.3.2. This included impacts from GHG emissions which are summarized below in Table 4.8-4.

TABLE 4.8-4 ESTIMATED ANNUAL GHG EMISSIONS

Emissions Category	Metric Tons of Carbon Monoxide Equivalent ($MTCO_2e$)
Construction Emissions 2021	769
Construction Emissions 2022	263
*Annual Operational Emissions**	
Area	0
Energy	416
Mobile	1,465
Waste	41
Water	26
Total	1,948

Notes: *Numbers are rounded.
Source: Air Quality Study for the Terra Vi Lodge Project, prepared by KD Anderson & Associates, March 20, 2020

Construction-related emissions are calculated for a two-year timeline, planned for 2021 and 2022. The larger portion of construction-related emissions would occur during the first year from the initial land development activities. Operational emissions estimates account for energy use, associated mobile sources, waste management, water use, and area emissions. The largest source category of operational GHG emissions from the proposed project would be motor vehicle travel. The total estimated annual GHG emissions from the proposed project is 1,948 $MTCO_2e$.

GHG-1 The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The project incorporates several design features to help reduce GHG emissions during project operation:

- Enhanced transit use by guests or park and ride users, resulting in reduced mobile source emissions.
- Implementation of Title 24 2019 Building Energy Efficiency Standards, resulting in buildings consuming less energy by reducing the amount of electricity used, and thus the amount of fossil fuels needed to generate electricity.
- Inclusion of solar photovoltaic electricity generating systems on the roof of the hotel portion of the project, with solar collection and battery storage. This reduces the amount of fossil fuels used to generate electricity.
- Use of greywater for outdoor water uses including landscape irrigation, reducing energy consumption from the treatment and transport of potable water.
- Use of low-flow fixtures for indoor water use, reducing energy consumption due to treatment and transport of water.
- Implementation of recycling and composting services. Waste decomposition produces methane, a GHG, and transport of waste to the landfill produces GHG emissions from the vehicle's fuel combustion. Reducing landfill waste through recycling and composting services reduces waste generation which contributes to GHG emissions.

The Air Quality Study considered the project to have a significant impact on GHG emissions if it would result in a net increase in GHG emissions measured in MT of CO_2e per year. As shown in Table 4.8-4, it is estimated that the project would result in 769 $MTCO_2e$ during the first year of construction, 263 $MTCO_2e$ during the second year of construction, and 1,948 $MTCO_2e$ in annual operational emissions. Since the proposed project would result in a net increase in GHG emissions, during both construction and operation, impacts would be *significant*.

Significance without Mitigation: Significant.

Impact GHG-1.1: Construction of the proposed project would result in a net increase in GHG emissions.

Mitigation Measure GHG-1.1a: The proposed project shall use electrically powered construction equipment, where feasible.

Mitigation Measure GHG-1.1b: The net increase in GHG emissions associated with the Terra Vi Lodge Project could be further reduced by the applicant purchasing carbon credits to offset GHG emissions. Carbon credits, however, are market-based. The availability, amount, and price of carbon credits fluctuate over time. As a result, it is unknown if local carbon credit offsets would be available at the time the project is implemented. Additional carbon credit offsets are available on a statewide or national level. However, even though the impact of GHG emissions is considered to be global in scale, the CEQA legal adequacy of applying statewide or national offsets to individual local projects has been questioned. In addition, while the County considered application of carbon credits to offset GHG emissions due to the proposed project, the County General Plan places a higher priority on implementing local mitigation measures before application of offsets. As a result of the unknown availability of local carbon credits, mitigation measures needed to eliminate any net increase in GHG emissions are considered to be not available, application of this mitigation measure is not considered to reduce the GHG emissions impacts of the project to a less-than-significant level, and this impact is considered to be significant and unavoidable.

Significance with Mitigation: Significant and unavoidable.

Impact GHG-1.2: Operation of the proposed project would result in a net increase in GHG emissions.

Mitigation Measure GHG-1.2a: The proposed project shall use electrically powered landscape equipment during outdoor landscaping and maintenance activities.

Mitigation Measure GHG-1.2b: As noted in the description of Mitigation Measure GHG-1.1b, because of the unknown availability of local carbon credits, mitigation measures needed to eliminate any net increase in GHG emissions are considered to be not available, application of this mitigation measure is not considered to reduce the GHG emissions impacts of the project to a less-than-significant level, and this impact is considered to be significant and unavoidable.

Significance with Mitigation: Significant and unavoidable.

GHG-2	**The project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.**

The proposed project would provide lodging and recreational services for visitors of the area. The estimated annual emissions from the project would be 1,947.71 $MTCO_2e$**.** Operation of the project would not be a source of large emissions requiring air permitting and mandatory emissions reporting pursuant to the US Mandatory Report Rule for GHG or California AB 32, which require reporting from facilities producing 25,000 $MTCO_2e$ per year.

Furthermore, as described in Chapter 3, Project Description, the proposed project would incorporate an energy-efficient building program and would be required to achieve the latest Building Energy Efficiency Standards. The project would include a tree preservation program to preserve a majority of existing trees on-site and plant additional trees; building materials based on resiliency and from repurposed or recycled materials where applicable; energy-efficient windows, doors, insulation, roofing, and heating and cooling equipment; roof-mounted solar photovoltaic and solar thermal panel systems; a water conservation program and high efficiency mechanical equipment; and solid waste disposal reductions including recycling, composting, and food waste programs. It would utilize skylights for natural lighting where possible, and include managed occupancy smart thermostats, lighting control systems, and LED lighting.

Accordingly, the proposed project would not conflict with any statewide strategies to reduce GHG emissions. Therefore, impacts would be *less than significant* in this regard.

Significance without Mitigation: Less than significant.

4.8.4 CUMULATIVE IMPACTS

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact GHG-1 and GHG-2 are not project-specific impacts to global warming, but the proposed project's contribution to this cumulative impact.

4.9 HAZARDS AND HAZARDOUS MATERIALS

This chapter describes the regulatory framework and existing conditions on the project site related to hazards and hazardous materials, and an evaluation of the potential environmental consequences associated with the construction and operation of the proposed project that are related to the release of hazardous materials into the environment.

4.9.1 ENVIRONMENTAL SETTING

4.9.1.1 REGULATORY FRAMEWORK

Federal Regulations

Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments of 1984. These laws provide for the "cradle to grave" regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The Department of Toxic Substances Control (DTSC) is responsible for implementing the Resource Conservation and Recovery Act program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, the California Environmental Protection Agency (CalEPA) has in turn delegated enforcement authority to Tuolumne County Environmental Health for State law regulating hazardous waste producers or generators in the County. A CUPA is a local agency that has been certified by CalEPA to implement the local Unified Program. The CUPA can be a county, city, or joint powers authority. A participating agency is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. A designated agency is a local agency that has not been certified by CalEPA to become a CUPA, but is the responsible local agency that would implement the six Unified Programs until they are certified. Currently, there are 83 CUPAs in California.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act, also known as Title III of the Superfund Amendments and Reauthorization Act, was enacted in October 1986. This law requires any infrastructure at the State and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their communities. Emergency Planning Community Right-to-Know Act Sections 301 through 312 are administered by United States Environmental Protection Agency's (EPA) Office of Emergency Management. The EPA's Office of Information Analysis and Access implements the Emergency Planning Community Right-to-Know Act Section 313 program. In California, Superfund Amendments and Reauthorization Act Title III is implemented through California Accidental Release Prevention program.

The State of California has delegated local oversight authority of the California Accidental Release Prevention program to the County of Santa Clara.

Hazardous Materials Transportation Act

The United States Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. The California State Fire Marshal's Office has oversight authority for hazardous materials liquid pipelines. The California Public Utilities Commission has oversight authority for natural gas pipelines in California. These agencies also govern permitting for hazardous materials transportation.

Federal Response Plan

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies and other resource providers, including the American Red Cross, that: 1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; 2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and 3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency. The Federal Response Plan is part of the National Response Framework, which was most recently updated on June 2016.

Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 authorizes the federal government to provide assistance in emergencies and disasters when State and local capabilities are exceeded. The Robert T. Stafford Disaster Relief and Emergency Assistance Act constitutes statutory authority for most federal disaster response activities, especially as they pertain to the federal Emergency Management Agency and its programs.

National Response Framework

The 2016 National Response Framework, published by the Department of Homeland Security, is a guide to how the nation responds to all types of disasters and emergencies. The Framework describes specific authorities and best practices for managing incidents that range from serious local to large-scale terrorist attacks or catastrophic natural disasters. In addition, the Framework describes the principles, roles, and responsibilities, and coordinating structures for responding to an incident, and further describes how response efforts integrate with those of the other mission areas.

Occupational Safety and Health Administration

The federal Occupational Safety and Health Act of 1970 authorizes each state (including California) to establish their own safety and health programs with the United States Department of Labor, Occupational Safety and Health Administration's (OSHA) approval. The California Department of Industrial Relations regulates implementation of worker health and safety in California. California OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices. California standards for workers dealing with hazardous materials are contained in Title 8 of the California Code of Regulations and include practices for all industries (General Industrial Safety Orders), and specific practices for construction and other industries. Workers at hazardous waste sites (or working with hazardous wastes as might be encountered during excavation of contaminated soil) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response regulations.

OSHA Regulation 29 Code of Federal Regulations Standard 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. Federal, state, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials (ACMs), including the demolition of structures where asbestos is present. All friable (crushable by hand) ACMs, or non-friable ACMs subject to damage, must be abated prior to demolition following all applicable regulations.

Federal Aviation Administration

The Federal Aviation Administration (FAA) provides standards for developing emergency helicopter landing facilities (EHLFs) in Advisory Circular 150/5390-2C. The circular covers general aviation heliports, including private use, transport heliports, hospital heliports, and emergency landing facilities. The FAA recommends guidelines and specifications in the circular for materials and methods used in the construction of EHLFs. The operator must complete FAA Form 7460-1 (Notice of Proposed Construction and Alteration), FAA Form 7480-1 (Notice of Landing Area), and other requirements listed under Part 157 for persons proposing to construction, activate, deactivate, or alter a heliport to give advance notice of their intent to the FAA. The operator must also advise the local Terminal Approach Radar Control or the local Air Traffic Control facility manager in writing of the EHLF.

The proposed emergency helipad is not intended to operate as a helistop or heliport for private use landings and would be considered an EHLF. Therefore, no notice for an airspace evaluation (FAA 7480) needs to be filed with the FAA.

California Department of Transportation, Division of Aeronautics

Under the State Aeronautics Act, the California Department of Transportation (Caltrans) has authority to grant permits for the planning, construction, establishment, maintenance, and operation of airports and air navigation facilities. Sections 3534(b)(1), 3550, 3551, and 3554 provide required details, which include heliport design standards such as the TLOF (Touchdown and Liftoff Area), FATO (Final Approach and Takeoff Area), and Safety Areas, Federal Aviation Regulation Part 77 imaginary surfaces including the Primary, Approach, and Transitional Surfaces, and required marking, lighting, and visual aids.

The Caltrans Division of Aeronautics issues permits for heliports and helipads in the State of California. An EHLF is exempt from Caltrans Division of Aeronautics heliport permitting requirements in accordance with Division of Aeronautics – Caltrans – Title 21 CCR 3533 (b)(8) provided it is not used for any purpose other than as an emergency use facility.

State Regulations

California Building Code

The State of California provided a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The CBC is based on the 2015 International Building Code, but has been modified for California conditions. The CBC is updated every three years, and the current (2016) CBC went into effect January 1, 2020. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the typical fire safety requirements of the CBC, including the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official Fire Code for the State and all political subdivisions. It is located in Part 9 of Title 24 of the California Code of Regulations. The CFC is revised and published approximately every three years by the California Building Standards Commission, and the current CFC went into effect January 1, 2020.

California Governor's Office of Emergency Services

The California Governor’s Office of Emergency Services (Cal OES) began as the State War Council in 1943. With an increasing emphasis on emergency management, it officially became Cal OES in 1970. The California Emergency Management Agency was established as part of the Governor’s Office on January 1, 2009—created by Assembly Bill 38 (Nava), which merged the duties, powers, purposes, and responsibilities of the former Governor’s Office of Emergency Services with those of the Governor’s Office of Homeland Security. The California Emergency Management Agency was responsible for the coordination of overall State agency response to major disasters in support of local government. The agency was also responsible for assuring the State’s readiness to respond to and recover from all hazards—natural, manmade, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts. On July 1, 2013, Governor Edmund G. Brown Jr.’s eliminated the California Emergency Management Agency and restored it to the Governor’s Office as the Cal OES.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California. The CAL FIRE ranks fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat, moderate, high, and very high fire threat. Additionally, the CAL FIRE produced the *2010 Strategic Fire Plan for California*, which contains goals, objectives, and policies to prepare for and mitigate for the effects of fire on California's natural and built environments.[1]

State Responsibility Areas Fire Safe Regulations

SRA Fire Safe Regulations outline basic wildland fire protection standards and can decrease the risk of wildfire events. SRA Fire Safe Regulations do not supersede local regulations that equal or exceed minimum State regulations. The State statute for wildfire protection is PRC Section 4290. Requirements in the PRC include information on:

- Road standards for fire equipment access
- Standards for signs identifying streets, roads, and buildings
- Minimum private water supply reserves for emergency fire use
- Fuel breaks and greenbelts
- Basic emergency access

California Environmental Protection Agency

The CalEPA was created in 1991, unifying California's environmental authority in a single cabinet-level agency and bringing the California Air Resources Board, State Water Resources Control Board, Regional Water Quality Control Boards (RWQCBs), California Department of Resources Recycling and Recovery (formerly the Integrated Waste Management Board), DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed within the CalEPA as the "umbrella" for the protection of human health and the environment and to ensure the coordinated deployment of State resources. Its mission is to restore, protect, and enhance the environment, to ensure public health, environmental quality, and economic vitality.

Department of Toxic Substance Control

The DTSC is a department of CalEPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California primarily under the authority of the federal Resource Conservation and Recovery Act and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

[1] California Department of Forestry and Fire Protection, 2010, 2010 Strategic Fire Plan for California, https://www.cafsti.org/wp-content/uploads/2010-Strategic-Fire-Plan-for-California.pdf, accessed March 6, 2020.

Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services (DHS) lists of contaminated drinking water wells, sites listed by the State Water Resources Control Board as having underground storage tank (UST) leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

Regional Water Quality Control Board

The RWQCB is a department of CalEPA that oversees investigation and cleanup of sites including underground storage tanks where wastes have been discharged in order to protect the water quality of the state. The RWQCB regulates wastewater discharges to surface waters and to groundwater. They also regulate storm water discharges from construction, industrial, and municipal activities.

California Health and Safety Code and Code of Regulations

California Health and Safety Code Chapter 6.95 and California Code of Regulations, Title 19, Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on-site. A business that uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

Regional Regulations

Central Valley Regional Water Quality Control Board

The Porter-Cologne Water Quality Act[2] established the State Water Resources Control Board and divided the state into nine regional basins, each under the jurisdiction of a RWQCB. The Central Valley RWQCB regulates water quality in the project area. The Central Valley RWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation actions, if necessary.

Tuolumne County Environmental Health Division

The Tuolumne County Environmental Health Division is the Certified Unified Program Agency (CUPA) for the project site and consolidates, coordinates, and makes consistent the following existing programs:

- Aboveground Storage Tank Spill Prevention, Control Countermeasure Plan (California Health and Safety Code, Chapter 6.6.7)
- Underground Storage Tank Program (UST)
- California Accidental Release Prevention program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs (California Health and Safety Code, Chapter 6.5) Hazardous Materials Business Plan (HMBP)

[2] California Water Code Sections 13000 et seq.

Tuolumne County Fire Department

The Tuolumne County Fire Department (TCFD) is a cooperative fire department with California Department of Forestry and Fire Protection (CAL FIRE). Within the Tuolumne County Fire Department/CAL FIRE along with eight fire districts provide life and property emergency response. In addition to services traditionally provided by most fire protection agencies nationwide, the county has the responsibility of addressing severe wildland fire protection. Wildland fires constitute the most significant major disaster threat in the county.[3]

Tuolumne County Office of Emergency Services

The County of Tuolumne Office of Emergency Services (OES) provides preparedness before, and coordination direction during, large-scale emergencies and disasters. OES coordinates with partner agencies, special districts, and key private agencies in providing planning, response, recovery, and mitigation activities as a result of disaster related incidents.

The state's Office of Emergency Services coordinates overall state agency response to major disasters in support of local government. The office is responsible for assuring the state's readiness to respond to and recover from both natural and man-made disasters, and for assisting local governments in their emergency preparedness, response, and recovery efforts.[4]

Tuolumne County Code of Ordinances

Chapter 13.25, *Hazardous Materials Management,* of the County's Code of Ordinances establishes administrative procedures for the effective local implementation of hazardous material, hazardous waste, and regulated hazardous substances regulatory requirements, and to bring all hazardous material and hazardous waste regulatory authority of the Unified Program Agency and compliance requirements into one ordinance.

Chapter 15.20, *Fire Safety Standards*, has local fire safe ordinances in place including requirements for adequate setbacks, defensible space, and fuel modification. The chapter also includes requirements for the provision of adequate fire flows.

Tuolumne County Integrated Waste Management Plan

On February 11, 1992, Tuolumne County adopted the Household Hazardous Waste Element of the Tuolumne County Integrated Waste Management Plan to reduce the amount of household hazardous waste generated within Tuolumne County through reuse and recycling, to divert household hazardous waste from landfills, to promote alternatives to toxic household products, and to educate the public regarding household hazardous waste management. As part of compliance with this plan, the County operates recyclable household hazardous waste collection at the CalSierra Transfer Station in East Sonora

[3] Tuolumne County, Fire Department, https://www.tuolumnecounty.ca.gov/717/Fire-Department, accessed November 25, 2019.

[4] Tuolumne County, Office of Emergency Services, https://www.tuolumnecounty.ca.gov/308/Office-of-Emergency-Services, accessed November 25, 2019.

and the Groveland Transfer Station in Groveland and collection events for non-recyclable household hazardous waste, organized by the Solid Waste Division of the Community Resources Agency, to remove household hazardous wastes from the waste stream. The Solid Waste Division also operates a household hazardous waste collection facility at the former Jamestown Mine.[5]

Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan

The goal of the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan (HMP) is to arrive at practical, meaningful, attainable and cost-effective mitigation solutions to minimize each jurisdiction's vulnerability to the identified hazards and ultimately reduce both human and financial losses subsequent to a disaster. The MHP addresses risks associated with numerous hazards, including wildfire, earthquake, flooding, sinkholes, and extreme weather. An action plan was developed in 2004, updated in 2013 and updated again in 2017 which entails adopting, implementing, assigning responsibility, monitoring, and reviewing this hazard mitigation plan over time, to ensure the goals and objectives are being achieved and the plan remains a relevant document.[6]

Tuolumne County Emergency Operations Plan

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

- Establishing emergency response policy;
- Identifying authorities and assigns responsibilities for planning and response activities;
- Identifying the scope of potential hazards;
- Identifying other jurisdictions and organizations to coordinate planning with;
- Determining emergency organization structure;
- Establishing policies for providing emergency information to the public;
- Outlining preplanned response actions, describes the resources available to support response activities;
- Outlining actions to return County operations to normal;
- Guiding area governments through recovery;
- Establishing responsibilities within the County for the maintenance of the overall emergency preparedness program;
- Outlining the process for ordering and rendering mutual aid; and
- Facilitating the continuity of governments.[7]

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[5] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed March 6, 2020.

[6] Tuolumne County, 2018, Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/8045/TuolumneLHMP2018?bidId=, accessed March 6, 2020.

[7] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed March 6, 2020.

Tuolumne County Airport Land Use Commission

The Tuolumne County Airport Land Use Commission (TCALUC) promotes compatibility between the airports and heliports in Tuolumne County and the land uses that surround them. The TCALUC reviews compatibility criteria applicable to local agencies in their preparation or amendment of land use plans and ordinances and to landowners in their design of new development. Under TCALUC standards, heliports and helipads are regulated per Caltrans definitions, and EHLFs are therefore exempt from Caltrans Division of Aeronautics heliport permitting requirements.

Tuolumne County General Plan

The Public Safety and Natural Hazards Elements of the Tuolumne County General Plan include several policies and implementation programs, listed in Table 4.9-1, that are aimed at improving public safety from hazards and hazardous materials.

TABLE 4.9-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO HAZARDS AND HAZARDOUS MATERIALS

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
PUBLIC SAFETY ELEMENT	
Goal 9A	*Consult with all affected agencies on fire protection planning within Tuolumne County.*
Policy 9.A.1	Actively involve fire protection agencies within Tuolumne County in land use planning decisions.
Policy 9.A.2	Encourage all fire protection agencies (Federal, State, and local) within the County to maintain communication with each other and with the Office of Emergency Services and the Community Resources Agency to promote an integrated approach to fire protection planning.
Policy 9.A.4	Actively support efforts to maintain and improve Federal and State fire service capabilities.
Policy 9.A.5	Consult with CAL FIRE, the U.S. Forest Service, the National Park Service and local fire agencies on fire prevention programs in order to maximize the distribution of information to the public.
Goal 9B	*Create plans to effectively prepare for, respond to, and recover from the effects of natural or manmade disasters or other emergencies.*
Policy 9.B.1	Maintain an effective Tuolumne County Emergency Operation Plan to direct the response for a natural disaster or other emergency.
Implementation Program 9.B.a	Periodically review and update Chapter 2.40 (Emergency Services) of the Tuolumne County Ordinance Code to evaluate consistency with State and Federal laws and regulations, to assess the current emergency response organization, and to ensure an accurate composition of the Tuolumne County Emergency Services Operational Area Committee.
Implementation Program 9.B.b	Ensure the Emergency Operations Plan for Tuolumne County is consistent with the provisions of Articles 1-8 of Division 2 of Title 19 of the California Code of Regulations regarding the Standardized Emergency Management System (SEMS) and with the National Incident Management System (NIMS). The Emergency Operations Plan for Tuolumne County should be reviewed every two years and updated as necessary, in order to incorporate changes in governmental regulations and operational practices.
Policy 9.B.5	Ensure that current emergency services are adequate to protect public health and safety in the event of natural and manmade hazards, including terrorist incidents and public health pandemics.

TABLE 4.9-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO HAZARDS AND HAZARDOUS MATERIALS

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
Implementation Program 9.B.h	Implement the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan to protect life, safety, and property by reducing the potential for future damages and economic losses that result from natural and manmade hazards.
Goal 9E	*Provide structural fire protection to persons and property within Tuolumne County consistent with the needs dictated by the level of development and in accordance with current Federal, State, and local fire protection agency regulations and policies.*
Policy 9.E.3	Require new development to be consistent with State and County regulations and policies regarding fire protection.
Goal 9G	*Establish and maintain a codified fire protection risk management strategy which requires new development within Tuolumne County to incorporate or supply fire protection infrastructure and improvements necessary so that such development does not exceed the capabilities of the County's fire protection resources.*
Policy 9.G.1	Maintain County fire protection regulations that are consistent with Section 4290 or the equivalent of the California Public Resources Code and other applicable fire protection regulations.
Policy 9.G.2	Require new residential development to have adequate fire protection, which may include design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire. Periodically update the County's fire protection standards to reflect new information and technology concerning fire prevention in wildland areas.
Policy 9.G.4	Require that residential development provide for defensible space around structures.
Goal 9I	*Minimize the risk of loss of life, injury, illness, property damage and alteration of established land use patterns resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.*
Policy 9.I.1	Ensure that the use, storage, transport, treatment and disposal of hazardous materials and hazardous wastes within Tuolumne County complies with Federal, State, and local regulations and safety standards.
Implementation Program 9.I.a	Implement the Tuolumne County Comprehensive Hazardous Waste Management Plan to protect life, safety, and property by reducing the potential for future damages and economic losses that result from hazardous materials and hazardous waste.
Implementation Program 9.I.d	Provide for the review of applications for discretionary entitlements for projects which would utilize hazardous materials or generate hazardous wastes by the Tuolumne County Environmental Health Division and the Tuolumne County Fire Department for compliance with the latest adopted regulations for safety and environmental protection.
Policy 9.I.2	Protect schools from the risks associated with facilities involved in the handling of hazardous materials or disposal of hazardous waste.
NATURAL HAZARDS ELEMENT	
Goal 17E	*Provide protection to County residents and natural resources from the losses associated with wildland fire.*
Policy 17.E.1	Reduce the exposure to risk from wildland fire to an acceptable level by only allowing development in high or very high fire hazard areas if it can be made safe by planning, construction, or other fire safety measures.
Policy 17.E.2	Require the maintenance of defensible space setbacks in areas proposed for development if wildland fire hazards exist on adjacent properties.
Policy 17.E.3	Require new development to have adequate fire protection and to include, where necessary, design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire.

TABLE 4.9-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO HAZARDS AND HAZARDOUS MATERIALS

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
Policy 17.E.4	Promote public awareness of wildland fire hazards present within the County, as well as proper fire prevention and protection practices.
Policy 17.E.8	Require property owners to maintain wildlands in a fire-resistant manner consistent with Section 4291 of the Public Resources Code. Assist fire protection agencies in their efforts to enforce Section 4291.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

4.9.1.2 EXISTING CONDITIONS

This section describes existing conditions related to hazardous materials, airport hazards, and wildland fires associated with the proposed project.

Hazardous Materials Sites

The 64-acre project site is rural in nature, and no structures exist on-site. The site has never been developed. A search of several hazardous waste databases, including DTSC's EnviroStor,[8] RWQCB's Geotracker,[9] EPA's EJScreen,[10] and EPA's EnviroMapper,[11] showed that the site is not listed as a hazardous waste site. In addition, no properties within a 0.25-mile radius from the project site are listed as hazardous waste sites.

Existing or Proposed Schools

There are no schools within 0.25 miles of the project site. The nearest schools are Greeley Hill Elementary and Coulterville High School approximately 11 miles southwest of the project site, and Tenaya Elementary School approximately 16 miles west of the project site.

Airport Hazards

Two airports are located in Tuolumne County, Columbia Airport and Pine Mountain Lake Airport. The Federal Aviation Administration requires runway protection zones and height limits on structures near airports to reduce risks to the public. In addition, the Tuolumne County Airport Land Use Compatibility

[8] Department of Toxic Substances Control, 2018, EnviroStor, https://www.envirostor.dtsc.ca.gov/public/, accessed March 6, 2020.

[9] State Water Resources Control Board, 2015, GeoTracker, http://geotracker.waterboards.ca.gov/, accessed March 6, 2020.

[10] Environmental Protection Agency, 2018, EJScreen, https://ejscreen.epa.gov/mapper/, accessed March 6, 2020.

[11] Environmental Protection Agency, EnviroMapper, https://www.epa.gov/emefdata/em4ef.home, accessed March 6, 2020.

Plan (ALUCP) designates safety zones for the areas surrounding the two airports.[12] The project site is not located within the safety zone of either airport.

Wildland Fire Hazard

According to the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, Tuolumne County historically experiences wildfires every two to five years. In more recent years with drought conditions, wildfires have occurred every other year. From 2001 to 2016, twelve fires have occurred in or near Tuolumne County that destroyed over 750 acres.[13] The 2013 Rim Fire burned through the project site, burning a total of 257,314 acres.

CAL FIRE evaluates fire hazard severity risks according to areas of responsibility (i.e., federal, State, and local). According to CAL FIRE, the project site is within a CAL FIRE designated State Responsibility Area (SRA), and is surrounded by land designated in a Federal Responsibility Area (FRA). As shown in Figure 4.17-2, the CAL FIRE map for the SRA in Tuolumne County identifies the project site as within a Very High Fire Hazard Severity Zone (VHFHSZ).

Fire protection services for the project site are provided through a multi-jurisdiction effort by the Groveland Community Services District, Tuolumne County Fire Department, CAL FIRE, and the United States Forest Service.

4.9.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant hazards and hazardous materials impacts if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.
2. 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.
3. Emit hazardous emissions or handle hazardous materials, substances or waste within ¼-mile of an existing or proposed school.
4. Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
5. 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 or excessive noise for people residing or working in the project area.

[12] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/5764/49-HydrologyandWaterQuality?bidId=, accessed March 6, 2020.

[13] Tuolumne County, 2018, Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, pages 67 to 68.

6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

4.9.3 IMPACT DISCUSSION

HAZ-1	**The project would not create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.**

Project Operation

Operation of the proposed project would involve the use of small amounts of hazardous materials, such as cleansers, paints, fertilizers, and pesticides for cleaning and maintenance purposes. However, the proposed land use is not associated with uses that use, generate, store, or transport large quantities of hazardous materials; such uses generally include manufacturing, industrial, medical (e.g., hospital), and other similar uses.

The proposed project would also include propane tanks installed in the western portion of the site. The location is a safe distance from any building or property line. Storage volumes would be based on demand and refueling frequencies and is estimated to include multiple tanks in an approximately 900-square-foot area. Propane would be transmitted through pipes underground to the various buildings on-site.

The use, storage, transport, and disposal of hazardous materials would be governed by existing regulations of several agencies, including the EPA, DOT, California Division of Occupational Safety and Health, and the Tuolumne County Environmental Health Division. Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts. Additionally, the Tuolumne County Environmental Health Division, the assigned CUPA for the project site, would conduct inspections of any propane containers of 55 gallons or greater, including aboveground tanks with a total aggregate quantity of at least 10,000 gallons. The proposed project would submit a storage statement to CUPA on an annual basis if it stores an aggregate quantity of at least 1,320 gallons of propane on-site.

Furthermore, the General Plan Update's Public Safety Element contains several policies that would protect County residents and the environment from exposure to hazardous materials. Policy 9.I.1 would ensure that use, storage, treatment, and disposal of hazardous materials complies with federal, state, and local regulations through Implementation Programs 9.I.a and 9.I.d, which also implement the Tuolumne County Comprehensive Hazardous Waste Management Plan and provide for review of applications for discretionary elements of projects that would use or generate hazardous materials by the Tuolumne County Environmental Health Division and the Tuolumne County Fire Department. Policy 9.B.5 and

Implementation Program 9.B.h would protect public health and safety through implementation of the HMP.

Therefore, substantial hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials during long-term operation of the proposed project would not occur. Impacts would be *less than significant,* and no mitigation measures are necessary.

Project Construction

Project-related construction activities would involve the use of larger amounts of hazardous materials than would project operation. Construction activities would include the use of materials such as fuels, lubricants, and greases in construction equipment and coatings used in construction. However, the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. These activities would also be short term or one time in nature, and would cease upon completion of the proposed project's construction phase. Project construction workers would also be trained in safe handling and hazardous materials use.

Additionally, as with project operation, the use, storage, transport, and disposal of construction-related hazardous materials would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts.

Therefore, substantial hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials during construction of the proposed project would not occur. Impacts would be *less than significant,* and no mitigation measures are necessary.

Significance without Mitigation: Less than significant.

HAZ-2	**The project would not 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.**

The proposed project would be constructed and operated with strict adherence to all emergency response plan requirements set forth by the Tuolumne County Office of Emergency Services, the Tuolumne County Environmental Health Division, and the Tuolumne County Fire Department.

Furthermore, the project site is vacant and void of any buildings, structures, or improvements. As noted above, no records were found in reference to historical usage or handling of any hazardous substances on the project site. None of the site materials to be removed during the construction phase are associated with or contain hazardous materials. Additionally, it is unlikely that the proposed project's operation would cause the release of hazardous materials into the environment. However, while highly unlikely due to the proposed use, in the event of a hazardous materials spill of greater amount or toxicity than on-site personnel could safely contain and clean up, assistance would be requested from the Tuolumne County

Fire Department and the Tuolumne County Environmental Health Division. Therefore, it is unlikely that construction or operation of the proposed project would cause the release of hazardous materials into the environment. Impacts would be *less than significant,* and no mitigation measures are necessary

Significance without Mitigation: Less than significant.

HAZ-3	**The project would not emit hazardous emissions or handle hazardous materials, substances or waste within ¼-mile of an existing or proposed school.**

As mentioned above, there are no schools within 0.25 miles of the project site. Additionally, the proposed project does not include elements or aspects that would create or otherwise result in hazardous emissions. Furthermore, the transport of any hazardous materials during the proposed project's construction phase would generally occur along Highway 120. The transport of such materials would not occur along or around the streets that surround the school site. Therefore, *no impact* would occur, and no mitigation measures are necessary.

Significance without Mitigation: No impact.

HAZ-4	**The project would not be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.**

California Government Code Section 65962.5 requires the compiling of lists of the following types of hazardous materials sites: hazardous waste facilities subject to corrective action; hazardous waste discharges for which the State Water Quality Control Board has issued certain types of orders; public drinking water wells containing detectable levels of organic contaminants; underground storage tanks with reported unauthorized releases; and solid waste disposal facilities from which hazardous waste has migrated. The following databases were reviewed for hazardous material site listings on-site or within 0.25 miles of the project site:

- GeoTracker, State Water Resources Control Board
- EnviroStor, Department of Toxic Substances Control
- EnviroMapper, US Environmental Protection Agency
- EJScreen, US Environmental Protection Agency

No hazardous materials sites were listed on the project site or within 0.25 miles of the project site. Therefore, *no impact* to the public or to the environment would occur as a result of the proposed project and no mitigation measures are necessary.

Significance without Mitigation: No impact.

HAZ-5	**The project would not be located within 2 miles of an existing airport land use plan, public airport, or public use airport but the proposed emergency helipad could result in a safety hazard or excessive noise for people residing or working in the project area.**

The nearest public-use airport to the project site is the Pine Mountain Lake Airport approximately 12 miles to the northwest. The project site is well outside of the airport's safety zones.[14]

The proposed emergency helipad is intended to provide a clear and level area near the scene of an accident or incident designated by the local emergency response team. Potential noise impacts from helicopters using the emergency helipad are addressed in Chapter 4.12, Noise, and Impact NOI-3.1 (related to noise impacts to existing sensitive users) is considered to be significant and unavoidable. This impact discussion focuses on potential operational safety hazards from use of the emergency helipad.

California Code of Regulations (CCR), Title 21, Sections 3525–3560 provide rules, regulations, and permit requirements related to the proposed emergency helipad that incorporate most of the FAA regulations, including design, lighting, visual, and obstruction standards. All of the standards and regulations contained in CCR, Title 21, Sections 3525–3560 related to the adequacy of emergency helipad design, including marking, lighting, and visual aids, must be met to receive approval from the FAA.

FAA Advisory Circular 150/5390-2C, Heliport Design, provides the standards used to design heliports and other aircraft landing facilities in the United States. This includes defining acceptable approach, landing, takeoff, and safety areas that must be maintained clear of obstructions. The FAA also provides standards for the placement of lighting, wind cones, beacons, and other heliport markings. In addition, the circular describes the appropriate approach and departure transitional surfaces, flight path dimensions, and heliport protection zones.

Federal Aviation Regulations (FAR) Part 157, Notice of Construction, Activation, and Deactivation of Airports, establishes standards and notification requirements for projects that propose to construct, alter, or deactivate an air facility. The notification, which is required 90 days prior to the day work is to begin, allows the FAA to identify potential aeronautical hazards in advance, to prevent and minimize any adverse impacts and provide safe and efficient use of navigable airspace.[15] FAR Part 157 serves as the basis for evaluating the effects of the proposed action on the safe and efficient use of airspace by aircraft and the safety of persons and property on the ground. These effects include but are not limited to evaluating:

- The effects the proposed action would have on existing or proposed traffic patterns of neighboring airports.
- The effects the proposed action would have on the existing airspace structure and projected programs of the FAA.

[14] Tuolumne County, 2003, Tuolumne County Airport Land Use Compatibility Plan, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/1325/Airport-Land-Use-Compatibility-Plan?bidId=, accessed March 6, 2020.

[15] Code of Federal Regulations, Title 14 Aeronautics and Space, Section 157.5 Notice of Intent.

- The effects that existing or proposed objects (on file with the FAA) within the affected area would have on the airport proposal.

The Terra Vi developers would be required per FAR Part 157 to conduct an airspace study to determine whether the proposed emergency helipad would be acceptable from an airspace utilization standpoint and meet all FAA design considerations. The airspace study would be required to show that the FAA does not object to the establishment of the proposed landing area and to provide determinations related to the safe and efficient use of navigable airspace by aircraft with respect to the safety of persons and property on the ground.

FAR Part 77 includes the establishment of imaginary surfaces that allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing the adverse impacts to the safe and efficient use of navigable airspace. While the Caltrans Division of Aeronautics is the State permitting agency for helipads, an EHLF is exempt from Caltrans Division of Aeronautics heliport permitting requirements in accordance with Division of Aeronautics – Caltrans – Title 21 CCR 3533 (b)(8) provided it is not used for any purpose other than as an emergency use facility. However, design of the ELHF must be in compliance with requirements of the Tuolumne County Building Code and Title 24 of the California Code of Regulations. The FAA is required to make the final determination as to the safety and appropriateness of the location for a helipad and the adequacy of helipad design per the design standards set forth in FAA Advisory Circular 150/5390-2C. The FAA, the Tuolumne County Building Division, and the TCALUC must all be consulted to meet standards.

The FAA's and Tuolumne County Building Division's review and permitting procedures would be conducted as part of implementation of the proposed project. Prior to providing an airspace determination letter from the FAA and a building permit from the Tuolumne County Building Division, all agencies would determine that the proposed emergency helipad location would not adversely affect the safe and efficient use of the navigable airspace by aircraft and would not result in safety effects to persons or property on the ground. An airspace determination letter from the FAA and a permit from the Tuolumne County Building Division would be required prior to operation of the proposed emergency helipad. In addition, the proposed project would be reviewed by the TCALUC and must receive a determination of consistency with the Tuolumne County Airport Land Use Compatibility Plan.[16] Because the proposed emergency helipad has not yet been reviewed by the FAA or County for compliance with applicable standards and permitting requirements, this impact is considered *significant*.

Significance without Mitigation: Significant.

Impact HAZ-5: Operation of an emergency helipad on the proposed project could result in safety hazard impacts to people working or residing within the project area.

> Mitigation Measure HAZ-5: Prior to the start of any helipad operations on the project site, the project shall receive airspace determination approvals from the Federal Aviation Administration, a building

[16] Tuolumne County, January 22, 2003. Tuolumne County Airport Land Use Compatibility Plan. Section 2.1.5 Types of Actions Reviewed, pages 2-5 to 2-6.

permit from the Tuolumne County Building Division, and a Letter of Land Use Consistency from the Tuolumne County Airport Land Use Commission.

Significance with Mitigation: Less than significant.

HAZ-6 The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The proposed project would result in a significant impact if it would involve physical improvements that would impede emergency response to the project site or the immediate vicinity, or if it would otherwise interfere with emergency evacuation plans.

The proposed project would be required to comply with the provisions of the 2016 CFC and the 2016 CBC, which would ensure that building and life safety measures are incorporated into the proposed project and would facilitate implementation of emergency response plans. Future development plans would include fire and emergency access through all phases of construction and operation. During construction, the project would be required to comply with all applicable provisions of the CFC to ensure fire safety during the construction phase.

As discussed in Section 4.9.1.1, the County of Tuolumne has prepared an Emergency Operations Plan that identifies and allocates resources in response to emergencies, from preparation through recovery. The Emergency Operations Plan identifies the County's emergency planning, organizational, and response policies and procedures and how they would be coordinated with emergency responses from other levels of government. The proposed project would not involve physical components that would interfere with the ability of the County, and emergency response service providers, to implement emergency response activities within the project site or vicinity. Furthermore, Tuolumne County maintains an HMP with the goal of implementing mitigation measures to minimize vulnerability to identified hazards and reducing both human and financial losses subsequent to a disaster.

In addition, the General Plan contains strategies that would further ensure that new development would not conflict with emergency operations in the project area. Implementation Program 9.B.h would implement the HMP to protect life, safety, and property by reducing the potential for future damages and economic losses that result from natural and manmade hazards. The Emergency Operations Plan would be maintained and periodically reviewed under Policy 9.B.1 and Implementation Programs 9.B.a and 9.B.b.

Compliance with applicable laws and regulations regarding emergency preparedness, and the General Plan policies, would ensure that the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HAZ-7	**The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.**

The project site is located within a Very High Fire Hazard Severity Zone and was previously significantly burned by the 2013 Rim Fire. Project design features incorporated into the proposed project to mitigate wildfire hazards are detailed in Section 3.3.6 of this Draft EIR and would include:

- Wide separations between buildings to prevent structure-to structure ignition, and to provide easy access by emergency responders.
- Exterior building materials that are compliant with the most recent wildland-urban interface building code (Chapter 7A of the California Building Code).
- An early evacuation protocol based on monitoring of both weather conditions and nearby incidents.
- An underground basement that would provide a place for guests and employees to stay for a short period of time during a time of wildfire or other disasters when early evacuation is not possible.
- A Vegetation Management Plan that integrates the needs for wildland fire safety.
- Prohibitions against risky behaviors.
- A construction fire prevention plan that would be implemented to reduce the chance of ignition.
- Fire pits located in public areas and operated and maintained by hotel staff only.
- A communication plan established to ensure receipt and notification of vital incident information.
- Weather stations with protocols for alerts so that personnel on-site would be notified when high fire danger exists.
- Employees trained as first-response emergency responders, with trained staff on duty at all times.
- Direct access to Highway 120 for fire service.
- Construction in compliance with the National Fire Protection Association's fire protection system.
- An emergency helipad located on the western side of Sawmill Mountain Road, within the western project site parcel used for emergency services only and available for use by the entire community.

Implementation of these project design features would reduce the impacts of wildland fires to *less than significant*.

Significance without Mitigation: Less than significant.

4.9.4 CUMULATIVE IMPACTS

HAZ-8	**The proposed project would result in less-than-significant cumulative impacts with respect to hazards and hazardous materials.**

The area considered for cumulative impacts is Tuolumne County, which is the service area for the Tuolumne County Department of Environmental Health, the affected CUPA. According to the California Department of Finance, Tuolumne County's population as of January 2019 was 54,590. The General Plan EIR estimates that the projected population of Tuolumne County by the year 2040 would rise to 63,243

persons.[17] Other development projects throughout the county would use, store, transport, and dispose of increased amounts of hazardous materials, and thus could pose substantial risks to the public and the environment. However, the use, storage, transport, and disposal of hazardous materials by other projects would be required to conform with regulations of multiple agencies as described in Section 4.9.1.1 above.

The proposed project is not located within 0.25 miles of any schools; therefore, the proposed project would not contribute to a cumulative impact associated with schools.

Furthermore, the proposed project area is not located within 2 miles of a public airport; therefore, the proposed project would not contribute to a cumulative impact associated with a public airport. The proposed project could result in safety hazards associated with the emergency helipad, which would be less-than-significant following mitigation. No other cumulative development would include helipads or other aviation facilities; therefore, the project would not contribute to any cumulative impacts associated with aviation-related hazards. The proposed emergency helipad is included in the project as a public benefit and would only be utilized by emergency responders needing landing access in the upper Highway 120 area of the county; the emergency helipad would therefore be a benefit to cumulative development projects as well.

Cumulative projects have the potential to interfere with an adopted emergency response plan or emergency evacuation plan; however, all development would be required to comply with the provisions of the local, State, and federal regulations, and General Plan policies for emergency response plans and emergency evacuation plans as applicable. Compliance with these regulations would reduce potential cumulative impacts to less than significant.

Cumulative projects have the potential to increase development in areas of high fire susceptibility; however, all development would be required to comply with the provisions of the local and State regulations for wildland fires as applicable. Compliance with these regulations would reduce potential cumulative impacts to less than significant.

Cumulative impacts would be *less than significant* after compliance with regulations, and project impacts would not be cumulatively considerable.

Significance without Mitigation: Less than significant.

[17] Tuolumne County General Plan EIR, August 2018, Project Description, State Clearinghouse No. 2015082027, page 2-6.

4.10 HYDROLOGY AND WATER QUALITY

This chapter describes the regulatory framework and existing conditions on the project site related to hydrology and water quality, and the potential impacts of the project on hydrology and water quality.

The information in this chapter is based in part on the following documents:

- Land and Structure, October 7, 2019. Drainage and Grading Plan.
- Geoscience, March 30, 2020. Revised Assessment of Source Water Capacity and Groundwater Pumping Influence for Two Supply Wells, Terra Vi Yosemite, Located near Groveland, Tuolumne County. This report is referred to in this chapter as the "project hydrogeology report."

The Drainage and Grading Plan is included in Appendix B of this Draft EIR. The project hydrogeology report prepared is included in Appendix G to this Draft EIR.

4.10.1 ENVIRONMENTAL SETTING

4.10.1.1 REGULATORY FRAMEWORK

Federal Regulations

Clean Water Act and National Pollution Elimination Discharge System

The Clean Water Act (CWA) establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, §§ 1251 et seq.). Under the act, the US Environment Protection Agency (EPA) is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into Waters of the United States. The federal Clean Water Act requires wastewater treatment of all effluent before it is discharged into surface waters. In California, the NPDES permit program is administered by the State Water Resources Board (SWRCB) through the nine Regional Water Quality Control Boards (RWQCBs).

State Regulations

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code Section 13000 *et seq.*) is the basic water quality control law for California. Under this Act, the State Water Board has ultimate control over state water rights and water-quality policy. In California, the EPA has delegated authority to issue NPDES permits to the State Water Board. The nine RWQCBs carry out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a Water Quality Control Plan, or Basin Plan, that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water-quality conditions and problems.

The project site is in the Upper Tuolumne Watershed, which is under the jurisdiction of the Central Valley RWQCB. The Central Valley RWQCB has two Basin Plans: one for the Tulare Lake Basin and one for the

Sacramento and San Joaquin River Basins. The San Joaquin River Basin includes the entire area drained by the San Joaquin River, including the Stanislaus and Tuolumne Rivers in Tuolumne County.[1]

Statewide Construction General Permit

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the SWRCB Construction General Permit (2009-0009-DWQ, CGP) as amended by 2010-0014-DWQ. Under the terms of the permit, applicants must file Permit Registration Documents (PRDs) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a SWPPP, containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection, and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Some sites also require implementation of a Rain Event Action Plan (REAP). The updated CGP (2010-0014-DWQ), effective on September 2, 2012, also requires applicants to comply with post-construction runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 permit.

State Water Resources Control Board General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems

Water Code section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, that could affect the quality of the waters of the state, file a Report of Waste Discharge (ROWD) to obtain coverage under Waste Discharge Requirements (WDRs) or a waiver of WDRs. Discharges to land from small domestic wastewater treatment systems have certain common characteristics, such as similar constituents, concentrations of constituents, disposal techniques, flow ranges, and they require the same or similar treatment standards. These types of discharges are appropriately regulated under a General Waste Discharge Requirements Order. State Water Board Water Quality Order 97-10-DWQ (WQO 97-10DWQ) is a 1997 General Order addressing Small Domestic Systems. Only Small Domestic Systems, with a monthly average flow rate of 100,000 gallons per day (gpd) or less, that discharge to land are eligible for coverage under this General Order.[2]

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[1] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/5764/49-HydrologyandWaterQuality?bidId=

[2] State Water Resources Water Quality Control Board, September 23, 2014, General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems, https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0153_dwq.pdf, accessed March 8, 2020.

California Water Code Section 13751

In 1949, the California Legislature concluded that collecting information on newly constructed, modified or destroyed wells would be valuable in the event of underground pollution, and would also provide geologic information to better manage California's groundwater resources. Section 13751 of the Water Code requires Well Completion Reports (WCR) forms to be filed with the Department of Water Resources (DWR) within 60 days from the date that construction, alteration, abandonment, or destruction of a well is completed. Completed WCR forms are sent to the DWR Region Office whose boundaries include the area where the well is located.[3]

California Department of Water Resources Well Standards

DWR Bulletin 74 sets the minimum standards for water, monitoring, cathodic protection, and geothermal heat exchange wells, with the purpose of protecting California's groundwater quality. Well standards for the project site are administered and enforced by the Tuolumne County Environmental Health Division. The process, from standards through enforcement, is detailed in Water Code Sections 13800- 13806.

Title 22 of the California Code of Regulations

Title 22 of California's Code of Regulations refers to state guidelines for how treated and recycled water is discharged and used. The State Water Board governs the permitting of recycled water projects, develops uniform water recycling criteria and reviews and approves Title 22 engineering reports for recycled water use.

Regional Regulations

Basin Plan for the Sacramento and San Joaquin River Basins

The preparation and adoption of water quality control plans (Basin Plans) is required by the California Water Code (Section 13240) and supported by the Federal Clean Water Act. Section 303 of the Clean Water Act requires states to adopt water quality standards which "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." The Basin Plan covers the entire area included in the Sacramento and San Joaquin River drainage basins including the Upper Tuolumne Watershed.[4]

Tuolumne County Water Quality Plan

Tuolumne County Water Quality Plan (WQP) contains a comprehensive program that addresses a wide range of water quality concerns within the County. The WQP emphasizes surface (e.g., lakes, streams)

[3] Department of Water Resource, 1999, How to Fill Out a Well Completion Report, https://static1.squarespace.com/static/57573edf37013b15f0435124/t/57e2c7e103596e4c714a5fc9/1474480098590/How+to+Fill+Out+a+Well+Completion+Report.pdf, accessed March 8, 2020.

[4] Central Valley Water Quality Control Board, 2018, The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Board Central Valley Region, The Sacramento River Basin and The San Joaquin River Basin, https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf, accessed March 8, 2020.

water quality, factors affecting surface water quality including stormwater runoff, and mechanisms for maintaining and improving surface water quality.

The WQP includes both regulatory and non-regulatory components. The regulatory component builds upon many existing environmental programs and activities implemented by various County departments and focuses on land development activities subject to the County's permitting requirements and on County public works projects. The non-regulatory stewardship component of the WQP encourages voluntary community participation in maintaining and improving the County's water quality.

Although the County is not currently identified as a small MS4, the WQP represents a proactive approach by the County to address pre-existing water quality issues in terms of the State General Permit for Small Municipal Separate Storm Sewer Systems. Consistent with the requirements for small MS4s, the WQP provides a framework for consistent, effective, and efficient implementation of stormwater management practices for discharges entering drainage conveyance systems. Programs contained in the WQP are intended to provide the initial framework for complying with the requirements of the Phase II NPDES Program.[5]

Tuolumne County Code of Ordinances

Chapter 12.20, Grading, of the Tuolumne County Code establishes minimum standards and provides regulations for the construction and maintenance of excavations, site reclamation, drainage control, stockpiling, as well as for protection of exposed soils surfaces, and cut and clearing of vegetation related to any or all of these practices in order to promote the safety, public health, convenience and general welfare of the community.

Chapter 13.16, Water Wells, regulates the construction, reconstruction, modification, abandonment and destruction of domestic and agricultural wells, cathodic protection wells, industrial wells, geothermal heat exchange wells, monitoring and observation wells, test wells and test holes and exploration holes in such a manner that the groundwater of the county will not be contaminated or polluted and that water obtained from wells will be suitable for beneficial use and will not jeopardize the health, safety or welfare of the people of the county.

Chapter 15.28, Landscaping Requirements, includes requirements for landscaping that are intended to conserve water and protect water resources. Provisions for stormwater management, recycling and greywater use, and other site management provisions to control runoff and infiltration are detailed in this chapter.

Tuolumne County General Plan

Policies of the Tuolumne County updated General Plan relating to hydrology and water quality are included below in Table 4.10-1.

[5] Tuolumne County, 2007, Water Quality Plan, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/7570/Tuolumne-County-Water-Quality-Plan?bidId=, accessed March 8, 2020.

TABLE 4.10-1 TUOLUMNE COUNTY GENERAL PLAN POLICIES AND IMPLEMENTATION PROGRAMS PERTAINING TO HYDROLOGY AND WATER QUALITY

Policy/ Implementation Program Number	Policy/Implementation Program Text
UTILITIES ELEMENT	
Policy 3.E.2	Require that proposed development in areas of known or suspected geological limitations to underground sewage disposal either be served by a public sewer system, or successfully demonstrate that on-site underground sewage disposal can be accomplished with no lessening of quality to ground or surface waters.
WATER SUPPLY ELEMENT	
Policy 14.C.1	Protect the quality of the County's water resources by supporting the efforts of local districts to maintain infrastructure and cross-connect sewer systems and ensuring Tuolumne County's development standards are adequate to protect surface and groundwater resources from contamination.
Implementation Program 14.C.a	Maintain local source water protection and wellhead protection programs in the Tuolumne County General Plan, such as setbacks, to protect the sources of drinking water supplies.
Implementation Program 14.C.b	Implement grading and surface runoff standards, such as retention and detention, permeable surfaces and recharge, necessary to protect water resources in compliance with State and Federal water quality regulations and with the County's water quality plan referenced in Implementation Program 14.C.e.
Policy 14.C.4	Encourage the conservation of water resources in a systematic manner that is sensitive to the maintenance of water quality, natural capacities, ecological values, and consideration of the many water related needs of the County.
Implementation Program 14.C.e	Update the Tuolumne County Water Quality Plan, subject to receiving funding, to facilitate a consistent, fair and cost-effective approach to water resource mitigation and encourage and support the restoration of degraded riparian areas through public education programs demonstrating the value of healthy riparian habitats in protecting water quality and provide for permit streamlining while conserving important water resources.
Policy 14.C.5	Develop and evaluate criteria to allow limited development to occur where harmful areawide impacts to groundwater exist based on known hazard areas when feasible.
NATURAL HAZARDS ELEMENT	
Policy 17.C.2	Continue to require evaluation of potential flood hazards prior to approval of development projects and require on-site mitigation to minimize off-site flows.
Implementation Program 17.C.e	Require new development to mitigate impacts on downstream drainages if new development results in increased peak flows because of project-generated stormwater runoff. Measures necessary to mitigate impacts will be attached to development entitlements issued by the County, which may include retention/detention facilities, permeable surfacing materials, greywater systems, and green roofs.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

4.10.1.2 EXISTING CONDITIONS

Surface Waters

Tuolumne County crosses seven watersheds. There are two main watersheds within the County: the Upper Stanislaus River Watershed and the Upper Tuolumne River Watershed. The proposed project is within the Upper Tuolumne River Watershed.

The Tuolumne River watershed drains an area of approximately 1,533 square miles. Its headwaters originate in the high Sierra at the eastern edge of Tuolumne Meadows in Yosemite National Park, and continue through the park to Hetch Hetchy Valley, where the main branch is dammed by the 95-year-old O'Shaugnessy Dam, forming the Hetch Hetchy Reservoir. At the O'Shaughnessy Dam, approximately 33 percent of the river's flow is diverted to the San Francisco Bay Area, where it provides drinking water for nearly 2.5 million people.[6]

Groundwater

The County stretches from the foothills to the higher elevations of the Sierra Nevada, where the subsurface material consists primarily of impervious granitic and greenstone bedrock, which generally produces a low or unpredictable groundwater yield. The general hydrogeology of Tuolumne County 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 well capacities are dependent not only on geographic location and geology, but also on the number and size of fractures encountered where a well is drilled, the degree of connectivity between those fractures and other fractures, and the seasonal and annual recharge of the bedrock fracture network.[7]

Water Quality

The downstream receiving water for the project site is the Tuolumne River, which is listed on the Section 303(d) List of Water Quality Limited Segments for invasive species. The Tuolumne River drains into the Don Pedro Lake.The lake is listed on the Section 303(d) List of Water Quality Limited Segments for mercury. [8]

Groundwater quality throughout the County has generally been found to be good. Groundwater mostly contains naturally-occurring constituents such as iron and manganese.

The Tuolumne County Water Quality Plan identifies residential and commercial on-site sewage disposal systems, leaking underground storage tanks, and unobstructed grazing practices as key sources of existing contamination. Chronic sources of soil erosion and enhanced sediment delivery to local waterways are also identified as a concern.[9]

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[6] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed March 8, 2020.

[7] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed March 8, 2020.

[8] State Water Resources Control Board, 2010, Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report), http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml, accessed March 8, 2020.

[9] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed March 8, 2020.

Regional Drainage

Because of the elevation gradient and existence of multiple upper watershed reservoirs, severe flooding has not historically been a major concern in Tuolumne County. However, management and containment of localized flooding of creeks and tributaries, particularly in developed areas, and along some local roadways has been a challenge and many storm water conveyance systems in Tuolumne County need improvements to reduce the potential for catastrophic flooding. The County has identified areas of Sullivan, Sonora, Mormon, Woods, and Curtis Creeks to be problematic. In addition, some more rural areas with County or ranch roads have low water fords which flood and prevent access at times.[10]

Site Drainage

The existing site character is rural in nature and no structures exist on-site. The project site was heavily burned in the 2013 Rim Fire, resulting in a significant burn scar that extends several acres into the site from Highway 120, and which destroyed most of the mature trees on-site. Due to the topography of the surrounding area, there is very little stormwater that runs on to the site. The areas of the site that drain towards the south converge at a 24-inch culvert that passes under Highway 120. Stormwater then drains into the Tuolumne River.

Flood Hazards

Flood and Dam Inundation Zones

The project site is within Federal Emergency Management Act (FEMA) Flood Zone Designation D, as per the FEMA FIRM Map. No. 06109C1250C dated April 16, 2009.[11] Zone D is an area where there are possible but undetermined flood hazards, as no analysis of flood hazards has been conducted. There are no nearby water bodies or streams that would result in flooding at the project site. Furthermore, the site is not located within a dam inundation area.

Seiche

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin such as a reservoir, harbor, lake, or storage tank. The project site is not located near any water storage tanks or reservoirs that would be at risk of seiche during seismic activity. The nearest body of water is the Pine Mountain Lake, approximately 9 miles to the southeast.

[10] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed March 8, 2020.

[11] Federal Emergency Management Act, FEMA Flood Map Service Center: Search By Address, https://msc.fema.gov/portal/search?AddressQuery=CA-120%2C%20Groveland%2C%20CA%2095321#searchresultsanchor, accessed November 20, 2019.

Tsunami

A tsunami is a great sea wave produced by undersea disturbances such as tectonic displacement or large earthquakes. The project site is approximately 125 miles from the ocean and therefore not at risk of flooding from a tsunami.

4.10.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant hydrology and water quality impacts if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.
4. In a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.10.3 IMPACT DISCUSSION

HYD-1	**Implementation of the proposed project could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.**

Due to the 2013 Rim Fire, the existing site has no mature trees which typically help reduce runoff from a site. The existing site also has no structures and is rural in nature. Of the 64 acres that make up the project site approximately 11.5 acers, or 18 percent, would be mass graded for the buildings, roads, and parking. An additional 1.4 acres would be developed for the septic system. The proposed project would affect drainage patterns and increase the overall amount of impervious surfaces, thus creating changes to stormwater flows and water quality.

Urban runoff can carry a variety of pollutants, such as oil and grease, metals, sediments, and pesticide residues from roadways, parking lots, rooftops, and landscaped areas, and deposit them into an adjacent waterway via the storm drain system. Construction could also result in the degradation of water quality with releasing sediment, oil and greases, and other chemicals to nearby water bodies.

Construction Impacts

Clearing, grading, excavation, and construction activities would have the potential to impact water quality through soil erosion and increased silt and debris discharged into runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, the proposed project would be required to comply with the NPDES CGP including the preparation of a SWPPP that incorporates BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The SWRCB mandates that projects that disturb one or more acres must obtain coverage under the Statewide CGP. The CGP also requires that prior to the start of construction activities, a project applicant must file Permit Registration Documents (PRDs) with the SWRCB, which includes a Notice of Intent (NOI), risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. Because Tuolumne County is not covered under a Phase I or Phase II MS4 permit, projects are also required to comply with post-construction stormwater performance standards as specified in the CGP. The standards require post-construction runoff to match pre-construction runoff for the 85th percentile storm event.

In addition, projects must comply with the requirements of the County's Code of Ordinance, as specified in Chapter 12.20, Grading. Contractors shall prepare an Erosion Control Plan for implementation for any construction to occur between October 15 and May 15 of any year. In the absence of such an approved plan, all construction shall cease on or before October 15, except construction activities necessary to implement erosion control measures. Erosion Control plans are submitted to the Engineering Development Division of the Tuolumne County Public Works Department for review and approval. Compliance with applicable regulations and procedures would ensure that impacts would be *less than significant*.

As described in Chapter 4.3, Biological Resources, erosion control equipment and materials would be required to comply with Mitigation Measure BIO-2 to avoid the spread of invasive species.

Operational Impacts

Runoff from residential and commercial properties and parking lots typically contain oils, grease, fuel, antifreeze, and byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations.

The drainage design for the proposed project would detain stormwater on-site during storm events and meter the outflow in order not to exceed the capacity of the existing culvert under Highway 120. Roof drainage and landscape area drains would direct stormwater underground to detention areas. Sheet flow from roads and parking areas would be captured in surface drainage swales which would also be directed to detention areas. Drainage swales and detention areas would be landscaped. Furthermore, the proposed project would implement the requirements for landscaping, as detailed in Chapter 15.28 of the

County's Code of Ordinances. Chapter 15.28 details landscaping requirements for certain types of commercial, industrial, and multiple-use residential developments. These requirements are aimed chiefly at water conservation, but also provide benefit to stormwater runoff conditions by diverting run-on to sites to protect from erosion and increasing site infiltration. These provisions include retaining existing site vegetation, maintaining soil conditions that promote water retention and reduce water loss from evaporation, and implementing stormwater management practices that minimize runoff and increase water retention and infiltration. By limiting contact water on developed sites and promoting infiltration, opportunities for direct discharge of contaminated stormwater to receiving waterbodies is limited.

In addition, the CGP contains post construction requirements including requirements that dischargers replicate the pre-project runoff water balance (defined as the amount of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event, or the smallest storm event that generates runoff, whichever is larger. The permit requirements emphasize runoff reduction through on-site storm water reuse, interception, evapotranspiration and infiltration through non-structural controls and conservation design measures (e.g., downspout disconnection, soil quality preservation, soil, interceptor trees). Further mitigation is required to ensure post-project runoff replicates pre-project runoff and this impact would be *significant*.

Significance without Mitigation: Significant.

Impact HYD-1: The proposed project may increase post-project runoff thus violating water quality standards.

> Mitigation Measure HYD-1a: A Drainage Plan for the site shall be prepared that specifies how runoff on the site will be managed in order to protect water quality. The plans will include detailed runoff calculations to appropriately size culverts, bridges, retention ponds/areas, and roadside ditches to meet the drainage requirements of the project site. The purpose of the plan will be to prevent the creation of localized on- or off-site flooding and to prevent any negative water quality effects off-site. If necessary, the plan shall be submitted to the Engineering Development Division of the Tuolumne County Public Works Department for review and approval.
>
> Mitigation Measure HYD-1b: Detention and/or retention facilities shall be designed to the satisfaction of the Tuolumne County Engineering Development Department staff and shall be included in the drainage report as described in Mitigation Measure HYD-1. These facilities shall capture surface runoff and retain flows such that the rate of surface runoff does not exceed existing flows. Maintenance of retention facilities shall be required by Tuolumne County.
>
> Significance with Mitigation: Less than significant.

Wastewater Treatment Plant

Wastewater from the proposed project would flow to an OWTS. The wastewater system would be divided between five separate wastewater systems sized for less than 10,000 gallons per day of sewage loading each. An area has been planned for and set aside for a 100 percent replacement future leach system area. The food service wastewater treatment system would include a technologically advanced aerobic

treatment system that would be continuously monitored. Specifically, a microprocessor-controlled treatment system would provide remote telemetry to a qualified service provider for 24-hour wastewater treatment system monitoring. All wastewater would be separated into black water and greywater and treated on-site. The black water would be disposed through the proposed leach system, and the greywater would be treated, stored, and re-used for on-site landscape irrigation. The proposed wastewater treatment and pumping system would be located on the southern border of the project site, between Highway 120 and the proposed fire access road. Surplus greywater would be disposed in the leach field.

The OWTS and leach field would be regulated by the RWQCB pursuant to the SWRQB's General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems (Order WQ 2014-0153-DWQ). Under these regulations, the project applicant would file a Report of Waste Discharge (ROWD) with the Central Valley RWQCB to obtain coverage under the Waste Discharge Requirements (WDRs). The ROWD would include a technical report that describes the wastewater generation, treatment, storage, and disposal. Upon review of the ROWD, the Central Valley Regional Water Board's Executive Officer would issue a Notice of Applicability (NOA) when coverage under the General Order has been authorized. The NOA will contain the necessary site-specific monitoring and reporting requirements. Furthermore, the proposed project would comply with the requirements of the Basin Plan including any prohibitions and/or water quality objectives, governing the discharge from the OWTS and leach field. Furthermore, the greywater system will comply with the WDR and the applicable requirements described in Title 22 of the California Code of Regulations. Compliance with the WDR, the NOA, the Basin Plan, and Title 22 of the California Code of Regulations would reduce impacts to a *less-than -significant* level.

Water Supply Wells

Water quality samples were taken from the on-site wells and the nearby domestic wells before and after the 10-day pumping test conducted in October 2019.[12]

Nearby wells showed concentrations of the semi volatile organic compound bis(2-ethylhexyl) phthalate before and after the pumping test. These detections are likely an artifact of the installation of PVC tubing in the wells to allow measurement of groundwater levels and are not related to the construction or pumping of the Terra Vi wells. Low concentrations of toluene were reported in the post-pumping samples. Toluene is used as a solvent and increases in toluene concentrations can occur following installation of tape used to secure electrical cables to the pump column. In all cases, the concentrations of toluene were below drinking water standards. Acetone was detected in only one well in the post-testing sample and is attributed to laboratory contamination. There are no California drinking water standards for acetone. Chloroform was reported in one sample collected shortly after the well was chlorinated but was not detected in confirmation sampling. The reported concentration was well below the drinking water standard. Iron concentrations were reported in two of the wells with decreased concentrations in the post-pumping samples. All other water quality parameters showed no significant changes between the pre-test and post-test samples.

[12] Geoscience, March 30, 2020, Revised Assessment of Source Water Capacity and Groundwater Pumping Influence for Two Supply Wells, Terra Vi Yosemite, Located near Groveland, Tuolumne County.

Arsenic, iron, turbidity, and color were detected above drinking water maximum contaminant levels (MCLs) in samples from the on-site pumping wells, but concentrations were not consistent before and after the pumping test. Variability in reported concentrations pre- and post-testing may be the result of changing water quality due to pumping large volumes of water. Additional samples must be collected to confirm these results. Further pumping development will likely reduce turbidity and color. The project will conduct further testing consistent with the recommendations of the project hydrogeology report. If arsenic levels remain high in future test results, the project would install an on-site treatment unit that would remove arsenic and other contaminants above drinking water standards from the groundwater. The unit would be located next to the proposed water tanks. With the proposed water testing and treatment, water quality levels would be within acceptable contaminant levels. Therefore, the impact would be *less than significant*.

HYD-2	**The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.**

The project proposes an on-site water system that would be developed from two on-site wells that are currently in place. The wells are drilled into weathered bedrock and produce water from fractures. The wells would supply the proposed project with 16,636 gallons per day (gpd) that the project is estimated to demand. Well water is proposed to be treated and stored in water tanks located on the northern boundary of the project site, east of the employee housing. Fire suppression systems and site hydrants for fire protection would be provided using a combination of rainwater, treated greywater, and potable water storage.

To assess groundwater capacity, the two on-site wells were pumped concurrently at a combined constant rate of 53 gallons per minute (76,320 gpd) for 10 days. Water level responses in the wells indicate they produce from the same fracture set. During pumping, water levels were measured in the on-site wells, three monitoring wells along the northern boundary of the project site, and three nearby domestic wells. The Yosemite Under Canvas camping project is proposed on the south side of Highway 120. Two water supply wells and a monitoring well were constructed for the Yosemite Under Canvas project. Pump testing on the project site was conducted during the period when the Yosemite Under Canvas wells were also being tested to ensure that the source capacity assessment would include the potential long-term influences of nearby off-site wells operating at the same time. Furthermore, testing was completed during October at the end of the dry period to maximize stress on the aquifer and provide conservative estimates of available production capacity.[13]

The SWRCB requires that water levels recover to within 2 feet of the static water measurement within a time not exceeding the duration of the well pumping test.[14] Water levels in the pumping wells on-site

[13] Geoscience, March 30, 2020, Revised Assessment of Source Water Capacity and Groundwater Pumping Influence for Two Supply Wells, Terra Vi Yosemite, Located near Groveland, Tuolumne County.

[14] Geoscience, March 30, 2020, Revised Assessment of Source Water Capacity and Groundwater Pumping Influence for Two Supply Wells, Terra Vi Yosemite, Located near Groveland, Tuolumne County.

recovered in less than eight days after the pumping was shut off. Water levels in all the monitoring wells recovered when the on-site and the nearby wells were not pumping. The SWRCB also stipulates that wells shall be assigned a capacity of no more than 50 percent of the pumping rate established during the 10-day test. Therefore, the well pumping capacity for the site would be 26.5 gallons per minute (gpm), or 38,160 gpd. The proposed project intends to operate the wells in an alternating pattern, with one well idle and the other well pumping. Since the proposed project would require 16,636 gpd, the wells can individually and safely supply the proposed project's water demand.

The project site and Tuolumne County are not within a designated groundwater basin or recharge area. Groundwater withdrawal in the project area is limited and serves the water demand of scattered resort facilities, vacation homes, and some full-time residents. A detailed discussion of groundwater availability for the project, existing development in the area, and future foreseeable development is provided in Chapter 4.16, Utilities and Service Systems.

The project proposes to minimize water consumption through the use of grey water systems for landscape irrigation and the use of low-flow plumbing fixtures, as per the CALGreen building code. Captured rainwater will also be used for other non-potable uses. In addition, return flow from the grey water irrigation system and from the on-site septic system will provide additional recharge to the groundwater aquifer beneath the site.

Therefore, the proposed project would not substantially decrease groundwater or interfere with groundwater recharge, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

HYD-3	**The project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.**

Of the 64 acres that make up the project site approximately 11.5 acres, or 18 percent, would be mass graded for the buildings, roads, and parking. An additional 1.4 acres would be used for the primary septic system. The increase in impervious surfaces on-site would increase stormwater runoff. The drainage design would detain stormwater on-site during storm events and meter the outflow in order not to exceed the capacity of the existing culvert under Highway 120. Roof drainage and landscape area drains would direct stormwater underground to detention areas. Sheet flow from roads and parking areas would be captured in surface drainage swales which would also be directed to detention areas. Drainage swales and detention areas would be landscaped. Furthermore, the proposed project would implement rainwater collection and storage which further reduces runoff and would not alter the course of a stream

or river. In addition, the site is not in a 100-year floodplain or near any surface water bodies that could result in flood flows.

Furthermore, the proposed project would implement the requirements for landscaping, as detailed in Chapter 15.28 of the County's Code of Ordinances, that are intended to conserve water and reduce runoff. The project applicant would submit a landscape documentation package to the County's Community Resources Agency for review and approval prior to issuance of a grading permit. Provisions for stormwater management as detailed in the same chapter would also be implemented on-site. However, to ensure that the BMPs are in accordance with Implementation Program 17.C.e of the updated General Plan and that post-project stormwater volumes do not exceed pre-project development volumes further mitigation is required. Without mitigation the proposed project could modify the timing and volume of runoff and expansion of existing stormwater facilities or the construction of new facilities by the County maybe required. Therefore, the project would result in a *significant* impact with respect to storm drain facilities.

Significance without Mitigation: Significant.

Impact HYD-3: The proposed project would increase impervious surfaces and post-project stormwater volumes which could exceed pre-project development volumes thus requiring the expansion of existing stormwater facilities or the construction of new facilities.

Mitigation Measure HYD-3: Implement Mitigation Measures HYD-1a and HYD-1b.

Significance with Mitigation: Less than significant.

HYD-4	**The proposed site is not located in a 100-year floodplain, dam inundation, tsunami, or seiche zone and would not release pollutants due to inundation from a flood hazard.**

The project site is not within a 100-year floodplain as per FIRM Map. No. 06109C1250C dated April 16, 2009.[15] It is designated as within Zone D, where no analysis of flood hazards has been conducted. However, the project site is relatively flat and there are no nearby water bodies or streams or other conditions that would result in flooding at the project site. the proposed project is also not within dam inundation zone and is not located near any water storage tanks or reservoirs that would result in a seiche during seismic activity. The project site is inland and approximately 125 miles from the ocean and therefore is not at risk of flooding due to tsunamis. Therefore, there would be *no impact* associated with the release of pollutants due to inundation.

Significance without Mitigation: No impact.

[15] Federal Emergency Management Act, FEMA Flood Map Service Center: Search By Address, https://msc.fema.gov/portal/search?AddressQuery=CA-120%2C%20Groveland%2C%20CA%2095321#searchresultsanchor, accessed November 20, 2019.

HYD-5	**The proposed project would not obstruct or conflict with the implementation of a water quality control plan or sustainable groundwater management plan.**

Adherence to the State CGP, implementation of the SWPPP, and adherence to the County's Code of Ordinance requirements for grading, landscaping, OWTSs, on-site sewage treatment and disposal, water wells, and groundwater management would ensure that surface and groundwater quality are not adversely impacted during construction. In addition, implementation of the BMP measures at the site will ensure that water quality is not impacted during the operational phase of the project. As a result, site development will not obstruct or conflict with the implementation of the Sacramento and San Joaquin River Basin Plan or the Tuolumne County WQP.

Furthermore, on-site groundwater wells will be installed per the California DWR's Well Standards and will require a permit from the Tuolumne County Environmental Health Division and completion of a DWR 188 Well Completion Form.

Therefore, the project would not obstruct or conflict with local water quality control plans or sustainable groundwater management and impacts would be *less than significant*.

Significance without Mitigation: Less than significant

4.10.4 CUMULATIVE IMPACTS

HYD-6	**The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to hydrology and water quality.**

Hydrology and Drainage

Cumulative projects within the Upper Tuolumne Watershed could increase impervious areas and increase stormwater runoff rates. Tuolumne County has identified four other projects within the vicinity of the proposed project; the Yosemite Under Canvas project, the Berkeley Tuolumne Camp Restoration project, the Thousand Trails/Yosemite Lakes RV Expansion project, and the Mountain Sage Conditional Use project. The 2018 Final Mitigated Negative Declaration/Initial Study for the Berkeley Tuolumne Camp Restoration project found it to have potentially-significant-but-mitigable impacts on hydrology and water quality related to runoff pollution from construction or camp operations, which would be reduced to less than significant with implementation of measures such as best management practices and adherence to applicable regulations. Regarding the Thousand Trails/Yosemite Lakes RV Expansion project, there are not project-specific details available at this time, so the project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. According to the Tuolumne County Planning Commission Agenda Report dated February 19, 2020, for the Mountain Sage Conditional Use Permit project, the project would be required to establish an Erosion Control Plan and install drainage improvements in accordance with plans approved by the Department of Public Works.

The proposed project and the Yosemite Under Canvas project would be required to install BMPs in accordance with Implementation Program 17.C.e of the updated General Plan to ensure that post-project stormwater volumes do not exceed pre-project development volumes. In addition, the CGP contains post construction requirements including requirements that dischargers replicate the pre-project runoff. Thus, no significant cumulative drainage impacts would occur, and cumulative project drainage impacts would not be *less than significant*.

Water Quality

Cumulative projects have the potential to generate pollutants during project construction and operation. All construction projects that disturb one acre or more of land would be required to prepare and implement SWPPPs for the construction phase in order to obtain coverage under the Statewide CGP. All construction would also be required to implement the grading requirements of Chapter 12.20 of the County's Code of ordinances. As described above, the Berkeley Tuolumne Camp Restoration project would have potential impacts on water quality from runoff pollution which would be reduced to less than significant with mitigation measures such as best management practices and adherence to applicable regulations. The proposed project, the Yosemite Under Canvas project, and the Mountain Sage Conditional Use Permit project, as well as others within the watershed that would require review for impacts, would also be required to prepare and implement post construction BMPs pursuant to the CGP and implement the landscaping requirements detailed in Chapter 15.28 of the County's Code of Ordinances. Thus, cumulative water quality impacts would be *less than significant*.

Groundwater

Cumulative projects that install on-site water wells could potentially decrease groundwater supplies or interfere substantially with groundwater recharge. The 2018 Final Mitigated Negative Declaration/Initial Study for the Berkeley Tuolumne Camp Restoration project found the project would not utilize groundwater and would therefore have no impact. Any future wells at project sites in the County would be required to adhere to the requirements of the County Code of Ordinances pertaining to water wells. Chapter 13.16 regulates the construction of wells in such a manner that the groundwater of the county will not be contaminated or polluted and that water obtained from wells will be suitable for beneficial use and will not jeopardize the health, safety or welfare of the people of the county. As noted under impact discussion HYD-2, pump testing on the project site was conducted during the period when the Yosemite Under Canvas wells were also being tested to ensure that the source capacity assessment would include the potential long-term influences of nearby off-site wells operating at the same time.

Furthermore, on-site groundwater wells will be installed per the California DWR's Well Standards to ensure groundwater quality is maintained and the that groundwater is sustainably managed. Therefore, cumulative groundwater impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.11 LAND USE AND PLANNING

This chapter describes the land use character of the project site and its vicinity and evaluates the potential environmental impacts that could occur by implementing the proposed project. This chapter begins with a summary of the relevant regulatory setting and existing conditions, followed by a discussion of the proposed project and cumulative impacts.

4.11.1 ENVIRONMENTAL SETTING

4.11.1.1 REGULATORY FRAMEWORK

This section summarizes existing local regulations and plans that pertain to land use. The project site is adjacent to the Stanislaus National Forest, however as privately owned property within the jurisdiction of Tuolumne County, it is not subject to federal regulations governing forest lands.

State Regulations

The California Forest Improvement Program (CFIP) encourages private and public investment in, and improved management of, California forest lands and resources. The CFIP ensures adequate high-quality timber supplies, employment and economic benefits, and the protection, maintenance, and enhancement of a productive and stable forest resource system for the benefit of present and future generations.

The owner of the project site entered into a CFIP contract with CAL FIRE in 2015. The agreement expired on December 31, 2019, and the project applicant would be required to refund State funds awarded for the project site, consistent with the request of CAL FIRE.

Local Regulations

Tuolumne County General Plan

The 2018 Tuolumne County General Plan includes provisions that address tourism land uses and developments within the County. The goals, policies, and implementing programs applicable to tourism land uses and developments are shown in Table 4.11-1.

Tuolumne County Ordinance Code

The Tuolumne County Ordinance Code Title 17, Zoning, implements the land use designations by establishing comprehensive zoning rules for the county. Section 17.02.015, Purpose, states that the intention of Title 17 is to enforce the General Plan and is enacted in order to promote the public health, safety, comfort, and general welfare throughout the county.

TABLE 4.11-1 PROJECT CONSISTENCY WITH GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTING PROGRAMS PERTAINING TO LAND USE AND PLANNING

Number	Goal/Policy/Implementing Program Text	Consistency Discussion
COMMUNITY DEVELOPMENT AND DESIGN		
Goal 1B	*Minimize conflicts between incompatible land uses.*	
Policy 1.B.3	Require new commercial development to be designed to minimize the visual impact of parking areas on public roads and on public viewsheds. **Implementing Program 1.B.g:** Require proponents of new commercial development to locate parking areas behind buildings or sufficiently screen them from public roads and public viewsheds, or if locating behind buildings and screening are determined to be infeasible, provide other landscaping or design features to visually enhance the parking areas.	**Consistent.** Project locates parking areas distributed throughout the site which minimizes views of parking areas from Highway 120. All roadways are designed to be screened where possible by berms and landscaping.
Policy 1.B.5	Preserve the existing nighttime environment by limiting the illumination of areas surrounding new development. New lighting that is part of residential, commercial, industrial, or recreational development shall be oriented away from off-site sensitive uses, and shall be hooded, shielded, and located to direct light downward and prevent glare.	**Consistent.** Project would include outdoor lighting for safety and security purposes which would be designed to minimize light spillage by following Dark-Sky influenced design programs. Lighting would be downward positioned, and fully shielded.
Goal 1C	*Promote a jobs-housing balance in the County and encourage new communities to be designed to provide a jobs-housing balance.*	
Policy 1.C.2	Encourage a Countywide jobs-housing balance as some communities in the County are not suited for extensive job-related or residential-related development. **Implementing Program 1.C.a:** Designate adequate land for commercial, recreational, industrial, business park and mixed-use development within and near identified communities that have adequate infrastructure and services.	**Consistent.** Project is consistent with County's zoning and General Plan Land Use designations and would not exceed regional growth projections or necessitate additional housing elsewhere, as discussed in Chapter 4.13, Population and Housing.
Goal 1D	*Encourage development to build facilities that promote the use of alternative transportation systems.*	
Policy 1.D.1	Encourage pedestrian oriented development to reduce the use of motor vehicles. **Implementing Program 1.D.c:** Encourage building site designs that cater to transit riders, pedestrians and cyclists, as well as those arriving by car. Examples of transit, pedestrian and bicycle friendly building site design features include, but are not limited to, segregated entrances, pavement markings and warning and directional signage.	**Consistent.** Project is designed in a way that amenities on-site, and design of walking trails between these amenities, would greatly reduce the use of automobiles on-site. Project would include a proposed Yosemite Area Regional Transit bus stop and would provide day-use parking spots for the public to use transit and travel to Yosemite National Park.

TABLE 4.11-1 PROJECT CONSISTENCY WITH GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTING PROGRAMS PERTAINING TO LAND USE AND PLANNING

NATURAL RESOURCES ELEMENT		
Goal 16A	*Balance property rights with the conservation of the environment and rural character of the County, which contributes to the quality of life of residents, encourages tourism and supports economic development.*	
Policy 16.A.5	Conserve scenic resources, landmarks and the natural landscape. Implementing Program 16.A.i: Provide flexibility in development standards to facilitate the clustering of new development in order to encourage the retention of scenic resources, landmarks and the natural landscape.	Consistent. As discussed in Chapter 4.1, Aesthetics, of this Draft EIR, the project would not conflict with designated landmarks or scenic resources and would include sustainability measures and landscaping to reduce impacts on the natural landscape. Project is consistent with zoning and General Plan Land Use designations and would be required to comply with all development standards.
Policy 16.A.6	Encourage the protection of clusters of native trees and vegetation and outstanding individual native and non-native trees which help define the character of Tuolumne County.	Consistent. Project would include a tree preservation which would preserve the majority of trees on-site and include additional planting of native forest plant species.
Policy 16.B.5	Evaluate and mitigate impacts to biological resources in accordance with the requirements of State and Federal law.	Consistent. Chapter 4-3, Biological Resources, of this Draft EIR includes evaluation of and proposed mitigation measures for biological resources in accordance with applicable regulations.
Policy 16.B.8	Balance the conservation of biological resources with the need to reduce wildland fire hazards. Implementing Program 16.B.p: Encourage vegetation removal for fire protection purposes or as otherwise required by the Tuolumne County Fire Department in the Open Space zoning district or other areas conserved through zoning, provided such vegetation removal is addressed in a management plan and approved following review under the California Environmental Quality Act.	Consistent. Project would maintain much of the existing forested area and native trees, as well as include landscaping of native plant species in developed areas of the site, while following a Vegetation Management Plan which would be reviewed and approved by the Tuolumne County Fire Prevention Bureau to reduce wildland fire hazards.
Policy 16.B.10	Encourage planting of native species or other drought tolerant species. Implementing Program 16.B.10: Encourage the use of native species and other drought tolerant species listed on the Tuolumne County Landscape Guidelines to promote water efficiency and reduce impacts associated with the introduction of exotic species.	Consistent. Project would include replanting of native forest plant species.
Policy 16.C.4	Support educational programs that describe methods of habitat conservation, encourage voluntary efforts to protect and enhance biological resources, provide opportunities for ongoing study by local students, and provide opportunities for recreation and enjoyment by the community.	Consistent. Project would include educational programs to educate staff and guests about sustainability, and methods to increase sustainability on-site. Project would provide recreational amenities on-site such as grass-landscaped fields, a pool and spa, outdoor dining areas, among others, as well as maintenance of existing trails.

Source: County of Tuolumne, 2018, 2018 Tuolumne County General Plan.

4.11.1.2 EXISTING CONDITIONS

As shown on Figure 3-1, in Chapter 3, Project Description, the project site is located in a rural portion of unincorporated Tuolumne County at the intersection of Highway 120 and Sawmill Mountain Road. The project site is bounded by a mix of rural residential, open space, and public land uses. Local development includes rural residential homes to the north and informal walking and hiking trails. Nearby development also includes several campsites, resorts, and recreational vehicle sites. The nearest developed sites are the Yosemite Lakes RV Resort located 1 mile to the southeast, and public Sweetwater Campground located 2.25 miles to the west.

A number of easements run through the project site, including roadway, material storage, Pacific Gas & Electric (PG&E), and Pacific Telephone and Telegraph (which is owned by AT&T). These are described below:

- A roadway easement provides access from Highway 120 to the Caltrans material storage facility driveway in the southwestern portion of the project site.
- Sawmill Mountain Road passes through the site within a 66-foot-wide roadway easement.
- A PG&E easement crosses the project site diagonally from the northwest to the southeast and accommodates overhead power lines, and another PG&E easement extends north of this easement, just east of Sawmill Mountain Road.
- A Pacific Telephone & Telegraph easement also runs along the PG&E easement from the northwest to the southeast, with another easement branching off near the center of the site towards Highway 120.
- A material storage easement exists on the western edge of the project site, near the intersection of Sawmill Mountain Road and Highway 120.
- A 20-foot access easement exists along Highway 120 on the border of the two parcels that make up the project site.
- A 60-foot access opening exists at the intersection of Sawmill Mountain Road and Highway 120.

As shown on Figure 3.2 in Chapter 3, Project Description, the project site is designated Parks and Recreation (R/P) in the General Plan. The R/P land use designation allows for recreational uses of a commercial nature to serve the tourist industry, while also providing leisure activities for county residents. Typical land uses permitted in this designation include parks, camping facilities, recreational vehicle parks, ski and other resort facilities, marinas, and commercial uses in support of such facilities and public utility and safety facilities.

The proposed project is located within two Zoning Districts: the C-K (Commercial Recreation) and O (Open Space) Zones, as shown on Figure 3-3, in Chapter 3, Project Description. Chapter 17.31, Commercial Recreational District of the Tuolumne County Ordinance Code, states that the purpose of the C-K Zoning District is to encourage well-planned and integrated resort and vacation-oriented commercial complexes in which the developer may incorporate innovative design techniques. Permitted uses in the C-K Zoning District include, but are not limited to, recreational structures and developments, hotels and motels, indoor retail sales and services under 25,000 square feet of gross floor area, restaurants with or without outdoor seating, and accessory uses and structures appurtenant to permitted uses. The maximum floor

area ratio (FAR) for the C-K District is 0.5. Floor area ratio refers to the ratio between allowable building area and parcel size.

The O Zoning District is intended to protect the public in areas not suitable for development because of flooding or other natural hazards and to provide areas of open space for the protection of wildlife habitat and scenic quality, where vegetation removal may be appropriate in certain instances or for the preservation of cultural resources. Permitted uses in the O District include, but are not limited to, roads, driveways, trails, bridges, wells or sewage disposal systems permitted in conjunction with another entitlement for which an environmental review under CEQA has been adopted; vegetation removal required by the Tuolumne County Fire Prevention Bureau; planting vegetation; and uses and land management activities approved for certain purposes. Conditional uses include, but are not limited to, general recreation with no buildings, and roads, driveways, or ridges where access through another district is not feasible.[1]

4.11.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant land use and planning impacts if it would:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.11.3 IMPACT DISCUSSION

LU-1	The project would not physically divide an established community.

The project would develop the 64-acre site with a hotel lodge. The proposed project would retain the two existing roadways adjacent to the project site (Highway 120 and Sawmill Mountain Road) and would not construct new major roadways off-site that could potentially create barriers in the surrounding area. Additionally, all proposed physical features are proposed to be on-site, therefore no new physical barriers would be created with implementation of the proposed project. Therefore, the proposed project would not divide any established community, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

LU-2	The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

[1] Tuolumne County, Tuolumne County Code of Ordinances, Chapter 17.14 Open Space District, or (O) District, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/424/Chapter-1714---Open-Space-District-or-O-District?bidId=.

The proposed project conforms with the uses permitted in the R/P General Plan land use designation and in the C-K Zoning Districts. This impact discussion assesses whether the project would conflict with any land use plans, policies, and regulations intended to avoid environmental impacts.

As discussed in Section 4.11.1.2, Existing Conditions, the project site is located in a rural area of Tuolumne County, which includes rural residential development along Sawmill Mountain Road. These adjacent sites are zoned for less intensive uses than the project site, including a mix of residential estate and agriculture uses. Due to the proximity of the project to neighboring residences, special design considerations are proposed to reduce the impact this development could have on these adjacent land uses. General Plan Goal 1B states that new development must minimize conflicts between incompatible land uses. As discussed above in Table 4.11-1, the proposed project meets this goal through consistency with Policies 1.B.3 and 1.B.5, and Implementing Program 1.B.g.

The proposed project is designed in a way that amenities on-site, and design of walking trails between these amenities, would greatly reduce the use of automobiles on-site. Additionally, the project includes a proposed Yosemite Area Regional Transit bus stop and would provide day-use parking spots for the public who want to use transit to travel to Yosemite National Park, which would encourage guests and the public to use public transportation when accessing the nearby Yosemite National Park, reducing automobile trips along Highway 120. Therefore, the proposed project generally complies with Goal 1D which encourages development that promotes the use of alternative transportation systems, through consistency with Policy 1.D.1 and Implementing Program 1.D.c. as discussed in Table 4.11-1.

Chapter 3, Project Description, of this Draft EIR, states that the project would include 20 employee rooms, enough to house half of the employees needed to staff the proposed hotel lodge. The proposed project is not expected to necessitate the construction of additional housing elsewhere, as discussed in Chapter 4.13, Population and Housing. Therefore, the proposed project is consistent with Policy 1.C.2 which encourages a countywide job- housing balance.

The proposed project includes several features which enhance the natural environment of the project site, including the replanting of native forest plant species. Additionally, the proposed project would maintain the existing trails, use materials that complement the natural environment of the site, and would provide opportunities for the natural environment to be celebrated. As such, the proposed project is consistent with General Plan Goal 16A which strives to balance property rights with the conservation of the environment, and the rural character of the County, to contribute to the quality of life of residents, encourage tourism, and support economic development, through consistency with Policies 16.A.5, 16.A.6, 16.B.5, 16.B.10, and 16.C.4, and Implementing Program 16.A.i. as discussed in Table 4.11-1.

Lastly, due to the history of wildland fires on the project site, the proposed project includes several wildfire protection features, which are consistent with General Plan Policy 16.B.8 and Implementing Program 16.B.p. Refer to Chapter 4.18, Wildfire, of this Draft EIR for more information on wildland fires.

Due to consistency with the General Plan as listed above and shown in Table 4.11-1, the proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation related to land use, and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

4.11.4 CUMULATIVE IMPACTS

LU-3	The proposed project would not result in significant cumulative impacts with respect to land use and planning.

This analysis of cumulative impacts to land use and planning is based on the proposed project, in combination with the Yosemite Under Canvas project located to the south of the project site across Highway 120, Thousand Trails /Yosemite Lakes RV Expansion project located approximately 1 mile to the southeast of the project site, Berkeley Tuolumne Camp Restoration project located approximately 2.8 miles to the southeast of the project site, and the Mountain Sage Conditional Use Permit project located approximately 14.5 miles to the west of the project site. The Berkeley Tuolumne Camp Restoration project is designated public and is exempt from County land use regulations but would be reviewed by the United States Forest Service for compliance with the Forest Plan Direction. In addition, the 2018 Final Mitigated Negative Declaration/Initial Study for this project determined it would not divide an established community. Details regarding the Thousand Trails/Yosemite Lakes RV Expansion project have not been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. Finally, the Mountain Sage Conditional Use Permit project would involve minor changes on-site to allow for conditional uses within the existing land use designations and regulations.

The land use analysis finds that the proposed project would not divide an established community or conflict with established plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project would also not create or exacerbate land use conflicts within the County of Tuolumne. Approval of the proposed project and the Yosemite Under Canvas project would be based on a finding that the projects would be in conformance with the existing zoning and General Plan land use regulations for those sites. The proposed project is adjacent to the Yosemite Under Canvas project, which would connect the recreation and tourism areas of the neighborhood, and not divide the existing neighborhood. These projects would be required to comply with applicable policies and regulations in the Regional Transportation Plan, Tuolumne County General Plan, and Tuolumne County Code of Ordinances. Therefore, cumulative impacts related to land use changes and impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

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4.12 NOISE

This section describes the regulatory framework and existing conditions related to noise sources and the overall noise environment in the vicinity of the project site, evaluates the potential impacts that could occur as a result of implementation of the proposed project, and details mitigation measures needed to reduce significant impacts. The information in this chapter is based in part on the following document:

- Bollard Acoustical Consultants, Inc., April 2, 2020. Environmental Noise & Vibration Assessment – EIR: Terra Vi Lodge Yosemite Development.

This report is located in Appendix H, Noise Study, of this Draft EIR (project noise study).

4.12.1 GLOSSARY

The following are brief definitions of terminology used in this section:

- **Sound:** A disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by the human ear or a microphone.
- **Noise:** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unit-less measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level, energy averaged over the measurement period.
- **L_{max}.** The maximum root-mean-square noise level during a measurement period.
- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m. Note: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent/interchangeable and are treated therefore in this assessment.

- Peak Particle Velocity (PPV). The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- RCNM: Federal Highway Administration Roadway Construction Noise Model.

4.12.2 ENVIRONMENTAL SETTING

4.12.2.1 REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. There are no federal noise or vibration standards applicable to activities or uses in the project area; therefore, this analysis addresses only State and local standards.

State Regulations

The California Office of Noise Control has prepared a land use compatibility chart for community noise to provide urban planners with a tool to gauge the compatibility of land uses relative to existing and future ambient noise levels. This land use compatibility chart identifies “normally acceptable,” “conditionally acceptable,” and “clearly unacceptable” noise levels for various land uses. A conditionally acceptable designation implies that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements.

CBIA v. BAAQMD

The California Supreme Court in a December 2015 opinion [California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD), 62 Cal. 4th 369 (No. S 213478)], here in referred to as CBIA v. BAAQMD, confirmed that CEQA is concerned with the impacts of a Project on the environment, and not the effects the existing environment may have on a Project, with certain exceptions.

California Building Code

The California Building Code (CBC) establishes an acceptable noise level criteria for the interior areas of habitable rooms, such as those proposed by the project (lodging). The code section which is applicable to the project is Section 1207.4 *Allowable Interior Noise Levels,* which states that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric shall be the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

California Department of Transportation (Caltrans)

Tuolumne County does not currently have adopted standards for groundborne vibration. As a result, the vibration impact criteria developed by the California Department of Transportation (Caltrans) was applied

to the project. The Caltrans criteria applicable to damage and annoyance from transient and continuous vibration typically associated with construction activities are presented in Tables 4.12-1 and 4.12-2. Equipment or activities typical of continuous vibration include: excavation equipment, static compaction equipment, tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. Equipment or activities typical of single-impact (transient) or low-rate repeated impact vibration include impact pile drivers, blasting, drop balls, "pogo stick" compactors, and crack-and-seat equipment.

TABLE 4.12-1 GUIDE VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

	Maximum Peak Particle in Inches per Second (PPV in/se)	
Structure and Condition	Transient Sources	Continuous/ Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Notes: PPV in/se = peak particle velocity in inches per second
Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers and vibratory compaction equipment.
Source: Caltrans, Transportation and Construction Vibration Guidance Manual, 2013.

TABLE 4.12-2 GUIDE VIBRATION ANNOYANCE POTENTIAL CRITERIA

	Maximum Peak Particle in Inches per Second (PPV in/se)	
Human Response	Transient Sources	Continuous/ Frequent Intermittent Sources
Barely perceptible	0.40	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Notes: PPV in/se = peak particle velocity in inches per second
Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers and vibratory compaction equipment.
Source: Caltrans, Transportation and Construction Vibration Guidance Manual, 2013.

Local Regulations

The Noise Element of the 2018 Tuolumne County General Plan contains goals, policies and implementation programs to ensure that County residents are not subjected to noise beyond acceptable levels. The General Plan goals, policies and implementation programs which are applicable to the project are reproduced below.

- Goal 5A: Protect the economic base of Tuolumne County and preserve the tranquility of residential areas by minimizing potential conflicts between transportation and stationary noise sources and noise-sensitive land uses.
- Policy 5.A.1: Evaluate the need of proponents of new development of noise-sensitive land uses proposed adjacent to existing transportation or other noise sources to incorporate noise reduction techniques so that noise levels at the new development are consistent with the exposure threshold standards shown in [General Plan] Tables 5.A and 5.B. [See Tables 4.12-3 and 4.12-4 in this Draft EIR.]
- Implementation Program 5.A.a: Review new public and private development proposals to determine conformance with the policies and programs of this Noise Element. Determine that noise levels from new development will not exceed the noise level standards for specified land uses included in [General Plan] Tables 5.A, 5.B, 5.C, or 5.D. [See Tables 4.12-3 through 4.12-6 in this Draft EIR.] Determine that new development of noise-sensitive land uses in proximity of existing noise sources or land designated on the General Plan land use diagrams as HI, LI, BP, HC, TPZ or MPZ will not be affected by noise levels exceeding the standards of [General Plan] Table 5.C [see Table 4.12-5 of this Draft EIR]. For modifications or expansions of existing stationary noise sources that already exceed the standards of Table 8 on lands designated as noise-sensitive uses, Tuolumne County will determine that the new development will not increase the noise level received at the noise-sensitive land uses, or require noise reduction measures, so that the cumulative noise generated from the entire development site is equal to or less than the pre-modification or pre-expansion ambient noise level.
- Implementation Program 5.A.b: Require an acoustical analysis where activities associated with proposed development are likely to produce noise levels exceeding those specified in [General Plan Tables 5.A, 5.B, 5.C, or 5.D of this Element. [See Tables 4.12-3 through 4.12-6 in this Draft EIR.] The acoustical analysis shall be conducted early in the review process so that the possible effects of noise and noise mitigation can be considered in the project design. The requirements of an acoustical analysis are listed in Implementation Program 5.A.c.
- Policy 5.A.2: Evaluate if proponents of proposed new transportation noise sources need to submit evidence of noise effects on existing noise-sensitive land uses. Require that new development of transportation noise sources be located and designed so that existing noise-sensitive land uses will not be exposed to noise levels that exceed the standards shown in [General Plan] Tables 5.A, 5.B or 5.D. [See Tables 4.12-3, 4.12-4, and 4.12-6 of this Draft EIR.] Potential noise effects on any adjacent sensitive wildlife habitat and associated special-status wildlife species should also be considered and minimized, as needed.

TABLE 4.12-3 MAXIMUM ALLOWABLE NOISE EXPOSURE FOR TRANSPORTATION NOISE SOURCES[a]

	Outdoor Activity Areas[b]	Interior Spaces[c]
Land Uses	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB
Urban Residential	60	45
Transient Lodging[d]	60	45
Hospitals, Nursing Homes[5]	60	45
Churches, Meeting Halls, Office Buildings, Mortuaries	-	45
Schools,[e] Libraries, Museums	-	45

Notes: L_{dn} = day-night sound level; CNEL = community noise equivalent level; dB = decibel
a. This table applies to noise exposure levels that result from a transportation noise source other than aircraft. For existing receiving land uses, consideration shall be given to the noise exposure from new transportation noise sources during the design and approval of the new transportation project. In the case of existing transportation noise sources, projects or consideration of land use changes involving noise-sensitive land uses shall address the noise exposure environment and use these standards as thresholds.
b. An outdoor activity area is a location outside of the immediate structure where formal or informal activities are likely to happen. For example, anywhere on an urban residential property could be an outdoor activity area, while the outdoor activity area for a school would be the playground or sporting fields, and for a hospital would be an exterior patio or exercise area. Where the location of the outdoor activity area is unknown, the exterior noise level standard shall be applied to the property line of the receiving land uses.
c. For typical construction methods, the reduction in the noise level from the outside of the structure to the inside is approximately 15 dB. In a high noise environment, special construction techniques may be necessary to reduce the interior noise level to the standard.
d. Transient lodging are overnight accommodations usually intended for occupancy by tourists or other short-term paying customers, examples include hotels, motels, or homeless shelters. Transient lodging, as used in this case, does not include bed and breakfast establishments which are located in rural areas, campgrounds, or guest ranches.
e. These standards only apply to nursing homes or schools that have more than 6 beds or students, respectively.
Source: Tuolumne County, 2018 Tuolumne County General Plan, Noise Element, Table 5.A.

TABLE 4.12-4 MAXIMUM ALLOWABLE NOISE EXPOSURE FOR AIRCRAFT NOISE SOURCES[a]

	Outdoor Activity Areas[b]	Interior Spaces[c]
Land Uses	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB
Residential – Living Areas	55	45
Residential – Sleeping Areas	55	40
Transient Lodging[d]	60	45
Hospitals, Nursing Homes[e]	60	45
Churches, Meeting Halls, Office Buildings, Mortuaries	60	45
Schools, Libraries, Museums	60	45

Notes: L_{dn} = day-night sound level; CNEL = community noise equivalent level; dB = decibel
a. This table applies to noise exposure levels that result from aircraft. For existing receiving land uses, consideration shall be given to the noise exposure from new aviation-related sources during the design and approval of the new aviation-related project. In the case of existing aviation-related noise sources, projects or consideration of land use changes that lie within the jurisdictional area of the Tuolumne County Airport Land Use Commission which involve noise-sensitive land uses shall address the noise exposure environment and use these standards as thresholds.
b. An outdoor activity area is a location outside of the immediate structure where formal or informal activities are likely to happen. For example, anywhere on an urban residential property could be an outdoor activity area, while the outdoor activity area for a school would be the playground or sporting fields, and for a hospital would be an exterior patio or exercise area. Where the location of the outdoor activity area is unknown, the exterior noise level standard shall be applied to the property line of the receiving land uses.
c. For typical construction methods, the reduction in the noise level from the outside of the structure to the inside is approximately 15 dB. In a high noise environment, special construction techniques may be necessary to reduce the interior noise level to the standard.
d. Transient lodging are overnight accommodations usually intended for occupancy by tourists or other short-term paying customers, examples include hotels, motels, or homeless shelters. Transient lodging, as used in this case, does not include bed and breakfast establishments which are located in rural areas, campgrounds, or guest ranches.
e. These standards only apply to nursing homes or schools that have more than 6 beds or students, respectively.
Source: Tuolumne County, 2018 Tuolumne County General Plan, Noise Element, Table 5.B.

TABLE 4.12-5 MAXIMUM ALLOWABLE NOISE EXPOSURE FOR STATIONARY SOURCES[a]

Noise Level Descriptors	Daytime (7:00 AM to 10:00 PM)	Nighttime (10:00 PM to 7:00 AM)
Hourly L_{eq}, dB[b]	50	45
Maximum level, dB[c]	70	65

Notes:
a. This table applies to noise exposure levels as a result of stationary noise sources. For a development project or land use change involving a noise-sensitive land use, the noise from nearby noise sources will be considered during design and approval of the project, or in determining whether the land use change is appropriate. For development projects which may produce noise, land use changes and project review will consider the effects of noise on possible noise-sensitive uses. When considering modification or expansion at a site that already produces noise levels which exceed these standards at noise-sensitive land uses, the modification or expansion shall be reviewed to consider if the proposed action will further raise the existing noise levels received at the noise-sensitive land use(s).
Noise-sensitive land uses include urban residential land uses, libraries, churches, and hospitals, in addition to nursing homes or schools which have over 6 beds or students, respectively. Transient lodging establishments which are considered noise-sensitive land uses include hotels, motels, or homeless shelters, but not bed and breakfast establishments located in rural areas, campgrounds, or guest ranches.
b. The sound equivalent level as measured or modeled for a one-hour sample period. The daytime or nighttime value should not be exceeded as determined at the property line of the noise-sensitive land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
c. Similar to the hourly Leq, except this level should not be exceeded for any length of time.
Source: 2018 Tuolumne County General Plan, Noise Element, Table 5.C.

TABLE 4.12-6 SIGNIFICANCE OF CHANGES IN CUMULATIVE NOISE EXPOSURE[a]

Ambient Noise Levels Without Project, L_{dn} or CNEL	Significant Impact if Cumulative Level Increases By:
<60 dB[b]	+5.0 dB or more
60 – 65 dB[c]	+3.0 dB or more
>65 dB	+1.5 dB or more

Notes: L_{dn} = day-night sound level; CNEL = community noise equivalent level; dB = decibel
a. This table applies to noise exposure levels as a result of stationary noise sources. For a development project or land use change involving a noise-sensitive land use, the noise from nearby noise sources will be considered during design and approval of the project, or in determining whether the land use change is appropriate. For development projects which may produce noise, land use changes and project review will consider the effects of noise on possible noise-sensitive uses. When considering modification or expansion at a site that already produces noise levels which exceed these standards at noise-sensitive land uses, the modification or expansion shall be reviewed to consider if the proposed action will further raise the existing noise levels received at the noise-sensitive land use(s).
Noise-sensitive land uses include urban residential land uses, libraries, churches, and hospitals, in addition to nursing homes or schools which have over 6 beds or students, respectively. Transient lodging establishments which are considered noise-sensitive land uses include hotels, motels, or homeless shelters, but not bed and breakfast establishments located in rural areas, campgrounds, or guest ranches.
b. The sound equivalent level as measured or modeled for a one-hour sample period. The daytime or nighttime value should not be exceeded as determined at the property line of the noise-sensitive land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
c. Similar to the hourly Leq, except this level should not be exceeded for any length of time.
Source: Tuolumne County, 2018 Tuolumne County General Plan, Noise Element, Table 5.D.

- Implementation Program 5.A.c: Institute procedures to enforce noise reduction measures required pursuant to an acoustical analysis during the building permit and construction processes and to monitor compliance with noise reduction measures during operation of the development. Acoustical studies shall meet all requirements detailed below:
  - Be the financial responsibility of the applicant.
  - Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
  - Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and significant noise sources. Where actual field measurements cannot be conducted, all sources of information used for calculation purposes shall be fully described.
  - Estimate existing and projected (20 years) noise levels noise levels of the noise generating source and compare those levels to the adopted policies of the Noise Element. Projected future noise levels shall take into account noise from planned streets, highways and road connections.
  - Recommended appropriate mitigation to achieve compliance with the adopted policies of the Noise Element, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.
  - Estimate noise exposure after the prescribed mitigation measures have been implemented.
- Policy 5.A.3: Require proponents of proposed development of new stationary noise sources or modifications of existing stationary noise sources to evaluate noise effects on existing nearby noise-sensitive land uses. This policy does not apply to noise levels associated with agricultural operations.
- Implementation Program 5.A.d: Prepare and adopt a noise ordinance to be used in defining acceptable noise levels received at various land uses and enforcing excessive noise levels have been reported and verified.
- Policy 5.A.5: Require that construction activity and temporary construction impacts do not expose existing noise-sensitive land uses to excessive noise levels. Require all new construction activities to implement all feasible noise-reducing measures as necessary to limit construction noise exposure at receiving occupied land uses to within acceptable County noise levels identified in Table 7 (General Plan Table 5.C). Should nighttime construction activities be required (between the hours of 10:00 p.m. and 7:00 a.m.), exterior noise levels shall not exceed 65 dBA L_{max}, based on FICON's 65 dBA SEL level for sleep disturbance (but conservatively using L_{max}, which is more appropriate for construction activities).
- Implementation Program 5.A.e: The County shall ensure that, where residences or other noise sensitive uses are located 1,900 feet of construction sites, appropriate measures shall be implemented to limit noise exposure from construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary wall and noise barriers to block and deflect noise.

- Implementation Program 5.A.f: Require the use of alternative pile driving techniques, where feasible, if a particular project requires pile driving within 800 feet of sensitive receptors.
- Implementation Program 5.A.g: Require that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).
- Implementation Program 5.A.h: Require that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, the use of an exhaust muffler on the compressed air exhaust is recommended to lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment should also be incorporated to achieve a further reduction of 5 dBA. Whenever feasible, require the use of quieter procedures, such as drilling rather than impact equipment operation.
- Implementation Program 5.A.i: Locate stationary noise sources as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors shall be adequately designed to minimize noise exposure at sensitive receptors such that County noise standards are met.

4.12.2.2 EXISTING CONDITIONS

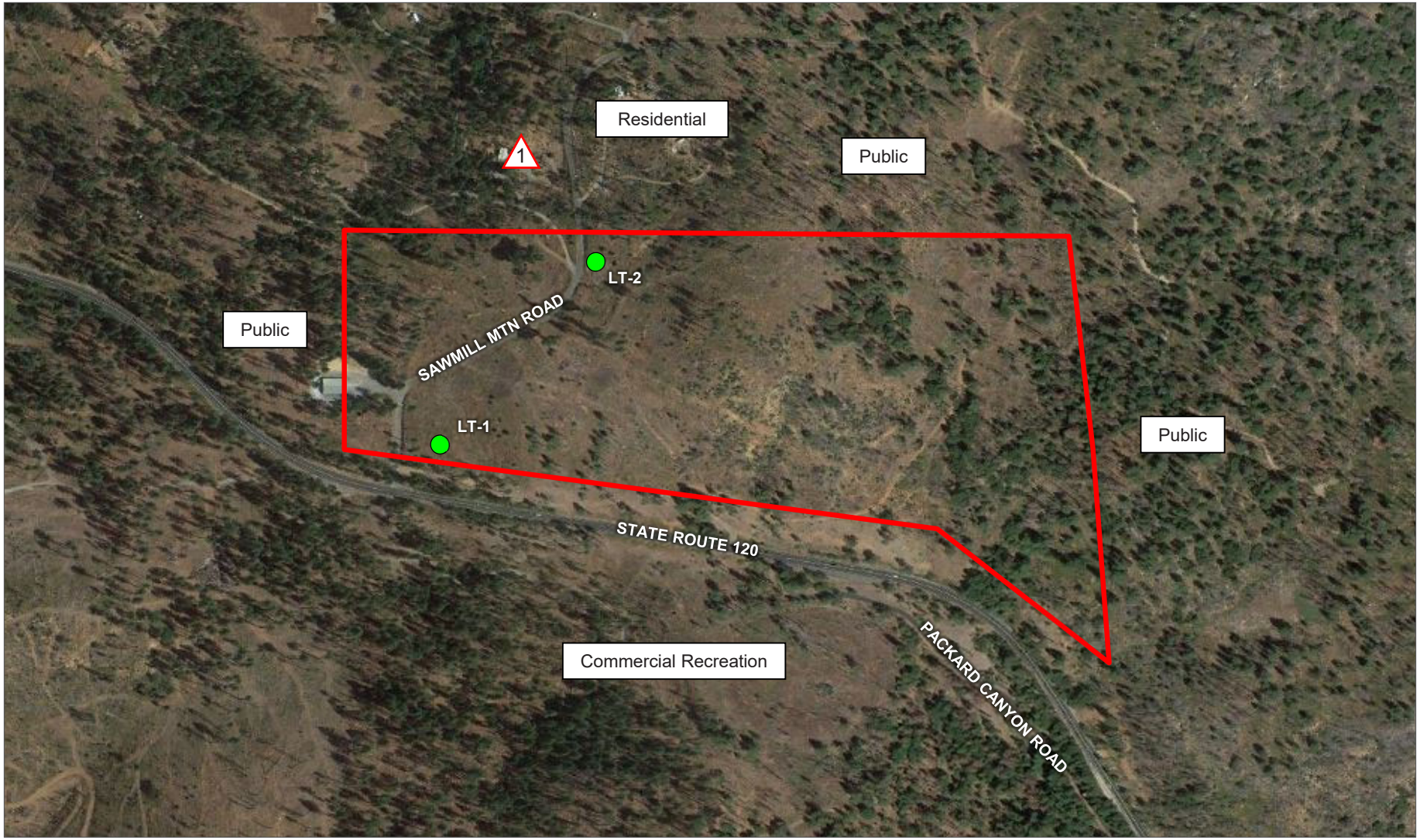
Sensitive Receptors

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship, and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities.

The noise-sensitive land uses which would potentially be affected by the project consist of the single-family residential land uses located to the north of the project site. Existing public forest lands and commercial recreation uses are located to the east, west and south of the project site, which are typically not considered to be noise sensitive, with the exception of wildlife, which could be noise sensitive. The project area and surrounding land uses are shown on Figure 4.12-1.

Existing Traffic Noise

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to develop existing noise contours expressed in terms of L_{dn} for major roadways within the project study area. The FHWA model predicts hourly L_{eq} values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop L_{dn} values from L_{eq} values.



Source: Bollard Acoustical Consultants, 2020.

0 600
Scale (Feet)

Project Border (Approximate)
Long-Term Noise Survey Locations
Nearest Existing Sensitive Receiver (Residence)

Figure 4.12-1
Noise Survey Locations and Nearest Existing Sensitive Receptors

Traffic data in the form of noon peak hour movements for existing (2019) conditions were obtained from the project traffic impact analysis prepared by KD Anderson & Associates, Inc. (see Appendix J). Average daily traffic volumes were conservatively estimated by applying a factor of 10 to noon peak hour conditions. Using these data and the FHWA Model, traffic noise levels were calculated. The traffic noise level at 100 feet from the roadway centerline and distances from the centerlines of selected roadways to the 60 dB, 65 dB, and 70 dB L_{dn} contours are summarized in Table 4.12-7.

TABLE 4.12-7 EXISTING TRAFFIC NOISE MODELING RESULTS

Segment Intersection	Direction	L_{dn} at 100 Feet	Distance to Contour (feet)		
			70 dB Ldn	65 dB Ldn	60 dB Ldn
SR 120/ Ferretti Road	North	59	17	37	80
-	South	-	-	-	
-	East	59	19	40	87
-	West	58	17	36	78
SR 120/Sawmill Mountain Road	North	35	0	1	2
-	South	-	-	-	-
-	East	63	35	74	160
-	West	63	34	74	160
SR 120/Hardin Flat Road	North	-	-	-	-
-	South	39	1	2	4
-	East	63	34	73	158
-	West	63	34	71	160

Notes: L_{dn} = day-night sound level; dB = decibel
Blank entries indicate roadway segments for which no traffic data was provided.
Source: FHWA-RD-77-108 and KD Anderson & Associates. A complete listing of FHWA Model inputs is provided in Appendix H.

Ambient Noise Measurements

The existing ambient noise environment at the project site is defined primarily by noise from traffic on SR 120. To generally quantify existing ambient noise levels in the project vicinity, Bollard Acoustical Consultants conducted long-term (120-hour) ambient noise surveys at two locations on the project site from May 10-14, 2019. The noise survey locations are shown on Figure 4.12-1, identified as sites LT-1 and LT-2. Photographs of the noise survey locations are provided in Appendix C of the project noise study (see Appendix H of this Draft EIR).

Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used to complete the noise level measurement surveys. The meters were calibrated immediately before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all specifications of the American National Standards Institute requirements for Type 1 sound level meters (ANSI S1.4).

The noise level measurement survey results are summarized in Table 4.12-8. The detailed results of the ambient noise surveys and graphs are contained in Appendix D of the project noise study (see Appendix H of this Draft EIR).

TABLE 4.12-8 LONG-TERM NOISE LEVEL MEASUREMENT RESULTS , DBA

Monitoring Location	Description	L_{dn}	Lowest L_{eq} 1-Hour	Highest L_{eq} 1-hour
LT-1	Approximately 175 feet from SR-120 roadway centerline	48[a]	39	47
LT-2	Approximately 60 feet from Sawmill Mountain Road centerline	44[a]	33	41

Notes: dBA = A-weighted decibel; L_{dn} = day-night sound level; L_{eq} = equivalent continuous noise level
For tables that span more than one page the table title will be added in a "row" above the column headings so that it repeats on the second page.
a. Highest reported Ldn level.
Source: Bollard Acoustical Consultants, Inc., 2020.

Existing Ambient Vibration Environment

During a site visit on May 9, 2019, it was noted that vibration levels were below the threshold of perception at the project site and in the immediate project vicinity. Therefore, the existing vibration environment in the immediate project vicinity is considered to be negligible.

4.12.3 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant noise impacts if it would:

1. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards.
2. Result in generation of excessive groundborne vibration or groundborne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

4.12.4 IMPACT DISCUSSION

NOI-1	**The project would result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards.**

Project Operation Noise

Traffic Noise

Local Roadway Network

Traffic data in the form of noon peak hour movements for Existing and Existing Plus Project conditions in the project area roadway network were obtained from the project transportation impact analysis prepared by KD Anderson & Associates, Inc. Average daily traffic (ADT) volumes were conservatively estimated by applying a factor of 10 to noon peak hour conditions.

Existing versus Existing Plus Project traffic noise levels on the local roadway network are shown in Table 4.12-9. The following section includes an assessment of predicted traffic noise levels relative to the Tuolumne County General Plan cumulative noise increase significance criteria identified in Table 8 of the project noise study (see Appendix H of this Draft EIR). The Table 4.12-9 data are provided in terms of L_{dn} at a standard distance of 100 feet from the centerlines of the roadways in the project vicinity.

The data in Table 4.12-9 indicate that the proposed project's contribution to traffic noise level increases is predicted to exceed the Tuolumne County General Plan cumulative noise increase significance criteria along Sawmill Mountain Road north of SR 120. This segment is predicted to have an existing plus project traffic noise level of approximately 50 dB L_{dn} at a distance of 100 feet from the roadway centerline.

Additional analysis of the above-mentioned roadway segment revealed that the first 1,200 feet of this segment is located within the project area and contains the primary access point to the development, which is located approximately 600 feet from SR 120. Thus, it is reasonably assumed that a significant portion of the project-generated traffic would exit Sawmill Mountain Road onto the project site at the primary access point. In addition, no existing residences or other sensitive uses are located along this portion of Sawmill Mountain Road within the project area. Finally, the predicted existing plus project traffic noise level of 50 dB L_{dn} at 100 feet along this roadway segment is below the Tuolumne County General Plan exterior noise level standard of 60 dB L_{dn} applicable to traffic noise affecting residential uses. Therefore, traffic noise impacts related to increases in traffic resulting from the implementation of the project (existing vs. existing plus project conditions) are identified as being less than significant.

TABLE 4.12-9 PREDICTED PROJECT-RELATED TRAFFIC NOISE LEVELS

			Traffic Noise Levels at 100 feet, dB L_{dn}				
Segment Intersection	Direction	Existing	Existing Plus Project	Project Traffic Increase	Cumulative Increase	Cumulative Plus Project	Cumulative Increase due to Project
SR 120/Ferretti Road	North	58.6	58.6	0.0	59.3	59.3	0.0
-	South	-	-	-	--	--	--
-	East	59.1	59.3	0.2	59.9	60.0	0.1
-	West	58.4	58.5	0.1	59.1	59.2	0.1
SR 120/Sawmill Mountain Road	North	35.2	49.6	14.4	38.2	49.8	11.6
-	South	-	-	-	--	--	--
-	East	63.1	63.5	0.4	64.2	64.6	0.4
-	West	63.1	63.3	0.2	64.2	64.4	0.2
SR 120/Hardin Flat Road	North	-	-	-	--	--	--
-	South	39.4	40.0	0.6	44.3	44.5	0.2
-	East	63.0	63.5	0.5	64.2	64.6	0.4
-	West	63.1	63.5	0.4	64.2	64.6	0.4

Notes: dB = decibel; L_{dn} = day-night sound level;
Blank entries indicate roadway segments for which no traffic data was provided.
Source: FHWA-RD-77-108 and KD Anderson & Associates. A complete listing of FHWA Model inputs is provided in Appendix H.

Cumulative traffic increase is predicted to exceed the General Plan cumulative noise increase significance criteria along Sawmill Mountain Road north of the SR 120. This segment is predicted to have a cumulative plus project traffic noise level of approximately 50 dB L_{dn} at a distance of 100 feet from the roadway centerline.

As discussed above, the primary access point to the proposed development is located on Sawmill Mountain Road, approximately 600 feet from the intersection of SR 120 (i.e., along this roadway segment within the project area). It is reasonable to assume that a significant portion of the project-generated traffic would exit Sawmill Mountain Road onto the project site at the primary access point. In addition, no existing residences or other sensitive uses were identified along the roadway segment within the project area. Finally, the predicted existing plus project traffic noise level of 50 dB L_{dn} at 100 feet along this roadway segment is below the Tuolumne County General Plan exterior noise level standard of 60 dB L_{dn} applicable to traffic noise affecting residential uses. Therefore, cumulative traffic noise is *less than significant*.

On-Site Traffic Circulation

The nearest existing sensitive use (receiver 1) is located approximately 400 feet from the centerline of the future interior roadway of the development (see Figure 4.12-1). According to the traffic impact analysis completed for the project by KD Anderson & Associates, Inc., the project is expected to generate a total of 894 daily trips that would be "internal" or would occur on-site. Assuming an on-site vehicle speed of 25 mph, 89 vehicle trips in a worst-case hour (10 percent of total on-site daily trips – conservative), and a distance of 400 feet from the centerline of the project interior roadway, the FHWA Model predicts a traffic noise level of 34 dB Leq. Predicted maximum noise levels due to on-site circulation are conservatively estimated to be 10 dB higher than predicted hourly average noise levels (44 dB Lmax). It was assumed for the purposes of this analysis that all of the on-site vehicle trips would occur at one location, when realistically it would likely be more spread out throughout the development. As a result, the above predicted noise levels at the nearest existing sensitive use are considered to be worst-case. Nonetheless, the predicted on-site traffic circulation noise levels of 34 dB Leq and 44 dB Lmax at the nearest existing sensitive use would satisfy the Tuolumne County General Plan daytime and nighttime hourly average and maximum noise level standards. In addition, the predicted on-site traffic circulation noise levels are at or below ambient daytime and nighttime noise levels measured within the vicinity of the nearest existing sensitive use (site LT-2). Therefore, resulting in a *less-than-significant* impact.

Parking Noise

Typical Sound Exposure Level (SEL) due to automobile arrivals/departures, including car doors slamming and people conversing is approximately 70 dB, at a distance of 50 feet. The maximum noise level associated with parking lot activity typically did not exceed 65 dB L_{max} at the same reference distance. The project proposes the construction of parking stalls that would be distributed throughout the development. The nearest existing sensitive use (receiver 1) is located to the northwest of cabins component of the development. Thus, the worst-case parking area noise exposure at receiver 1 would be generated from the nearest parking area near the guest cabins, which includes 50 parking spaces. The effective noise center of cabins parking area is located approximately 500 feet from receiver 1. At that distance, the predicted parking lot noise levels would be 31 dB L_{eq} and 45 dB L_{max}, respectively. This is below the applicable Tuolumne County General Plan hourly average and maximum noise level limits for daytime and nighttime hours. Therefore, resulting in a *less-than-significant* impact.

Delivery Trucks

The proposed loading dock and truck passby route is approximately 700 feet from the nearest existing sensitive use (receiver 1). Heavy truck arrivals and departures, and on-site truck circulation, will occur at low speeds. According to the project noise study, single-event truck passby noise levels are approximately 74 dB L_{max} and 83 dB SEL at a reference distance of 50 feet. Based on two heavy truck trips per hour, and an SEL of 83 dB SEL per passby, the hourly average noise level generated by on-site circulation computes to 50 dB L_{eq} at a reference distance of 50 feet from the passby route. When projected to a distance of 700 feet (distance from truck passby route to receiver 1), delivery truck circulation noise exposure computes to approximately 28 dB L_{eq} and 51 dB L_{max}. The predicted heavy truck passby noise levels of 28 dB L_{eq} and 51 dB L_{max} at the nearest existing sensitive use is below the applicable Tuolumne County General Plan

hourly average and maximum noise level limits for daytime and nighttime hours. Therefore, resulting in a *less-than-significant* impact.

Loading Docks

The loading dock area is proposed on the basement level directly below the restaurant/event building (south of the structure). The loading dock noise levels at Receiver 1, approximately 1,000 feet away, are predicted to be 20 dB L_{eq} and 32 dB L_{max}. The predicted loading dock noise levels take into consideration standard spherical spreading of sound (6 dB decrease per each doubling of distance from source), an offset for atmospheric absorption of sound (1.5 dB decrease per thousand feet), and an adjustment to account for a significant degree of shielding of the loading dock area that would be provided by the intervening proposed building at the basement level location (estimated to be approximately -15 dB). The predicted loading dock noise levels of 20 dB L_{eq} and 32 dB L_{max} at the nearest existing sensitive use is below the applicable Tuolumne County General Plan hourly average and maximum noise level limits for daytime and nighttime hours. Therefore, resulting in a *less-than-significant* impact.

Mechanical Equipment

The heating, ventilating, and air conditioning (HVAC) requirements for proposed buildings of the development will likely consist of packaged rooftop air conditioning systems. Receiver 1 is located approximately 500 feet from the nearest proposed buildings of the development (cabins in the northern end of the project site). Reference file data for HVAC systems indicate that a 12.5-ton packaged unit can be expected to generate an A-weighted sound power level of 85 dB. When projected to a distance of 500 feet (distance from nearest proposed cabin to receiver 1), HVAC unit noise exposure computes to approximately 31 dB L_{eq}. Cumulative HVAC noise from cabins further away were predicted to be 35 dB L_{eq}. This would be below the applicable Tuolumne County General Plan hourly average noise level limits for daytime and nighttime hours and would be at or below measured daytime and nighttime noise levels. Therefore, resulting in a *less-than-significant* impact.

Maintenance Landscaping/Yard

The development will contain a maintenance yard that will be located adjacent to an existing Caltrans sand storage building west of Sawmill Mountain Road. IT is anticipated that the primary noise source associated with maintenance yards include equipment such as circular saws, hammers and nail guns. According to the site plans, the maintenance yard will also include a generator. The proposed maintenance yard is approximately 700 feet from the nearest existing sensitive use (receiver 1). Table 4.12-10 shows typical noise levels for maintenance equipment.

Based on the reference noise levels indicated above, and assuming standard spherical spreading of sound (6 dB decrease per each doubling of distance from source), maintenance yard operations noise exposure at receiver 1 located 700 feet away would be up to 57 dB L_{eq} and 57 dB L_{max}. This could exceed ambient daytime and nighttime noise levels at the nearest sensitive receptor, resulting in a *significant* impact.

Significance without Mitigation: Significant.

TABLE 4.12-10 MAINTENANCE YARD EQUIPMENT NOISE LEVELS

Equipment	Reference Noise Levels L_{eq}/L_{max}	Predicted Noise levels[a] L_{eq}/L_{max}
Hammer	73/76 at 20 ft	40/73 at 700 ft
Drill (large)	80/83 at 15 ft	45/48 700 ft
Circular Saw	77/79 at 20 ft	44/46 700 ft
Nail/Staple Gun	71/76 at 20 ft	38/43 700 ft
Generator	82/82 at 50 ft	57/57 700 ft

Notes: L_{eq} = equivalent continuous noise level; L_{max} = maximum root-mean-square noise level during a measurement period
a. Predicted noise levels are based on a -6 dB per doubling of distance and include an offset for atmospheric absorption and intervening ground attenuation.
Source: Bollard Acoustical Consultants, Inc., 2020.

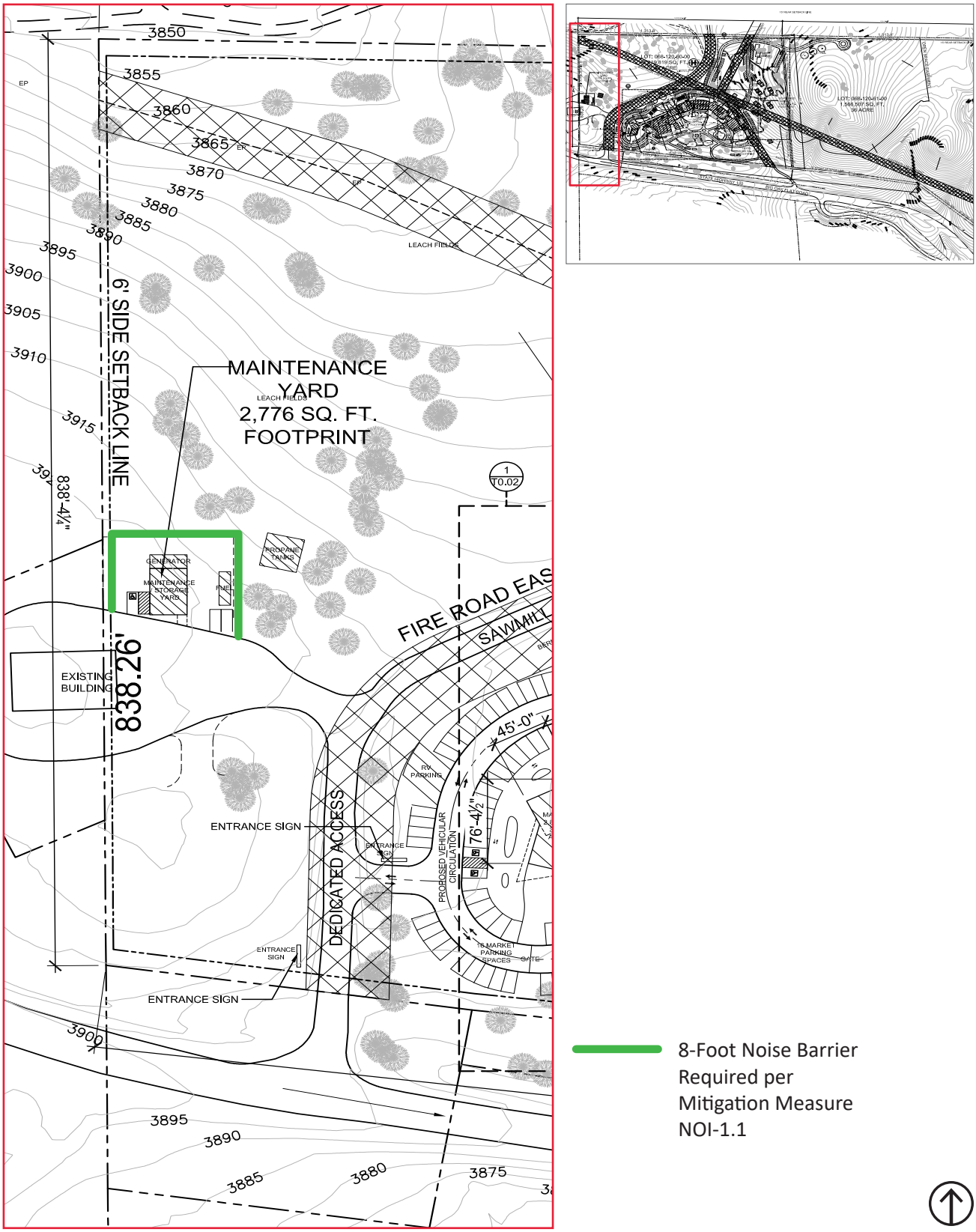
Impact NOI-1.1: The project would generate a substantial permanent increase in maintenance yard noise in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards.

Mitigation Measure NOI-1.1: In order to satisfy applicable Tuolumne County General Plan daytime and nighttime noise level limits at the nearest existing sensitive use to the project, and subsequently result in maintenance yard noise levels at or below ambient noise conditions at that use, the following noise mitigation measures shall be implemented:

- Construct a solid noise barrier measuring 8-feet in height along the north, east and west sides of the maintenance yard boundary, as depicted in Figure 4.12-2. The barrier could be constructed of either masonry or precast concrete panels. A noise barrier constructed of wood (or wood composite) fence material with overlapping slat construction would also be sufficient. The purpose of overlapping slats and using screws rather than nails is to ensure that prolonged exposure to the elements does not result in visible gaps through the slats which would result in reduced noise barrier effectiveness.
- Ensure that the generator selected for the maintenance yard have a reference noise level not to exceed 70 dB at a distance of 50 feet.

Significance with Mitigation: Less than significant. Table 4.12-11 shows the predicted mitigated noise levels.

The highest predicted equipment noise levels of 38 dB L_{eq} and 41 dB L_{max} are below mean measured daytime ambient noise levels within the vicinity of the nearest sensitive use (site LT-2). In addition, the highest predicted mitigated equipment noise level of 41 dB L_{max} is below the mean measured nighttime maximum noise level at site LT-2. Lastly, the highest predicted mitigated equipment noise level of 38 dB L_{eq} would exceed the mean measured nighttime ambient noise level at site LT-2 by 3 dB – which would be below the applicable Tuolumne County General Plan cumulative noise level increase criterion of 5 dB.



Source: AVRP Skyport, 2019.

Figure 4.12-2
Maintenance Yard Noise Barrier

TABLE 4.12-11 MITIGATED PREDICTED MAINTENANCE YARD EQUIPMENT NOISE LEVELS

Equipment	Predicted noise levels at 700 ft[a] L_{eq}/L_{max}
Hammer	33/36
Drill (large)	38/41
Circular Saw	37/39
Nail/Staple Gun	31/36
Generator	38/38

Notes: L_{eq} = equivalent continuous noise level; L_{max} = maximum root-mean-square noise level during a measurement period
a. Predicted noise levels are based on a -6 dB per doubling of distance and include an offset for atmospheric absorption and intervening ground attenuation.
Source: Bollard Acoustical Consultants, Inc., 2020.

Emergency Helipad

The project proposes a helicopter landing zone (helipad) for emergency services only. Impacts associated with helipad are addressed under Impact NOI-3.

Combined Normal On-Site Noise Operations

The calculated unmitigated combined noise levels from normal on-site project operations at the nearest existing sensitive use (receiver 1) are presented in Table 4.12-12. It should be noted that due to the logarithmic nature of the decibel scale, the sum of two noise values which differ by 10 dB equates to an overall increase in noise levels of 0.4 dB. When the noise sources are equivalent, the sum would result in an overall increase in noise levels of 3 dB.

Unmitigated combined on-site project-related noise levels are predicted to fall below the Tuolumne County General Plan daytime and nighttime maximum noise level standards at the nearest existing sensitive use, but exceed the General Plan daytime and nighttime hourly average noise level standards. This is a *significant* impact.

Significance without Mitigation: Significant.

TABLE 4.12-12 COMBINED NOISE LEVELS FROM NORMAL ON-SITE OPERATIONS AT NEAREST EXISTING SENSITIVE USES - UNMITIGATED

Project Operations Noise Levels (dB)[a] at Receiver 1														
Vehicle Circulation		Parking		Truck Circulation		Loading Dock		HVAC	Garbage		Maintenance Yard		Combined	
L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
34	44	31	45	28	51	20	32	35	38	46	57	57	**57**	**59**

County Noise Standards		
Daytime	L_{eq}	50
	L_{max}	70
Nighttime	L_{eq}	45
	L_{max}	65

Notes: dB = decibel; L_{eq} = equivalent continuous noise level; L_{max} = maximum root-mean-square noise level during a measurement period; HVAC = heating, ventilation, and air conditioning
a. Predicted noise levels include shielding provided by intervening on-site buildings and topography (where applicable).
Source: Bollard Acoustical Consultants, Inc., 2020.

Impact NOI-1.2: The project would generate combined on-site operational noise in the vicinity of the project in excess of standards established in the Tuolumne General Plan daytime and nighttime hourly average noise level standards.

Mitigation Measure NOI-1.2a: To satisfy applicable Tuolumne County General Plan noise level increase criteria at the nearest existing sensitive use to the project, the project shall limit on-site truck deliveries to daytime hours only (7:00 a.m. to 10:00 p.m.) and limit refuse collection activities to daytime hours only (7:00 a.m. to 10:00 p.m.).

Mitigation Measure NOI-1.2b: Implement Mitigation Measure NOI-1.1.

Significance with Mitigation: Less than significant. Table 4.12-13 shows the predicted mitigated noise levels from implementation of Mitigation Measure NOI-1.1. Combined project noise levels from normal on-site operations after implementation of this mitigation measure are predicted to be 38 dB L_{eq} and 49 dB L_{max} at the nearest sensitive receiver, for which the cumulative increase in ambient noise levels would be less than the General Plan cumulative noise level increase criterion of 5 dB.

TABLE 4.12-13 COMBINED NOISE LEVELS FROM NORMAL ON-SITE OPERATIONS AT NEAREST EXISTING SENSITIVE USES -UNMITIGATED

Project Operations Noise Levels (dB)[a] at Receiver 1														
Vehicle Circulation		Parking		Truck Circulation		Loading Dock		HVAC	Garbage		Maintenance Yard		Combined	
L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
34	44	31	45	28	51	20	32	35	38	46	38	41	**41**	**54**

County Noise Standards		
Daytime	L_{eq}	50
	L_{max}	70
Nighttime	L_{eq}	45
	L_{max}	65

Notes: dB = decibel; L_{eq} = equivalent continuous noise level; L_{max} = maximum root-mean-square noise level during a measurement period; HVAC = heating, ventilation, and air conditioning
a. Predicted noise levels include shielding provided by intervening on-site buildings and topography (where applicable).
Source: Bollard Acoustical Consultants, Inc., 2020.

Construction Noise

During project construction, heavy equipment would be used for grading excavation, paving, and building construction, which would increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Noise exposure at any single point outside the project work area would also vary depending upon the proximity of equipment activities to that point. The project site is approximately 250 feet from the nearest existing sensitive use (receiver 1).

Table 4.12-14 includes the range of maximum noise levels for equipment commonly used in general construction projects at full-power operation at a distance of 50 feet. Not all of these construction activities would be required of this project. The Table 4.12-14 data also include predicted maximum equipment noise levels at the nearest existing sensitive use (receiver 1) located approximately 250 feet away, which assume a standard spherical spreading loss of 6 dB per doubling of distance.

Based on the equipment noise levels provided in Table 4.12-14, worst-case on-site project construction equipment noise levels at the nearest existing sensitive use (receiver 1) could range from approximately 62 to 76 dB. Due to the short-term nature of construction noise, the intermittent frequency of construction noise, and the required compliance with the construction-related noise criteria and implementation measures established in Policy 5.A.5 of the Tuolumne County General Plan, construction activities are not anticipated to result in substantial temporary or periodic increases in ambient noise levels in the project vicinity. As a result, the impact of construction noise exposure at existing sensitive uses is considered to be *less than significant*.

TABLE 4.12-14 CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Reference Maximum Noise Level at 50 Feet, dBA	Predicted Maximum Noise Level at 250 feet, dBA
Air compressor	80	66
Backhoe	80	66
Ballast equalizer	82	68
Ballast tamper	83	69
Compactor	82	68
Concrete mixer	85	71
Concrete pump	82	68
Concrete vibrator	76	62
Crane, mobile	83	69
Dozer	85	71
Generator	82	68
Grader	85	71
Impact wrench	85	71
Jack hammer	88	74
Loader	80	66
Paver	85	71
Pneumatic tool	85	71
Pump	77	63
Rail saw	90	76
Saw	76	62
Scarifier	83	69
Scraper	85	71
Shovel	82	68
Spike driver	77	63
Tie cutter	84	70
Tie handler	80	66
Tie inserter	85	71

Notes: dBA = A-weighted decibel
Source: Federal Transit Administration, Noise and Vibration Impact Assessment Manual, Table 7-1, 2018.

NOI-2 The project would not result in generation of excessive groundborne vibration or groundborne noise levels.

Construction Vibration

During project construction heavy equipment would be used for grading excavation, paving, and building construction, which would generate localized vibration in the immediate vicinity of the construction. The nearest existing sensitive use to the project area (receiver 1, residence) is located approximately 250 feet from construction activities which would occur on the project site.

Table 4.12-15 includes the range of vibration levels for equipment commonly used in general construction projects at a distance of 25 feet. The Table 4.12-15 data also include predicted equipment vibration levels at the nearest existing sensitive use to the project area located approximately 250 feet away.

Vibration levels would not exceed Caltrans threshold of 0.30 PPV in/se for damage to residential structures and for vibration annoyances. Therefore, construction vibration-related impacts would be *less than significant*.

TABLE 4.12-15 CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Typical Equipment Item	Approximate PPV at 25 Feet (in/sec)	Approximate PPV at 250 Feet (in/sec)
Hoe ram	0.032	0.003
Large bulldozer	0.032	0.003
Caisson drilling	0.032	0.003
Loaded trucks	0.027	0.002
Jackhammer	0.012	0.001
Small bulldozer	0.001	<0.001

Notes: PPV in/se = peak particle velocity in inches per second
Source: Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual, 2018.

Operational Vibration

The project proposes transient lodging and commercial uses within the development. Transient lodging and commercial operations do not typically have equipment that generates substantial vibration levels. In addition, the proposed lodging and commercial uses do not propose equipment that will produce appreciable vibration. Operational vibration impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

NOI-3	**The project would not be located within the vicinity of a private airstrip, public airport, public use airport, an airport land use plan, but the proposed emergency helipad could expose people residing or working in the project area to excessive noise levels.**

The Tuolumne County General Plan contains day-night average (Ldn/CNEL) and maximum (Lmax) noise level standards applicable to aircraft noise sources. Helicopter noise exposure is highly dependent upon operational information such as aircraft model, number of flights per day, time of day of flights, and flight path. At the time of writing this report, this information is currently unknown. As a result, it is difficult to accurately quantify future noise exposure associated with the proposed emergency helipad at the nearest existing sensitive uses. However, the project noise study file data indicates that a Bell 407 helicopter, a model commonly used for emergency services, has a calculated combined Sound Exposure Level (SEL) of one approach and one departure of 100 dB SEL at a distance of 100 feet from the nearest point of a helipad approach. The maximum noise level for the combined arrival and departure of that same model is calculated to be 85 dB L_{max} at 100 feet. Based on the combined SEL level indicated above, and assuming two daily arrivals and departures (one trip during daytime hours, one trip during nighttime hours), the day-night average noise level from that helicopter model calculates to be 64 dB L_{dn} at a distance of 100 feet. It is anticipated that the emergency helipad will be used infrequently; therefore, the assumption that the emergency helipad would be used twice daily is conservative.

Impacts to Existing Sensitive Uses

The proposed emergency helipad is approximately 430 feet from the nearest existing sensitive use (receiver 1). Based on the project noise study file data, and assuming two daily helicopter arrivals and departures, day-night average noise level exposure is calculated to be 55 dB L_{dn} at 430 feet. The maximum noise level for the combined helicopter arrival and departure at that same distance would be 72 dB L_{max}. It is reasonable to assume that noise levels associated with emergency services, such as those proposed at the project emergency helipad, would likely be exempt from Tuolumne County noise level criteria However, based on the information above, noise levels associated with those emergency operations would likely result in substantial temporary increases in ambient daytime and/or nighttime noise levels at nearby existing sensitive uses. As a result, the impact to existing sensitive uses is identified as being *significant*.

Significance without Mitigation: Significant.

Impact NOI-3.1: Noise levels associated with use of the proposed emergency helipad could result in substantial temporary increases in ambient daytime and/or nighttime noise levels at nearby existing sensitive uses.

> Mitigation Measure NOI-3.1: While mitigation measures related to flight path design and helipad location could potentially be effective in reducing noise levels at the existing residences nearest to the project emergency helipad, it is also possible that noise exposure associated with the selected flight path could impact other sensitive uses along the route. In addition, due to the nature of the operations associated with the proposed helipad (emergency situations), mitigation measures such as limitations on aircraft models and frequency of flights per day (i.e., number per day and time of day)

are generally considered to be infeasible in application. Because there are no identified feasible mitigation measures that would ensure noise levels generated by emergency flight operations at the project emergency helipad would not result in substantial increases in ambient noise levels, this impact is considered to be significant and unavoidable.

Significance with Mitigation: Significant and unavoidable.

Impacts to Proposed Sensitive Uses

The primary noise-sensitive areas of the proposed project would be the interior areas of the guestrooms proposed within the lodge and cabinrooms. The Tuolumne County General Plan establishes noise level standards of 45 dB L_{dn} and 40 dB L_{max} (nighttime) for transient lodging uses affected by aircraft noise sources. The California Building Code identifies an interior noise level standard of 45 dB L_{dn} for habitable rooms. Standard building construction (stucco siding, STC-27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), typically results in an exterior to interior noise reduction of approximately 25 dB with windows closed and approximately 15 dB with windows open. Therefore, provided that emergency helipad operations noise levels do not exceed 70 dB L_{dn} or 65 dB L_{max} at exterior building facades, standard building construction would be adequate to ensure compliance with the applicable General Plan and California Building Code interior noise level standards.

Based on the operational assumptions and computed reference noise levels provided above, helicopter operations noise exposure is projected to be 70 dB L_{dn} at 40 feet and 65 dB L_{max} at 1,000 feet.

The project site plans indicate that the emergency helipad will be located approximately 160 feet from the nearest proposed lodging (cabin). This distance would be outside of the projected 70 dB L_{dn} noise contour indicated above. Therefore, based on the noise level data and operational assumptions indicated above, standard building construction would be adequate to reduce emergency helipad operations noise levels to 45 dB L_{dn} or less within all guestrooms of the development, which would satisfy the applicable General Plan/California Building Code day-night average interior noise level criterion. Nonetheless, mechanical ventilation (air conditioning) should be provided for all guestrooms within this development to allow the occupants to close doors and windows as desired for additional acoustical isolation.

Emergency helicopter operations maximum noise level exposure is projected to be 65 dB L_{max} at 1,000 feet. The site plans indicate that all of the proposed lodging is located within the 1,000 feet noise contour. Therefore, based on the noise level data provided above, building construction upgrades would be required for all proposed guestrooms of the development in order to comply with the General Plan 40 dB L_{max} interior noise level standard. As a result, this impact is identified as being *significant*.

Significance without Mitigation: Significant.

Impact NOI-3.2: Noise levels associated with use of the proposed emergency helipad could exceed the Tuolumne County General Plan 40 dB L_{max} interior noise level standard within the sensitive interior areas of the proposed development.

Mitigation Measure NOI-3.2a: Window and door assemblies of all lodging within the proposed development shall be upgraded to a minimum STC rating of 32.

Mitigation Measure NOI-3.2b: Disclosure statements shall be provided to inform guests of the potential for elevated interior noise levels during emergency operations at the helipad, especially during nighttime hours.

Significance with Mitigation: Less than significant.

4.12.5 CUMULATIVE IMPACTS

NOI-4	The proposed project would result in a less-than-significant cumulative impact with respect to noise.

The project noise study analyzes the proposed project along with planned projects within the project vicinity and determines that noise impacts from other projects within the county would be highly localized to the area of the particular projects. In addition, it is expected that traffic noise impacts would be the most significant impact associated with these projects. Cumulative traffic noise impacts resulting from the project, which includes consideration of other traffic generated from proposed projects in the area, are considered to be *less than significant*. Therefore, no mitigation measures would be required.

Significance with Mitigation: Less than significant.

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4.13 POPULATION AND HOUSING

This chapter describes the regulatory framework and existing conditions on the project site related to population and housing, and the potential impacts of the project on population and housing.

4.13.1 ENVIRONMENTAL SETTING

4.13.1.1 REGULATORY FRAMEWORK

This section summarizes key State, regional, and local regulations and policies pertaining to population and housing that are applicable to the proposed project. There are no federal regulations regarding population and housing that are applicable to the proposed project.

State Regulations

California Housing Element Law[1] includes provisions related to the requirements for housing elements of local government General Plans. These requirements include an assessment of housing needs and an inventory of resources and constraints relevant to meet these requirements. Additionally, in order to assure that counties and cities recognize their responsibilities in contributing to the attainment of the State housing goals, local jurisdictions must plan for, and allow the construction of, a share of the region's projected housing needs.

Regional Regulations

Regional Housing Needs Allocation

Housing Element law requires local jurisdictions to plan for, and allow the construction of, a share of the region's projected housing needs. This share is called the Regional Housing Needs Allocation (RHNA). State law mandates that each jurisdiction provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community to meet or exceed the RHNA. The California Department of Housing and Community Development is responsible for calculating the RHNA for individual jurisdictions without a Council of Governments, including Tuolumne County.[2] Tuolumne County is responsible for taking the RHNA provided by the State and allocating housing needs across its jurisdiction.

[1] Government Code Sections 65580 through 65589.8.

[2] State of California, Department of Housing and Community Development, Division of Housing Policy Development, December 7, 2018, Final Regional Housing Need Determination.

Local Regulations

Tuolumne County General Plan

The 2018 General Plan contains several goals, policies, and implementing programs relevant to population and housing. These include encouraging development of housing for all income levels and promoting affordable housing and identifying sites suitable for housing in order to meet the regional housing need. Chapter 2 of the General Plan covers policies and implementation programs specific to housing. The General Plan adopts the Tuolumne County Transportation Council's population projection of 63,243 residents by 2040, which the Environmental Impact Report for the 2018 General Plan estimates as a 14 percent increase from the population as reported in January 2019.[3]

Tuolumne County 2018 Housing Element

The County's Housing Element, most recently updated in September 2019, is part of the County's General Plan but is updated on a different cycle, consistent with State law. The County's 2014-2019 Housing Element describes how the County plans to meet the projected housing needs of all economic segments of the community and the County's fair share allocation of regional housing needs. The Housing Element addresses the provision of housing for county residents, including affordable, mixed-use, and infill housing, and includes an analysis of whether the County has provided adequate sites to meet its RHNA obligations. The Housing Element includes many goals, policies, and implementing programs that outline the County's plan to construct housing for very-low-, low-, and/or moderate-income households. The project site is not determined to be in a location prime for development of housing for very-low-, low-, and/or moderate-income households.

4.13.1.2 EXISTING CONDITIONS

Population

According to the California Department of Finance, Tuolumne County's population as of January 2019 was 54,590, which is a 0.2 percent decrease over the 2018 population of 54,721.[4] Tuolumne County has an average household size of 2.28 persons per household.[5] The General Plan Environmental Impact Report, as noted above, estimated a 14 percent population increase to the projected 2040 population of 63,243.

[3] Tuolumne County General Plan EIR, August 2018, Project Description, State Clearinghouse No. 2015082027, page 2-6.

[4] State of California, Department of Finance, Report E-1, Population Estimates for Cities, Counties, and the State, January 1, 2018 and 2019.

[5] State of California, Department of Finance, Report E-5, Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2019, with 2010 Benchmark.

Housing

On January 1, 2019, Tuolumne County had an estimated 31,624 housing units, with a 29 percent vacancy rate. Of the County's total housing units, approximately 80 percent are single-family detached homes, 11 percent are mobile homes, 9 percent are multi-family, and 1 percent are single-family attached homes.[6]

According to the American Communities Survey, the median initial construction year for Tuolumne County housing units was between 1970 and 1979, making the average home approximately 42 years old in 2017, the most recent year for which data is available.[7]

Employment

According to the State of California County-Level Economic Forecast for 2017 to 2050, there were approximately 18,180 wage and salary jobs in Tuolumne County in 2017. The County is expected to experience a growth in jobs of approximately 0.7 percent between 2017 and 2022, and a total of approximately 1,330 new jobs by the year 2050.

4.13.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant population and housing impacts if it would:

1. Induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.13.3 IMPACT DISCUSSION

POP-1	**The project would not induce substantial unplanned population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).**

The proposed project would result in a significant impact related to population growth if it would lead to substantial unplanned growth either directly or indirectly. The proposed project includes development of currently vacant land. Elements of the project include a public market, general lodge with 100 guestrooms, two "manager's suites" for the hotel managers, and multi-purpose uses, indoor and outdoor areas, and seven guest cabins providing 26 guestrooms, as well as five employee apartments with four

[6] State of California, Department of Finance, Report E-5, Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2019, with 2010 Benchmark.

[7] US Census, 2013- 2017, American Community Survey 5-Year Estimates, Table DP04.

rooms in each unit, for a total of 22 year-round employee rooms. Development of the proposed project is anticipated to generate 40 jobs once the project is operational.

As discussed in Chapter 3, Project Description, of this Draft EIR, the project site is designated as Parks and Recreation (R/P) in the General Plan and is zoned Commercial Recreation (C-K) and Open Space (O). The R/P land use designation is described in the General Plan as intended for recreational uses of commercial nature to serve the tourist industry. Typical land uses allowed in this designation include parks, camping facilities, recreational vehicle parks, ski and other resort facilities, marinas, and commercial uses in support of such facilities and public utility and safety facilities. The C-K Zoning District is meant to encourage well-planned and integrated resort and vacation-oriented commercial complexes in which the developer may incorporate innovative design techniques. Because, as noted in Chapter 4.11, Land Use and Planning, of this Draft EIR, the project is consistent with the County's zoning regulations and General Plan Land Use designations, development of the project site would not be considered to be unplanned.

As described above, the Department of Finance estimates future population and housing growth for Tuolumne County. The proposed project would be considered to induce substantial growth if the estimated buildout resulting from future development permitted under the proposed project would exceed these growth projections for the county. Implementation of the proposed project would introduce 22 permanent employee rooms, resulting in a direct increase of housing on-site. Additionally, as implementation of the proposed project is expected to result in 40 full-time jobs, the project would have the potential to result in indirect housing growth, if future project employees move to the project area and increase demand for off-site housing. However, the number of jobs that would be created by the project (40 permanent jobs) is well within the 1,330 new jobs projected by the year 2050. Although some of the jobs generated as a result of the proposed project can be potentially filled by existing residents of the county, there is a possibility that some future employees of the proposed project may relocate to the region in order to work at the hotel lodge. Generally, it is expected that the 40 jobs projected on-site can likely be filled by existing County residents. In the event that future employees relocate to the region for employment on the project site, the population increase would not exceed State growth projections for the County. Additionally, this growth was included in growth projections in the General Plan and General Plan EIR. Further, on-site employee housing reduces the number of off-site housing required to accommodate the growth and would not induce a substantial number of unplanned new residents or housing needed in the county. Therefore, the project would not exceed regional growth projections and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

POP-2	**The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.**

The project site is currently vacant; therefore, there would be *no impact* relevant to displacing substantial numbers of existing people or housing on the project site.

Significance without Mitigation: No impact.

4.13.4 CUMULATIVE IMPACTS

POP-3 The project would not contribute to significant cumulative population and housing impacts.

Impacts from cumulative growth are considered in the context of growth associated with the proposed project, as well as projected growth from the Yosemite Under Canvas project located south of the project site across Highway 120, the Thousand Trails/Yosemite Lakes RV expansion project located 1 mile southeast of the project site, the Berkeley Tuolumne Camp Restoration project located 2.8 miles southeast of the project site, and the Mountain Sage Conditional Use Permit project located 14.5 miles west of the project site.

As described above, the proposed project would not induce substantial unplanned growth or require the construction of replacement housing elsewhere. Although the proposed project would create 40 jobs, the housing created for employees and the potential indirect population and/or housing growth would not exceed the growth assumed under the State projections. The Yosemite Under Canvas project would contribute between 20 and 30 staff members during the operational season and 10 to 15 personnel on-site at any given time. The Berkeley Tuolumne Restoration project would only be active during the summer months, and accommodate staff within the rebuilt camp site, and therefore would not contribute to nor exceed regional projections.[8,9] The Mountain Sage Conditional Use Permit project would permit conditional, temporary uses on an existing site, such as a limited number of events and farmer's markets, many of which would only occur seasonally, and therefore would also not be anticipated to contribute to nor exceed regional projections.[10] Details regarding the Thousand Trails/Yosemite Lakes RV Expansion project have not yet been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. Nevertheless, based on current information, these cumulative projects would therefore not exceed the growth assumed under the General Plan 2040 and would not displace people or housing because the projects would not be removing housing units. Thus, the proposed project would not contribute to cumulative growth that could displace substantial numbers of people or housing or cumulatively exceed planned levels of growth and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

[8] ESA Consulting, February 2019, Yosemite Under Canvas Initial Study/ Mitigated Negative Declaration, page 74.

[9] City of Berkeley, Parks Recreation & Waterfront, September 2018, Notice of Intent to Adopt a Mitigated Negative Declaration for the City of Berkeley Tuolumne Camp Permit Project, page MND-1.

[10] County of Tuolumne Community Development Department, February 19, 2020. *Agenda, Tuolumne County Planning Commission.*

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4.14 PUBLIC SERVICES, PARKS, AND RECREATION

This chapter describes public services, including fire protection, police, schools, libraries, and park and recreation services provided in the project vicinity, and evaluates the potential impacts to these services that could result from the proposed project. In each section, a summary of the relevant regulatory setting and existing conditions are followed by a discussion of project-specific and cumulative impacts.

This chapter contains separate sections for the following public services:

- Fire Protection
- Police
- Schools
- Libraries
- Parks and Recreation

4.14.1 FIRE PROTECTION SERVICES

4.14.1.1 ENVIRONMENTAL SETTING

This section describes the current regulations, resources, and response time for fire protection services in the Tuolumne County. The information in this section is based in part on the following document:

- BAE Urban Economics, March 27, 2020. Final Memorandum Re: Fire Impact Analysis for Terra Vi Lodging Project. (See Appendix I of this Draft EIR.)

Regulatory Framework

State Regulations

California Building Code

The State of California provides a minimum standard for building design through Title 24 of the California Code of Regulations. The California Building Code (CBC) is located in Part 2 of Title 24. The CBC is updated every three years, and the current 2019 CBC went into effect in January 2020. The County of Tuolumne adopted the CBC into its Code of Ordinances (see below). Commercial and residential buildings are plan-checked by County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the establishment of fire resistance standards for fire doors, building materials, and particular types of construction, and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The 2019 California Fire Code (CFC) adopts by reference the 2018 International Fire Code (ICF) with necessary State amendments. Updated every three years, the CFC contains regulations related to construction, maintenance and use of buildings. The CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow

requirements, and fire hydrant locations and distribution. The 2016 CFC was adopted by Tuolumne County, into its Code of Ordinances (see section below).

Local Regulations

Tuolumne County General Plan

The Tuolumne County General Plan, adopted in 2019, includes goals, policies, and programs relevant to fire protection services. General Plan goals, policies, and programs related to wildfire are described in more detail in Chapter 4.17, Wildfire. Table 4.12-1 lists the General Plan goals and policies specific to fire protection and applicable to the proposed project.

TABLE 4.14-1 TUOLUMNE COUNTY GENERAL PLAN GOALS AND POLICIES PERTAINING TO FIRE PROTECTION SERVICES

Goal/Policy/ Number	Goal/Policy Text
PUBLIC SAFETY ELEMENT	
Goal 9E	*Provide structural fire protection to persons and property within Tuolumne County consistent with the needs dictated by the level of development and in accordance with current Federal, State, and local fire protection agency regulations and policies.*
Policy 9.E.1	Evaluate the circulation system to identify areas causing delay of emergency vehicle response and evacuation due to traffic congestion.
Policy 9.E.2	Maintain adopted levels of fire protection service.
Policy 9.E.3	Require new development to be consistent with State and County regulations and policies regarding fire protection.
Goal 9F	*Establish a system for the orderly expansion of fire protection services within Tuolumne County consistent with the needs dictated by County growth and development.*
Policy 9.F.2	Construct new fire protection facilities as needed within the jurisdiction of the Tuolumne County Fire Department/CAL FIRE in order to maintain the desired Insurance Services Office (ISO) ratings.
Goal 9G	*Establish and maintain a codified fire protection risk management strategy which requires new development within Tuolumne County to incorporate or supply fire protection infrastructure and improvements necessary so that such development does not exceed the capabilities of the County's fire protection resources.*
Policy 9.G.3	Determine the impact proposed development will have on the provision of fire protection services and maintain the established level of service as outlined in the current Tuolumne County Fire Department Service Level Stabilization Plan.
Policy 9.G.5	Require that street and structural identification are provided to assist in emergency response.
Goal 9H	*Establish reliable sources of funding for fire protection services in Tuolumne County in order to maintain the services at an acceptable level.*
Policy 9.H.2	Enforce the provisions found in Title 15 of the Tuolumne County Ordinance Code and the California Fire Code for built-in fire suppression equipment in all new development in order to improve fire safety and offset the need for increased fire department staffing and equipment.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan

Tuolumne County updated its Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) in 2018. The MJHMP outlines activities designed to reduce or eliminate losses resulting from natural hazards, including wildfires. The MJHMP describes wildfire risks for the county and establishes goals and objectives to mitigate risks. The MJHMP contains the hazard mitigation actions to help reduce the risk of damage and injury from wildfire under Goal 5: Minimize the level of damage and losses to people, existing and future critical facilities, and infrastructure due to wildland fires.

Tuolumne County Code of Ordinances

The Tuolumne County Code of Ordinances organized by Title, Chapter, and Section, contains all ordinances for the county. Most provisions relating to fire protection services are included in Title 15, Building & Construction, as follows:

- **Chapter 15.04, Construction Codes**: Chapter 15.04 of the County Code of Ordinances adopts the 2016 California Building Code.
- **Chapter 15.20, Fire Safety Standards:** This chapter adopts sections of the California Fire Code in its entirety, with amendments to Section 505.2, Street or Road Signs, and Section 505.1, address identification for commercial, industrial, and residential developments. This chapter provides regulations for fire hydrant installation, off-street signing, gate entrances, setbacks, defensible space, and fuel modification.

Existing Conditions

The proposed project is located within a CAL FIRE designated State Responsibility Area (SRA) and is surrounded by land designated in a Federal Responsibility Area (FRA). Within the SRA, the project site is located on land designated by CAL FIRE as a Very High Fire Hazard Severity Zone. Due to the rural nature of the project site, the proposed project is not located within the Wildland Urban Interface. Please also see Chapter 4.17, Wildfire, for additional information pertaining to wildfire background and existing conditions on the project site.

Fire protection services are provided through a multi-jurisdiction effort by the Groveland Community Services District (GCSD), Tuolumne County Fire Department (TCFD), CAL FIRE, and the United States Forest Service (USFS). The closest staffed fire station to the proposed project site is the Groveland Community Services District (CSD) station, located at 18930 Main Street, in Groveland. This station is approximately 17 miles from the proposed project site, which translates to an approximately 22-minute drive time with no traffic.[1] The project site is technically located within the primary response area of the Tuolumne County Fire Department, whose closest station that is staffed full-time is Station 76 at 18249 4th Street in Jamestown, a 40-mile drive to the northeast, which takes approximately 57 minutes. The closest Tuolumne County volunteer fire station is located at 13785 Highway 120 in Chinese Camp, a 34-mile drive to the east, which would take about 47 minutes. The closest CAL FIRE station is located at 11300 Merrell

[1] Volunteer Station 63 (Smith Station) located at 22360 Elmore Road in Groveland is closest; however, no volunteers and no fire equipment are currently assigned there.

Road in Groveland, which primarily responds to fire suppression calls in the SRA. This station is further from the project site than the GCSD, and therefore it is assumed that it would not be the first-in station for most incidents at the project site.[2]

Because GCSD and TCFD operate under a mutual aid agreement, the GCSD would provide the first response for most incidents that could occur at the project site. According to Josh White, Fire Chief for both GCSD and TCFD, the service standard goal for the GCSD is to respond to 90 percent of calls for service within the GCSD boundaries within 7 minutes.[3] Due to the distance between the project site and the GCSD station, it is not be possible for the CSD to achieve this service standard for existing responses to the project site.

Groveland Community Services District

The GCSD headquarters is located at the CSD District Office located at 18966 Ferretti Road, in Groveland. The GCSD is a special district, which is created and funded by its community's residents to provide enhanced local services. The service area covers approximately 15 square miles and is bounded by the Tuolumne River to the north, Stanislaus National Forest to the east, Mariposa County to the south, and the community of Moccasin to the west.[4] The GCSD provides first-in fire protection services to the project site, including fire responder emergency medical response and hazardous materials. Because the project site is outside of the GCSD service area, there is no tax mechanism for payment into the GCSD. The GCSD has mutual aid agreements with TCFD, CAL FIRE, and Mariposa County to provide adequate fire protection services. The Tuolumne Calaveras Unit San Andreas Emergency Command Center provides dispatching services to the GCSD. The station closest to the project site (Station 78 located at 18930 Main Street in Groveland) currently has a staff of one captain and four fire apparatus engineers, staffed at two persons each day. The GCSD has a current ratio of 1 fire fighter per 1,000 population in the service area. Equipment at this station consists of one type 1 engine, one reserve type 1 engine, one type 3 engine, and one pickup truck.[5] This equipment is nearing the end of its service life and the engines are well past the industry standard for replacement.

In 2018, GCSD Station 78 received approximately 490 incident calls, including five vegetation fires, four structure fires, 44 other fires, 359 medical aids, 17 hazardous materials incidents or fire menace standbys, 61 other type incidents.[6] In addition, GCSD receives approximately 50 calls per year outside of the district.[7]

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[2] BAE Urban Economics, May 2020, Fire Impact Analysis for Terra Vi Lodging Project.

[3] White, Josh, Fire Chief, Tuolumne County Fire Department, Personal communication with Matt Kowta, BAE Urban Economics, August 26, 2019.

[4] Groveland Community Services District. N.d., Our Services, https://www.gcsd.org/our-services accessed January 14, 2019.

[5] White, Josh, Fire Chief, Groveland CSD, Personal communication with Alexis Mena, PlaceWorks, July 31, 2019.

[6] White, Josh, Fire Chief, Groveland CSD, Personal communication with Alexis Mena, PlaceWorks, July 31, 2019.

[7] BAE Urban Economics, January 2020, Fire Impact Analysis for Terra Vi Lodging Project. Murphy, Andrew, Assistant Chief, Tuolumne County Fire Department, Personal community with Matt Kowta, BAE Urban Economics, December 22, 2019 and January 6, 2020.

Tuolumne County Fire Department

The TCFD provides fire protection services to the unincorporated areas of the county, including the project site. Fire protection services include search and rescue, first responder emergency medical response, hazardous materials, fire prevention, fire investigation, and plans review. The TCFD headquarters is located at 18440 Striker Court, in Sonora.[8] The TCFD has mutual aid agreements with GCSD, CAL FIRE, and Mariposa County to provide adequate fire protection services. The Tuolumne Calaveras Unit San Andreas Emergency Command Center provides dispatching services to the TCFD.

The closest TCFD fire station to the project site is Station 61, located at 13785 Highway 120, in Chinese Camp, 33.5 miles to the east. However, this is only a volunteer station. The closest fully staffed fire station is Station 76 located at 18249 4th Street, in Jamestown, 40.4 miles to the northeast. Station 76 currently has a staff of one captain and four fire apparatus engineers, staffed at two persons each day. The TCFD has a current ratio of 1 fire fighter per 725 population in the service area, when career and volunteer fire fighters are combined. Equipment at Station 76 consists of one type 1 engine and one reserve type 1 engine. Equipment at Station 61 consists of one type 2 engines and two water tenders. This equipment is nearing the end of its service life and the engines are well past the industry standard for replacement.[9]

In 2018, TCSD responded to 7,421 incidents in the county, including 308 vegetation fires, 222 structure fires, 625 other types of fires, 5,113 medical aids, 233 hazardous materials or fire menace standbys, and 920 other type incidents. Station 76, in Jamestown, responded to 1,603 incidents, consisting of 43 vegetation fires, 39 structure fires, 138 other type fires, 1,085 medical aids, 40 hazardous materials and fire menace standbys, and 258 other type calls. Station 61, in Chinese Camp, responded to 438 incidents, including 81 vegetation fires, 24 structure fires, 104 other type fires, 190 medical aids, 13 hazardous materials and fire menace standby, and 27 other type incidents. While TCFD does not have a formally adopted response time standard, TCFD confirmed that these response times do not provide adequate service to the project site.[10]

Due to ongoing concerns within Tuolumne County regarding the adequacy of fire protection and emergency medical (EMS) the commissioned a countywide First Responder and EMS Study, to review existing services, evaluate current needs, and provide recommendations for service improvements. The study, completed by Matrix Consulting group in February of 2019, identified significant challenges to the ongoing provision of fire and EMS services within the unincorporated areas of Tuolumne County. These include declining participation of volunteer emergency response personnel and a commensurate increase in need for paid emergency response personnel, combined with a constrained ability of the funding mechanisms available to pay for the operational and capital costs of fire and EMS services to keep up with the increased costs to provide these services. The study does not address changes to the current system for provision of fire and EMS services within the upper Highway 120 area. Further, the study found that a review of finances was needed for department and district lacking proper funding.[11]

[8] Groveland Community Services District. N.d., Our Services, https://www.gcsd.org/our-services accessed January 14, 2019.
[9] White, Josh, Fire Chief, Groveland CSD, Personal communication with Alexis Mena, PlaceWorks, July 31, 2019.
[10] White, Josh, Fire Chief, Groveland CSD, Personal communication with Alexis Mena, PlaceWorks, July 31, 2019.
[11] Matrix Consulting, First Responder and EMS Study, February 2019.

CAL FIRE

CAL FIRE's primary function in Tuolumne County is to respond to fire suppression calls within the SRA.[12] CAL FIRE also provides services such as first responder emergency medical response, and hazardous materials, resource protection. The closest CAL FIRE station to the project site is located at 11700 Merrell Road, in Groveland, approximately 17 miles to the east, or approximately a 24-minute drive. [13] CAL FIRE has a mutual aid agreement with the GCSD, TCFD, and the USFS to provide adequate fire suppression and protection services. The Tuolumne Calaveras Unit San Andreas Emergency Command Center provides dispatching services to CAL FIRE.

The Groveland CAL FIRE station currently has a staff of two captains and three fire apparatus engineers, and 10 firefighters during the spring, summer, and fall seasons. During the winter period, this station is staffed with an operator and three firefighters. Equipment this station consists of two type 3 engines and one pickup truck.[14] There are no existing deficiencies in equipment of staffing that CAL FIRE is facing.

In 2018, the Groveland CAL FIRE station responded to 438 incidents, including 81 vegetation fires, 24 structure fires, 104 other type fires, 190 medical aids, 13 hazardous materials and fire menace standby, and 27 other type incidents. Currently, it would take approximately 28 minutes from the Groveland station to respond to an incident on the project site. CAL FIRE does not have a formally adopted standard response time, except to contain all wildfire fires within 10 acres of less, 95 percent of the time.[15] Due to the distance of the Groveland station to the project site, it would not be possible for CAL FIRE to meet this standard if a major wildfire were to occur on the project site.

4.14.1.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to fire protection if it would:

- Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

[12] BAE Urban Economics, May 2020, Fire Impact Analysis for Terra Vi Lodging Project.
[13] Groveland Community Services District. N.d., Our Services, https://www.gcsd.org/our-services accessed January 14, 2019.
[14] White, Josh, Fire Chief, Groveland CSD, Personal communication with Alexis Mena, PlaceWorks, July 31, 2019.
[15] White, Josh, Fire Chief, Groveland CSD, Personal communication with Alexis Mena, PlaceWorks, July 31, 2019.

4.14.1.3 IMPACT DISCUSSION

PS-1	**The project would result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

Development of the proposed project would introduce employees and visitors to the project site, as, when operational, it would accommodate an average of 290 hotel guests, with a maximum occupancy of 400 guests, and include approximately 40 employees. The proposed project would also include employee apartments for up to 20 employees, plus two manager's suites in the main lodge. Although the proposed project would not result in new permanent residents on the project site, the proposed project would still exacerbate the existing lack of adequate fire protection services. Applying a rate of 0.79 estimated calls per accommodation, the estimated annual call for fire or emergency medical service to the project site would be approximately 11.[16] This represents an increase in demand on services provided by the GCSD, TCFD, and CAL FIRE, which would increase the deficiencies in service due to the distance from a fire station and existing response times. Calls from the Groveland station to the project site, which is out of the GCSD district, would take an estimated 22 minutes, and could create the potential for delayed response times for emergencies within the GCSD boundary while station personnel are responding to the project site.[17]

However, the proposed project would incorporate a number of features that would help limit the number of incidents on the project site that could generate emergency calls for fire protection or emergency medical services and reduce the extended responses time from the GCSD station. Physical features to reduce the number of incidents include: an overall site layout and design that emphasizes fire prevention and defensible space, including increased building separation, low building heights, and complete perimeter firefighting accessibility; buildings with non-combustible exterior finishes; high performance fire extinguishing and alarm system, on-site water storage, and an emergency helicopter landing facility which would be available for property-generated incidents and as well as incidents generated off-site.[18] The emergency helipad would be beneficial as it would provide an improvement to emergency response access in the region, compared to existing conditions that only allow for vehicle access. Additionally, non-physical features to lessen the number of incidents include staff and guest fire prevention and preparedness program; no cooking will be allowed in guest rooms; no smoking and no littering signs would be posted in throughout the entire project site; the lodge kitchen cooking areas will include quick-response fire extinguishing systems and enhanced fire separation area components; and periodic regular fire safety drills will be performed.[19] Furthermore, the proposed project would also include a communication plan, which would ensure the notification of vital incident information and include protocols for alerts so that personnel would be notified of high fire danger conditions. This plan would

[16] BAE Urban Economics, May 2020, Fire Impact Analysis for Terra Vi Lodging Project, Table 1.
[17] BAE Urban Economics, May 2020, Fire Impact Analysis for Terra Vi Lodging Project.
[18] BAE Urban Economics, May 2020, Fire Impact Analysis for Terra Vi Lodging Project.
[19] BAE Urban Economics, May 2020, Fire Impact Analysis for Terra Vi Lodging Project.

also include emergency communication equipment, such as radios, cell phone towers or boosters, satellite phones, and a weather station.

The proposed project would also include a training program for employees, that would provide emergency fire-response training. Key engineering staff would be trained in certified programs by the California Regional Fire Academy, which would include technical training relating to wildland fires, fire prevention, fire department apparatus, tools and equipment, breathing apparatus, extinguishers, hazardous materials, communication and emergency medical treatment.[20] Trained staff would be on-duty at all times, which would allow the proposed project to avoid calling GCSD to come out for minor emergency medical treatment incidents.

Despite the fire resistant and suppression physical features, non-physical features, and training program, the proposed project would still exacerbate existing fire protection service response time deficiencies in the region due to an increase in visitors and employees on the project site. While the proposed project would provide service improvements to the project site, GCSD and TCFD would still require alteration or expansion of staffing, equipment, and facilities, to maintain acceptable response times. Therefore, the proposed project would have a *significant* impact regarding fire protection services.

Significance without Mitigation: Significant.

Impact PS-1: The proposed project has the potential to increase demand for fire protection services to the project site. The construction or alteration of fire protection facilities to meet the increase in demand could cause significant environmental impacts.

> Mitigation Measure PS-1: Prior to issuance of the certificate of occupancy, the project sponsor shall provide trained and certified emergency staff. The project shall provide enough staff to ensure that two emergency staff are on premises and available to respond to emergencies at all times.
>
> The emergency staff shall be trained to meet Tuolumne County Fire Department volunteer fire service standards. Staffing may be provided by Terra Vi employees who have completed the required training.
>
> The Terra Vi project shall provide personal protection equipment (PPE) and positive communication equipment for all emergency staff. 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 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 Tuolumne County and maintained per manufacturer and National Fire Protection Association (NFPA) standards by the Terra Vi project sponsor.
>
> Significance with Mitigation: Less than significant.

[20] BAE Urban Economics, May 2020, Fire Impact Analysis for Terra Vi Lodging Project.

4.14.1.4 CUMULATIVE IMPACTS

PS-2	**The project, in combination with past, present and reasonably foreseeable projects, would result in cumulative impacts with respect to fire protection services.**

The cumulative setting for fire protection services consists of the current service area boundaries provided for in the mutual aid agreements between GCSD, TCFD, CAL FIRE, and USFS. The proposed project, in combination with other reasonably foreseeable development, would not increase the population of Tuolumne County; however, the increase in visitors to the project site and cumulative projects could contribute to the need for expanded fire protection facilities, equipment, and staff to provide adequate response times in the region. An assessment by the TCFD concluded that the proposed project, in combination with cumulative projects in the area, would create the need to expand existing fire services and hire additional staff to adequately meet the additional service demand.[21] Therefore, the proposed project, in combination with cumulative projects, could result in *significant* cumulative impacts regarding fire protection services.

Significance without Mitigation: Significant.

Impact PS-2: The proposed project, in combination with cumulative projects, has the potential to increase demand for fire protection services in the service area. The construction or alteration of fire protection facilities to meet the increase in demand could cause significant environmental impacts.

Mitigation Measure PS-2: Implement Mitigation Measure PS-1.

Significance with Mitigation: Less than significant.

4.14.2 POLICE SERVICES

4.14.2.1 ENVIRONMENTAL SETTING

This section describes regulations, resources, and response times for police protection and public safety services in Tuolumne County.

Regulatory Framework

There are no federal or State regulations pertaining to law enforcement that apply to the proposed project. Table 4.14-2 lists Tuolumne County General Plan goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project.

[21] White, Josh, Fire Chief, Groveland CSD, Personal communication with Alexis Mena, PlaceWorks, July 31, 2019.

TABLE 4.14-2 TUOLUMNE COUNTY GENERAL PLAN GOALS AND POLICIES PERTAINING TO POLICE SERVICES

Goal/Policy/ Number	Goal/Policy Text
PUBLIC SAFETY ELEMENT	
Goal 9D	*Protect and enhance the quality of life in Tuolumne County by providing a criminal justice system that offers peace of mind to the citizens of Tuolumne County that their lives and personal property will be protected from crime.*
Policy 9.D.2	Provide law enforcement, such as patrol, investigation, supervision, administration, clerical support, dispatch, coroner, crime laboratory, prosecution, probation, and jail services within the unincorporated area of Tuolumne County and assure that the established level of service is maintained and maintain this level.
Policy 9.D.3	Assure that the established level of service in the criminal justice system is maintained prior to approving new development.
Policy 9.D.4	Require new development to be designed so as to discourage criminal activity.
Goal 9E	*Provide structural fire protection to persons and property within Tuolumne County consistent with the needs dictated by the level of development and in accordance with current Federal, State, and local fire protection agency regulations and policies.*
Policy 9.E.1	Evaluate the circulation system to identify areas causing delay of emergency vehicle response and evacuation due to traffic congestion.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Existing Conditions

The Tuolumne County Sheriff Department (TCSD) provides law enforcement services in the unincorporated areas of Tuolumne County, including the project site. The TCSD is funding by the General Fund and has a budget of approximately $21 million per year with $1 to $1.5 million in grant funding.[22] The United States Forest Service (USFS) provides law enforcement for federally owned land within the county. The TCSD headquarters is located at 28 North Lower Sunset Drive in Sonora, and the TCSD operates four substations in Sonora, Jamestown, Twain Hart, and Groveland. The substations allow the TCSD to provide police services to multiple regions of the county. The TCSD also provides search and rescue services, which are jointly used by CAL FIRE, Yosemite National Park, and USFS.

Staffing

The Groveland substation, located at 18678 Main Street, is located approximately 15 miles east of the project site. The substation has up to one patrol officer per shift, if available, and two additional volunteer community service officers. Due to a current lack of staffing at the TCSD, the Groveland substation is not permanently staffed with a full-time sworn in officer. This substation includes a small office with an alarm and existing equipment consists of a computer, phone, and one vehicle for volunteers. The Groveland substation does not meet the current demands for police services in the part of the county, which it

[22] Evans, Neil, Undersheriff, Tuolumne County Sheriff Department, Personal communication with Jacqueline Protsman, PlaceWorks, December 27, 2019.

serves, and there are no plans for expansion, hiring additional staff, or purchasing equipment at this time.[23]

Call Volume and Response Times

On average, the Groveland substation handles approximately 27 calls for service per year. When staffing is available for the Groveland substation, service response times are approximately 15 minutes. However, when staffing is not available, officers respond from the Lake Don Pedro area or Sonora, which average 25 to 30 minutes, and 30 to 45 minutes, respectively.[24]

4.14.2.2 STANDARD OF SIGNIFICANCE

The proposed project would result in a significant impact related to police protection if it would:

- Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

4.14.2.3 IMPACT DISCUSSION

PS-3	**The project would result in the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.**

Development of the proposed project would accommodate an average of 290 hotel guests, with a maximum occupancy of 400 guests, and include approximately 40 employees once the project is operational. The proposed project would include employee apartments for up to 20 employees, plus two manager's suites in the main lodge. Although the proposed project would not create new permanent residents in the county, it could potentially increase demand for sheriff services to the project site. Although the need for additional staffing and facilities would exist with or without the proposed project, the proposed project could exacerbate existing response time and staffing deficiencies. This could result in future construction or expansion of police facilities that could have potentially significant environmental impacts. Therefore, the proposed project would have a potential *significant* impact with respect to the need for new or physically altered police protection facilities.

Significance without Mitigation: Significant

[23] Evans, Neil, Undersheriff, Tuolumne County Sheriff Department, Personal communication with Jacqueline Protsman, PlaceWorks, December 27, 2019.

[24] Evans, Neil, Undersheriff, Tuolumne County Sheriff Department, Personal communication with Jacqueline Protsman, PlaceWorks, December 27, 2019.

Impact PS-3: The proposed project has the potential to increase demand for police services to the project site. The construction or alteration of police facilities to meet the increase in demand could cause significant environmental impacts.

Mitigation Measure PS-3: The Terra Vi Lodge shall include private security personnel on staff (Manager on Duty) to provide security, complaint resolution, and interfaces with law enforcement/emergency personnel in case of an incident, emergency, or evacuation. These personnel shall be on-site 24 hours a day, seven days a week. The security personnel shall make regular rounds of the Terra Vi Lodge and employee housing and report internally any incidences, as well as report to local authorities if the situation warrants it.

Significance with Mitigation: Less than significant.

4.14.2.4 CUMULATIVE IMPACTS

PS-4	**The project, in combination with past, present and reasonably foreseeable projects, would result in cumulative impacts with respect to police services.**

The cumulative setting for sheriff services consists of the current services area boundaries of the Groveland substation. The proposed project, in combination with other reasonably foreseeable development, would not increase the population of Tuolumne County and subsequently the TCSD service area; however, the increase in visitors to the project site and cumulative projects could contribute to the need for expanded police facilities that could cause significant physical impacts to the environment. An assessment by the TCSD concluded that the proposed project, in combination with cumulative projects in the area, would create the need to expand existing sheriff facilities and hire additional officers and staff to adequately meet the additional service demand. This could result in future construction or expansion of police facilities that could have potentially significant environmental impacts. Therefore, the proposed project, in combination with cumulative projects, could result in *significant* cumulative impacts regarding police services.

Significance without Mitigation: Significant.

Impact PS-4: The proposed project, in combination with cumulative projects, has the potential to increase demand for police services in the service area. The construction or alteration of police facilities to meet the increase in demand could cause significant environmental impacts.

Mitigation Measure PS-4: Implement Mitigation Measure PS-3.

Significance with Mitigation: Less than significant.

4.14.3 SCHOOLS

This section describes the existing regulations and conditions with regard to schools serving Tuolumne County, as well as the proposed project's potential impacts to schools.

4.14.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes key State and local regulations related to schools. There are no federal regulations pertaining to schools that apply to the proposed project.

State Regulations

Senate Bill 50

Senate Bill (SB) 50[25] (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 State and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available, whether the school district is eligible for State funding and whether the school district meets certain additional criteria involving bonding capacity, year-round school and the percentage of moveable classrooms in use.

California Government Code, Section 65995(b), and Education Code Section 17620

SB 50 amended California Government Code Section 65995, which contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. Per California Government Code Section 65995, the payment of fees is deemed to fully mitigate the impacts of new development on school facilities.

Mitigation Fee Act (California Government Code 66000-66008)

Enacted as Assembly Bill (AB) 1600, the Mitigation Fee Act requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put.[26] The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development plan on which it is to be levied. The Act came into force on January 1, 1989.

Local Regulations

The Tuolumne County General Plan contains the Education and Libraries Element, which includes goals, to encourage school districts to maintain and enhance existing educational opportunities. The following goals are applicable to the proposed project:

[25] SB 50, approved in 1998, is different legislation than SB 50 as currently proposed by the State Legislature.

[26] California Government Code, Sections 66000-66008, https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=66000, accessed November 5, 2019.

- Goal 12A: Provide assistance to the County Superintendent of Schools Office and the school districts within Tuolumne County regarding school facilities planning, land use, growth trends, and potential school sites.
- Goal 12B: Support the availability of higher education programs and facilities offered by Columbia College and other postsecondary institutions in order to serve the needs of the residents of Tuolumne County.

Existing Conditions

Tuolumne County is served by three school districts: Big Oak Flat-Groveland Unified School District, Sonora Union High School District, and Summerville Union High School District. The Big Oak Flat-Groveland Unified School District (School District) currently serves the project site.

The Big Oak Flat-Groveland Unified School District serves the southern portion of Tuolumne County, including Groveland, Moccasin, and surrounding areas. The School District operates four schools, including two high schools, one elementary school, and one day school. Among the four schools, two are located within the community of Groveland. The School District collects development impact fees, which fund improvements and new facilities to mitigate impacts from new development. The School District collects $2.63 per unit of residential and multi-family development, and $0.42 per square foot of commercial development.[27]

4.14.3.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to schools if it would:

- Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

4.14.3.3 IMPACT DISCUSSION

PS-5	**The proposed project would not result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.**

Development of the proposed project would not include any housing that would generate new students or increase the need for local school facilities. The proposed employee housing would not include employee family housing. Development of the proposed project would require payment of commercial developer impact fees to the school district that serves the project site. The payment of school fees is

[27] Tuolumne County Superintendent of Schools, https://www.tcsos.us/business-services/developerfees/, accessed October 24, 2019.

deemed to fully mitigate the impacts of new development on school facilities, per SB 50. Therefore, there would be *no impact* on the need for school facilities.

Significance without Mitigation: No impact.

4.14.3.4 CUMULATIVE IMPACTS

PS-6	The proposed project would not result in cumulative impacts with respect to school services.

The proposed project would not generate any new students and would pay commercial developed impact fees. Therefore, the project would not contribute to cumulative impacts with respect to school services and there would be *no impact*.

Significance without Mitigation: No impact.

4.14.4 LIBRARIES

This section describes the existing regulations and conditions regarding library services in Tuolumne County, as well as the proposed project's potential impacts to libraries.

4.14.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes key State and local regulations related to libraries. There are no federal regulations pertaining to libraries that apply to the proposed project.

State Regulations

The Mello-Roos Community Facilities Act, Government Code Section 53311 *et seq.*, provides an alternative method of financing certain public capital facilities and services through special taxes. This State law empowers local agencies to establish Community Facilities Districts (CFDs) to levy special taxes for facilities such as libraries. Such districts exist within Tuolumne County.

Local Regulations

The Tuolumne County General Plan contains the Education and Libraries Element, which includes goals, to encourage adequate library facilities to serve the residents of the county. The following goal and policy are applicable to the proposed project:

- Goal 12C: Adopt an acceptable level of availability and variety of library services and maintain that level as new development occurs within Tuolumne County.
- Policy 12.C.1: Maintain a goal through the Capital Improvements Program (CIP) for levels of library services throughout Tuolumne County equivalent to 325 square feet of gross floor area of adequately

equipped and staffed library facilities per 1,000 population, exclusive of the Sierra Conservation Center.

Existing Conditions

The Tuolumne County Library governs and administers four community branch libraries, the Sonora Main Library, the Groveland Branch Library, the Tuolumne Branch Library, and the Twain Harte Branch Library, and a 24-7 online library for all library users. The Tuolumne County Library serves all unincorporated communities of Tuolumne County, as well as the City of Sonora. The project site is served by the branch library in Groveland, located at 18990 Main Street, approximately 14 miles east of the project site.

The Tuolumne County Library lends books, media, and digital content to all groups, and provides educational and entertainments programs and events for children, teens, adults, and families. It also offers free internet-enabled public computers and offers access to database and reference and research services for residents. The library provides different learning opportunities and classes, which include, but are not limited to, adult literacy tutoring, Born to Read, children's room, Storytime for children, and Teen Spot.[28]

Library services are primarily funded by County property taxes. Individuals living in the unincorporated areas in Tuolumne County served by the Tuolumne County Library have a portion of their property taxes designated for the Tuolumne County Library.

4.14.4.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to libraries if it would:

- Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

4.14.4.3 IMPACT DISCUSSION

PS-7	**The proposed project would not result in the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.**

Development of the proposed project would increase the number of residents and housing in the Tuolumne County Library service area. The proposed project would include five employee apartments that would accommodate up to 20 employees on-site, as well as two manager's suites in the main lodge. It is possible that the 22 employees living on-site and other employees living off-site would use the library

[28] Tuolumne County Library, https://www.tuolumnecounty.ca.gov/416/Library, accessed on November 5, 2019.

and would therefore represent a slight increase in demand on library services provided at the Groveland Branch Library. However, because it is expected that at least some of the future employees of the project would be existing residents of Tuolumne County and surrounding communities, it is not anticipated that all new employees would represent new residents or users of the Tuolumne County Library and its services.

Tuolumne County has one goal and policy pertaining to libraries, as listed in Section 4.14.4.1 above. Goal 12C focuses on providing the community with an acceptable level of availability and variety services, and to maintain that level with new development. This goal is implemented through Policy 12.C.1, which requires the County to maintain an equivalent of 325 square feet of gross floor area of library facilities per 1,000 population (a minimum of 0.325 square feet per person) and is achieved through the County's Capital Improvements Program. The County current meets this goal and has approximately 23,458 square feet of gross floor area of library facilities for a population of approximately 54,590 (approximately 0.43 square feet per person). The proposed project would not substantially increase new residents or users of the of the Tuolumne County Library and the library currently meets the acceptable level of service. Therefore, a *less-than-significant* impact would occur with response to the need for new of physically altered library services.

Significance without Mitigation: Less than significant.

4.14.4.4 CUMULATIVE IMPACTS

PS-8	**The proposed project would result in less-than-significant cumulative impacts with respect to the construction of other public facilities.**

The methodology used for the cumulative impact analysis is described in Chapter 4.0, Environmental Analysis, of this Draft EIR. This section analyzes potential impacts to library services that could occur from development allowed by the proposed project in combination with reasonably foreseeable growth within the project vicinity. The proposed project, in conjunction with the cumulative projects within the proposed project vicinity, could increase demands on library services. However, these projects would not generate permanent residents and temporary residents use of library facilities and services would not likely be substantial. The Yosemite Under Canvas Project would include temporary residents and generate between 20 and 30 staff members during the operational season, but it is not anticipated that all new employees would represent new residents or users of the Tuolumne County Library and its services. The Thousand Trails Yosemite Lake RV Expansion may also increase temporary residents on-site but details regarding this project have not been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. The Berkeley Tuolumne Camp Restoration project would include rebuilding the 13 cabins, one permanent residence, and 77 guest cabins that were on-site prior to the 2013 Rim Fire, which would not increase the temporary or permanent residents beyond what was previously on-site. Finally, the Mountain Sage Conditional Use Permit project would allow for conditional uses on the site including temporary, limited events which would not generate permanent residents. Therefore, the proposed project in conjunction with the cumulative projects would not substantially increase the use of library services or constitute the need for new or physically altered

library facilities. As a result, a *less-than-significant* cumulative impact associated with libraries would occur.

Significance without Mitigation: Less than significant.

4.14.5 PARKS AND RECREATION

4.14.5.1 ENVIRONMENTAL SETTING

This section describes the regulatory framework and existing conditions related to parks and recreation services in Tuolumne County and the potential impacts that would result from development of the proposed project on parks and recreation services.

Regulatory Framework

State Regulations

The Quimby Act of 1975 authorizes Cities and Counties to pass ordinances requiring developers to set aside land, donate conservation easements or pay fees for park improvements. The Quimby Act sets a standard park space to population ratio of up to 3 acres of park space per 1,000 persons. Jurisdictions with a ratio of higher than 3 acres per 1,000 persons can set a standard of up to 5 acres per 1,000 persons for new development.[29] The calculation of a jurisdiction's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of city-owned parkland. A 1982 amendment (AB 1600) requires agencies to clearly show a reasonable relationship between the public need for a recreation facility or park land, and the type of development project upon which the fee is imposed.

Local Regulations

Tuolumne County General Plan

The County of Tuolumne General Plan includes goals, policies, and programs relevant to the environmental factors potentially affected by the proposed project. The General Plan's Parks and Recreation Element provides guidance for preservation of the County's open spaces and other natural resources, as well as identify the parks and recreation facilities available to local residents. Table 4.14-3 lists selected goals and policies.

[29] California Government Code Section 66477, California Department of Parks and Recreation website, Quimby Act 101: An Abbreviated Overview, http://www.parks.ca.gov/pages/795/files/quimby101.pdf, accessed on November 4, 2019.

TABLE 4.14-3 TUOLUMNE COUNTY GENERAL PLAN GOALS AND POLICIES PERTAINING TO PARKS AND RECREATION

Goal/Policy Number	Goal/Policy Text
PUBLIC SAFETY ELEMENT	
Goal 11A	*Provide an adequate supply and equitable distribution of recreation facilities for residents based on existing and projected population and the results of community needs surveys.*
Policy 11.A.1	Acquire and develop recreation facilities to fulfill the County's projected unmet need based on a goal of 5 acres of recreational facilities per 1,000 residents.
Goal 11B	*Acquire, develop and manage recreational lands according to principles which protect private property rights, maximize cost efficiency, promote accessibility by all residents, advocate safety, and encourage public participation.*
Policy 11.B.6	Construct trails for bicycle, pedestrian and, where feasible, equestrian use linking the County's major population centers with other local, state and federal recreational facilities, significant open space areas, libraries, schools, neighborhoods, public facilities and other destination points. Acquisition and construction shall be in accordance with the priorities established, the needs identified and within the general locations shown in the Tuolumne County Recreation Master Plan in coordination with the Tuolumne County Regional Transportation Plan Non-motorized Element (RTP) and General Plan Transportation Element.
Goal 11C	*Cooperate with other public agencies and private enterprise to provide park and recreation facilities.*
Policy 11.C.6	Coordinate with and provide incentives to private industry and commercial businesses to help attain maximum use and minimum duplication in the cost of park and recreation facilities.
Goal 11E	*Address the impacts of new development on the County's recreational facilities.*
Policy 11.E.1	Maintain and update, as necessary, the Tuolumne County Ordinance Code sections pertaining to land dedications and/or payment of in-lieu fees for new development's contribution to providing recreational facilities consistent with Government Code Section 66477.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Tuolumne County Recreation Master Plan

The Tuolumne County Recreation Master Plan, adopted in February 2002, implements the provisions of the Tuolumne County General Plan pertaining to recreation. It establishes standards for providing new park and recreational facilities, provides inventory of existing facilities, identifies recreational needs within the County, proposes locations for potential future facilities and methods of financing, and provides a basis for the Recreation Element of the General Plan to support land use decisions affecting recreational facilities. The Recreation Master Plan lays out potential ways to meet the Recreation Element of the General Plan's goals for constructing at least 35 miles and developing at least 225 acres of recreational facilities, among others.

Existing Conditions

County-Owned Parks and Facilities

The Tuolumne County Parks and Recreation Department owns and operates parks and recreational facilities in Tuolumne County. Park facilities include dog parks, parks and playgrounds, sports fields,

swimming pools, and youth centers.[30] The County has a goal of maintaining a ratio of 5 acres of recreational facilities per 1,000 residents.[31] Currently, the County provides 341.25 acres of parkland for the 54,590 population of the County, with a ratio of 6.25 acres per 1,000 residents, with is 1.25 percent of the standard.[32]

Stanislaus National Forest

In addition to the County's park and recreational facilities, Tuolumne County residents have access to a range of trails and open space within the Stanislaus National Forest. The Stanislaus National Forest encompasses approximately 1,403 square miles and contains over 800 miles of rivers and streams, as well as campgrounds and dozens of hiking, biking, and horseback riding trails. The Forest is split in to four Ranger Districts, including Route 120, Route 108, Stanislaus River, and Route 4. The proposed project is surrounded by the Route 120 Ranger District. This District traverses the southern portion of the Stanislaus National Forest and continues eastward towards Yosemite National Park. The nearest hiking trail is the Little Golden Forest Interpretive Trail near the Groveland Ranger District Office, located approximately, 4 miles west of the project site.

Yosemite National Park

The project site is also within proximity to Yosemite National Park, which is located approximately 5 miles east of the project site. Yosemite National Park encompasses approximately 1,169 square miles, with 1,101 square miles of designated wilderness, 800 miles of hiking trails, and 20 miles of walking and bicycle paths. Recreational activities include hiking, backpacking, ranger and interpretive programs, biking, birdwatching, fishing, horseback riding, rock climbing, winter sports, and water activities.[33]

4.14.5.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in a significant impact related to parks and recreation if it would:

- Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered parks and recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

[30] County of Tuolumne, https://www.tuolumnecounty.ca.gov/675/Find-a-Park-or-Facility, accessed November 6, 2019.
[31] County of Tuolumne, 2018, 2018 Tuolumne County General Plan, Volume I: General Plan Policy Document, p. 11-2.
[32] County of Tuolumne, 2018, 2018 Tuolumne County General Plan, Volume I: General Plan Policy Document, p. 11-2.
[33] National Parks Service, https://www.nps.gov/yose/planyourvisit/things2do.htm, accessed November 6, 2019.

4.14.5.3 IMPACT DISCUSSION

PS-9	**The project would not result in the need for new or physically altered park facilities or other recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.**

As described in Chapter 3, Project Description, of this Draft EIR, development of the proposed project is expected to generate up to 33 FTE employees, the lodge/hotel manager, as well as accommodate an average of 394 hotel guests, with a maximum occupancy of 556 hotel guests. The proposed project would include employee apartments for up to 20 employees, plus two manger's suites in the main lodge, which would constitute a small increase in permanent residents that could increase the demand for the parks and recreational facilities in the region.

The proposed project would have a significant impact if it would result in substantial adverse impacts associated with the provision of new of physically altered parks and recreational activities in order to maintain the County's adopted ratio of 5 acres of parkland per 1,000 residents. As described under Existing Conditions, the County currently has a ratio of 6.25 acres per 1,000 residents, with is 1.25 percent of the standard.[34] The proposed project would increase the numbers of persons and level of activity of the project site; however, the proposed employee housing would not include employee family housing, making it unlikely that a substantial increase in the amount of people assumed to frequently use the existing County parks would be introduced as a result of the proposed hotel lodge. The 22 new residents generated by the development of employee housing may utilize the County park system; however, this would not this would not decrease the park acreage to resident ratio, as it would remain at 6.25 acres per 1,000 residents. A small number of guests may choose to utilize County park and recreational facilities, but this would mostly likely be few people as most guests would travel to the area to use facilities in the Stanislaus National Forest or Yosemite National Park. Therefore, new or physically altered park facilities would not be necessary to meet the acceptable service ratios for County parks and recreational facilities.

The proposed employee housing would not include employee family housing.

The proposed project would generate up to 33 FTE employees that may choose to utilize trails and facilities in Stanislaus National Forest or Yosemite National Park, but this would be a small increase compared to the over 2 million people who visit the Stanislaus National Forest and over 4 million people who visit Yosemite National Park annually.[35,36] The proposed project would also accommodate up to 556 hotel guests, which are most likely attracted to the area due to the close proximity to the National Forest and Yosemite National Park. However, the hotel would accommodate people who were already planning to visit the area and would not increase the use of the National Forest or National Park to the point where new or physically altered park and recreation facilities would be required.

[34] County of Tuolumne, 2018, 2018 Tuolumne County General Plan, Volume I: General Plan Policy Document, p. 11-2.
[35] National Parks Service, https://www.nps.gov/yose/planyourvisit/brochures.htm, accessed November 7, 2019.
[36] United States Forest Service, 2004, National Visitors Use Monitoring Report: Stanislaus National Forest.

Therefore, the proposed project would not generate a need to physically alter or construct new facilities at County parks, the Stanislaus National Forest, or Yosemite National Park, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-10	**The project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated.**

Development of the proposed project would accommodate up to 22 new permanent residents in on-site employee housing, which would only slightly increase the demand for the parks and recreational facilities in the County. It is possible for all the 556 potential guests of the hotel could utilize regional park facilities owned and operated by the County. However, the hotel guests would most likely have been drawn to the area to visit the Stanislaus National Forest or Yosemite National Park, and only a small number of guests would likely visit County parks. Therefore, the generation of residents and hotel guests on-site would not exceed the park acreage to resident ratio and would not increase the use of existing County park facilities to the point where substantial physical deterioration would occur or be accelerated.

The hotel guests generated by the proposed project would most likely use park facilities in the Stanislaus National Forest and Yosemite National Park. The proposed hotel would accommodate people who are already planning to visit the area, and therefore the guests would not represent a substantial increase in the use of existing park facilities in Stanislaus National Forest or Yosemite National Park, as those recreational areas receive over 2 million and 4 million annual visitors, respectively. Furthermore, the hotel would provide 30 day-use parking spaces on-site to encourage the use of public transportation and ride sharing to reduce the deterioration of roadways in and near Yosemite National Park. Therefore, the proposed project would not cause the substantial or accelerated deterioration of park facilities, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

PS-11	**The project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.**

As described in PS-10, development of the proposed project would include 22 new permanent residents, that would only slightly increase the demand for the parks and recreational facilities in the County. It is possible for all the 556 potential guests of the hotel could utilize regional park facilities owned and operated by the County. While employees or guests of the hotel at the project site could utilize public recreational facilities, including County Parks, Stanislaus National Forest, Yosemite National Park, and other nearby recreational areas and attractions, this number of users is small in comparison to the number of current users of facilities. It is unknown specifically which facilities project guests would visit. Furthermore, the hotel would accommodate people who were already planning to visit the area and its park facilities. Therefore, the increase in potential recreational facility users from the proposed project

would not result in the need for new or physically altered recreational facilities, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.14.5.4 CUMULATIVE IMPACTS

PS-12	**The project, in combination with past, present and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to parks.**

Implementation of the proposed project would have a significant impact if, in combination with other development projects in Tuolumne County, it would result in substantial adverse physical impacts associated with the provision of new or physically altered parks and recreational facilities in order to maintain the County's adopted ratio of 5 acres of parkland per thousand residents.

While cumulative growth in the employee and visitor population would result in increased use of regional parks and recreational facilities, buildout of the reasonably foreseeable projects in the vicinity of the project site would not result in substantial adverse impacts to parks and recreational facilities in Tuolumne County, Stanislaus National Forest, or Yosemite National Park. The new employees in cumulative projects would most like be seasonal and would not generate new permanent residents that would exceed the 5 acres of parkland to 1,000 resident ratios. Similar to the proposed project, the cumulative projects would accommodate people who are already planning to visit the area. Furthermore, the guests would not represent a substantial increase in the use of existing park facilities in Stanislaus National Forest or Yosemite National Park, as those recreational areas receive over 2 million and 4 million annual visitors, respectively. Therefore, the proposed project, in conjunction with cumulative projects, would not result in a need for new or expanded park facilities or cause the substantial deterioration of existing facilities.

Overall, implementation of the proposed project, in combination with other past, present, and reasonably foreseeable projects, would result in a *less-than-significant* cumulative parks and recreation impact.

Significance without Mitigation: Less than significant.

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4.15 TRANSPORTATION

This section describes the regulatory framework and existing conditions on the project site related to transportation and traffic. This section also addresses the potential impacts of the proposed project's implementation on transportation and traffic conditions on and in the regional vicinity of the project site. The analysis in this section is based in part on a transportation impact analysis (TIA) conducted by KD Anderson and Associates, Inc, in April 2020. A complete copy of this traffic study is in the technical appendices to this Draft EIR (Appendix J1). The analysis also reflects the vehicle miles traveled (VMT) analysis prepared by Wood Rodgers in Appendix J2.

4.15.1 ENVIRONMENTAL SETTING

4.15.1.1 REGULATORY FRAMEWORK

This section identifies the laws, regulations, policies, and programs related to the physical environment that pertain to the project's effects on transportation and circulation on the highways and local roadways within the project site area.

State Regulations

Caltrans and the California Transportation Commission (CTC) are the primary agencies that oversee transportation infrastructure in California. Caltrans manages the state's highway and inter-city rail systems, and the CTC is responsible for the programming and allocating of funds for the construction of highway, passenger rail, and transit improvement in California.

California Transportation Plan 2040

Caltrans' California Transportation Plan 2040 (CTP 2040) is a statewide, long-range transportation plan that establishes a policy framework for all levels of government to address future mobility needs and reduction of GHG emissions. Transportation goals identified in the CTP 2040 include improving multi-modal mobility and accessibility for all people and preserving the multi-modal transportation system. Policies related to these goals include operating an efficient transportation system; strategic investment; providing multi-modal choices; sustainable and preventative maintenance strategies; including life cycle costs in decision making; and adapting the transportation system to reduce impacts from climate change. The project site is located in Tuolumne County, within Caltrans' District 10, which encompasses the eight-county northern San Joaquin Valley area.

California Transportation Development Act

The California Transportation Development Act (TDA) provides a dedicated State funding source for use by local jurisdictions at the county level to improve existing public transportation and encourage regional public transportation coordination. Transit agency audits are performed on a triennial basis to ensure that transit agencies are meeting minimum service performance standards. Unmet transit needs identified by local transit agencies and included in the Regional Transportation Plan (RTP). TDA funds can be allocated

to non-transit uses if there are no unmet transit needs within the jurisdiction that are reasonable to meet with the use of TDA funds.

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law. The legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill 32). In December 2018, the Governor's Office of Planning and Research (OPR) finalized guidelines on evaluating transportation impacts in CEQA based on the criteria of vehicle miles traveled (VMT).

The implementation of SB 743 eliminated the use of criteria such as auto delay, level of service, and similar measures of vehicle capacity of traffic congestion as the basis for determining significant impacts as part of CEQA compliance. The SB 743 VMT criteria promotes the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.

Traffic Operations Policy Directive 13-02

Caltrans policy regarding applicable traffic controls has recently been expanded based on Traffic Operations Policy Directive 13-02. This directive requires that Caltrans consider the relative merits of alternative traffic controls when it becomes necessary to stop traffic on state highways. Roundabouts are the default intersection control, but all-way stops and traffic signals are to be considered. The policy directive requires preparation of an Intersection Control Evaluation to determine the preferred traffic control.

Caltrans Encroachment Permit

Caltrans requires an encroachment permit for improvements made to the state highway by private parties or local agencies. The permit process requires the submission of a Standard Encroachment Permit Application (TR-0100), along with supporting documentation consisting of site plans, location, map, letter of authorization, applicable fees, etc., to the Caltrans office which has jurisdiction over the encroachment site. Caltrans has up to 60 calendar days to review the application and provide a determination.

Regional and Local Regulations

2016 Tuolumne County Regional Transportation Plan (2016 RTP)

The Tuolumne County Transportation Council (TCTC), as the federally-designated rural transportation agency and the State-designated regional transportation planning agency (RTPA) for Tuolumne County, is required by both federal and State law to prepare a long-range (at least 20-year) transportation planning document known as a Regional Transportation Plan (RTP). The RTP is an action-oriented document used to achieve a coordinated and balanced regional transportation system. Under both federal and State law, TCTC must update its RTP every five years.

The 2016 RTP demonstrates how TCTC plans to meet the transportation needs of the region for the period from 2016 to 2040, considering existing and projected future land use patterns as well as forecasted population and job growth. The 2016 RTP identifies and prioritizes expenditures of anticipated funding for all transportation modes, including highway, local roadway, aviation, rail, non-motorized transportation, and public transportation. Table 2-1 in Section 2.0, Project Description, provides a list of proposed 2016 RTP projects.

Few of these projects are in the area of the proposed project, Tier 1b State Highway Projects include a left turn lane on SR 120 at Old Priest Grade, and guardrails on Old Priest Grade. Long range Tier 1c State Highway projects include climbing lanes on SR 120 (New Priest Grade), Unfunded Tier 3 state highway projects include geometric improvements to SR 120 / Ferretti Road. Tier 1b Bicycle and Pedestrian projects include Complete Streets improvements to SR 120 in Groveland, while Tier 2 projects include Safe Routes to Schools improvements on SR 120 and the Hetch Hetchy Railroad Trail, both in Groveland.

Tuolumne County Traffic Impact Mitigation Fee (TIMF) Program

The local Traffic Impact Mitigation Fee (TIMF) program is a locally administered program that new development pays to help mitigate traffic impacts to the roadway network. The TIMF Program funds are used to improve roadway deficiencies such as intersection improvements or 2016 Final Regional Transportation Plan Local Streets and Roads- 112 road widening projects. The City of Sonora and Tuolumne County administer their own TIMF programs.

2018 Tuolumne County General Plan

The General Plan consists of three components- the Countywide General Plan, Community Plans which relate to specific areas of the unincorporated area of the County, and a Technical Background Report with data and information to support the General Plan and Community Plans. The General Plan EIR was completed and approved by the State Clearinghouse on December 10, 2018. The Tuolumne County Board of Supervisors certified the General Plan EIR and formally adopted the General Plan in January 2019.[1]

The Countywide General Plan provides an overall framework for development of the County and protection of its natural and cultural resources, rural character, and the rights of its residents and property owners. The goals and policies contained in the General Plan apply throughout the County, except within the City of Sonora city limit and are supplemented by the policies contained in the Community Plans. The Community Plans provide a more detailed focus on specific geographical areas within the unincorporated County.

Transportation related policies and implementation programs from the Tuolumne County General Plan that are relevant to the proposed project are included in Table 4.15-1, below.

[1] Tuolumne County, 2019, Board of Supervisors, https://tuolumneco.granicus.com/DocumentViewer.php?file=tuolumneco_1ef5c945-548d-4d29-a0f6-0bd0a4ad2fa0.pdf&view=1, accessed on April 3, 2020.

TABLE 4.15-1 PROJECT CONSISTENCY WITH POLICIES OF THE TUOLUMNE COUNTY GENERAL PLAN

Number	Policy	Consistency Discussion
Chapter 4: Transportation		
4.A.1	Support and work with the TCTC to regularly conduct assessments of the current status of the highway system to determine the current level of needs in the system, and report those needs to the Board of Supervisors. Implementation Program 4.A.d.1: Support alternative energy vehicles, including electric vehicles, and development of electric charging stations for passenger vehicles for the use of the public, including County employees and County fleet vehicles	Consistent. The project would install electric vehicle charging stations in on-site parking areas.
4.A.5	Consider the traffic impacts of development in relation to General Plan growth policies and require new development to provide mitigation for its fair share of impacts to the County's transportation system. Assess the needs of street and road users regularly through the land development application review process. Implementation Program 4.A.q: Evaluate the impacts of new development on the County's transportation system and require such development to provide mitigation for its fair share of the impact. New development that is determined by the County to create or exacerbate an identified deficiency in the transportation system may not be approved if a plan and funding program to provide needed roadway improvements have not been approved and if the mitigation provided by the development will not correct the deficiency or if it will create an additional burden on County transportation funds. This implementation program shall not apply to new development for which the County makes a finding of overriding considerations for traffic impacts related to the new development in accordance with the California Environmental Quality Act	Consistent. Potential impacts to transit from the proposed project are discussed under TRANS-1 in Section 4.15.3, Impact Discussion, below.
4.A.6	Strive to maintain all components of the transportation system at adopted level of service standards. Implementation Program 4.A.t: Require new development to mitigate that development's impacts on the local and regional transportation system through the fair share contribution of improvements to the master planned system and/or the payment of Traffic Impact Mitigation Fees. Exceptions to the payment of traffic impact mitigation fees may apply to land uses listed in the Traffic Impact Mitigation Fee Schedule or when alternative sources of funding can be identified to offset foregone revenues.	Consistent: The project includes proposed widening of SR 120 to facilitate safe vehicle circulation at the Sawmill Mountain Road intersection.
4.B.4	Encourage the use of alternative modes of transportation by incorporating public transit, bicycle and pedestrian modes in County transportation planning and by requiring new development to provide adequate pedestrian and bikeway facilities at suitable locations. Implementation Program 4.B.k: Consider the needs of pedestrians, bicyclists and individuals with disabilities in the project design review process.	Consistent: The project would include a park-and-ride area for visitors to Yosemite National Park or other nearby recreational sites, YARTS bus access, and pedestrian walkways.

TABLE 4.15-1 PROJECT CONSISTENCY WITH POLICIES OF THE TUOLUMNE COUNTY GENERAL PLAN

Number	Policy	Consistency Discussion
	Implementation Program 4.B.n: Encourage a continuous and interconnected pedestrian friendly system of paths that lead to transit stops, by encouraging all new residential and commercial development to include a pedestrian circulation system that is connected to existing (and where possible, planned) transit stops. **Implementation Program 4.B.o:** Require, when appropriate, new commercial, high density residential and recreational development to provide and maintain bicycle storage facilities. **Implementation Program 4.B.p:** Provide and plan for pedestrian access routes to designated transit corridors in new development.	

Source: Tuolumne County, 2018, Tuolumne County General Plan.

4.15.1.2 EXISTING CONDITIONS

This report section describes existing conditions on the circulation system in the vicinity of the proposed project in terms of facilities for motor vehicles, pedestrians, bicyclists and transit riders.

Project Location and Vicinity

The 64-acre project site is located at the intersection of Highway 120 and Sawmill Mountain Road, just north of the Tuolumne / Mariposa county border. The regional and local roadways serving the site are further described below.

Existing Roadway Network

Regional Roadways

Regional access to the site is provided via State Route 120, State Route 108, and State Route 49. The text that follows describes these facilities as well as the local streets that complete the study area circulation system.

State Route 120 (SR 120)

State Route 120 (SR 120) is a state highway that links Yosemite National Park's west gate with Tuolumne County and with the northern Sacramento Valley area. This route extends from SR 99 in Manteca through Oakdale and then along a common alignment with SR 108 to the Yosemite Junction in Tuolumne County. At the junction SR 120 turns south and joins with SR 49 along a route to Moccasin. At that point SR 120 turns east to Groveland before continuing along the project site to Yosemite National Park. SR 120 continues beyond the Yosemite National Park entrance over Tioga Pass to US 395 in Nevada. In the area of the project SR 120 is a two-lane conventional highway with 12-foot travel lanes and paved shoulders. The rural prima facie 55 mph speed limit applies in the area of the proposed project.

The volume of traffic on SR 120 varies along its length. The California Department of Transportation (Caltrans) reports that SR 120 carried an Average Annual Daily Traffic (AADT) volume of 15,600 vehicles per day west of Yosemite Junction in 2017. That volume drops to 3,900 AADT between Yosemite Junction, and 4,250 AADT is reported east of SR 49. Through Groveland the volume on SR 120 rises to 10,700, and the volume is 4,000 AADT in the area of the proposed project to Yosemite National Park. Trucks comprise 5 percent of the daily traffic on SR 120 in the area east of SR 49.

State Route 108

State Route 108 (SR 108) is a state highway and the primary east-west transportation route through central Tuolumne County, including Sonora. This route extends from Modesto, continues across Stanislaus County through Riverbank and Oakdale and extends into Tuolumne County along a common alignment with SR 120. SR 108 leaves that common alignment at Yosemite Junction and extends easterly through Sonora, across the Sierra Nevada's Sonora Pass to its terminus at US 395. In Tuolumne County, SR 108 ranges from a two-lane conventional highway to a four-lane expressway.

Caltrans reports that SR 108 carries 15,000 AADT in the area between Yosemite Junction and the south junction with SR 49. Trucks comprise 8 percent of the daily traffic in this area.

State Route 49

State Route 49 (SR 49) is a state highway and the primary north-south transportation route through Tuolumne County and the rest of the Motherlode counties. This route extends north from an intersection on SR 41 in Madera County through Mariposa County and into Tuolumne County to the south SR 120 junction in Moccasin. The joint route continues to Chinese Camp where SR 120 leaves and SR 49 extends to SR 108. SR 49 leaves SR 108 in Sonora and continues northerly before ultimately ending in Sierra County. In Tuolumne County SR 49 is a two-lane conventional highway.

Caltrans reports that SR 49 carried 850 AADT south of Moccasin and 2,500 AADT between Chinese Camp and SR 108. The volume on SR 49 through downtown Sonora is 19,400 AADT north of Dodge Street. Trucks comprise 7 to 8 percent of the daily traffic on SR 49 south of SR 108.

Local Roadways

Regional access to the site will be via Sawmill Mountain Road, Hardin Flat Road, and Ferretti Road. The text that follows describes these the local streets that complete the study area circulation system.

Sawmill Mountain Road

Sawmill Mountain Road (Forest Route 1S03) is a Forest Service road that extends north from SR 120 for a few miles to provide access to a Caltrans maintenance station and several rural residences. In the area of the proposed project immediately north of SR 120 this two-lane road has a paved width of 22 feet and no shoulders. The United States Forest Service (USFS) has jurisdiction over Sawmill Mountain Road. Construction on this road is governed by Federal Highway Administration publication (FHWA FP-14) Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects. The Forest

Service Handbook/Manual Section 7700 provides policy guidance regarding transportation facilities and issues.

24-hr traffic counts conducted for this analysis revealed that Sawmill Mountain Road carried 50 vehicles per day north of the SR 120 intersection on a Saturday in August 2019.

Hardin Flat Road

Hardin Flat Road is a Tuolumne County road that intersects SR 120 about ¼ mile east of Sawmill Mountain Road. Hardin Flat Road extends for about seven miles through the area south of SR 120. Hardin Flat Road re-connects to SR 120 via local roads such as Yosemite Lakes Road and Golden Arrow Road. Hardin Flat Road provides access to the Thousand Trails – Yosemite RV Park and to the site of the City of Berkeley's Tuolumne Camp.

Ferretti Road

Ferretti Road is a Major Collector Tuolumne County road that extends north from SR 120 in two locations. The western connection provides access to the Pine Mountain Lake community and to the eastern Groveland commercial area. Ferretti Road extends for about 10 miles through Pine Mountain Lake to Tuolumne County's Pine Mountain Lake Airport before reaching its eastern connection to SR 120.

Traffic volume data included in the 2018 Tuolumne County Regional Transportation Plan (RTP) indicated that on a weekday Ferretti Road carried 2,870 vehicles per day south of Pine Mountain Drive.

Study Area Intersections

Based on direction from Caltrans and Tuolumne County this analysis addresses three intersections, and the physical configuration of these intersections is described in the text which follows.

The **SR 120/Ferretti Road (west)** intersection is a "tee" controlled by a stop sign on the southbound Ferretti Road approach. There are no separate turn lanes at this intersection.

The **SR 120/Sawmill Mountain Road** intersection is a "tee" controlled by a stop sign on the southbound Sawmill Mountain Road approach. There are no separate turn lanes at this intersection.

The **SR 120/Hardin Flat Road** intersection is a "tee" controlled by stop sign on the northbound Hardin Flat Road approach. There are no separate turn lanes at this intersection.

Alternative Transportation Modes

Tuolumne County Transit

Tuolumne County is served by Tuolumne County Transit, which includes six Monday-Friday fixed routes serving the communities of Sonora, Jamestown, Columbia, Standard, Tuolumne, Twain Harte, Mi-Wuk Village, and Sierra Village, dial-a-ride service Monday-Saturday, and a seasonal SkiBUS service to winter destinations.

Transit Service to Yosemite is provided through a collaborative effort between TCTC, Yosemite National Park, Yosemite Area Regional Transportation Service (YARTS), Yosemite Highway 120 Chamber of Commerce, and Tuolumne County Visitors Bureau. Public transit service to Yosemite Valley started in 2012 in Tuolumne County. YARTS service runs from May to September from Sonora to Yosemite. Stops include Sonora, Jamestown, Groveland, Buck Meadows, Yosemite Lakes, Big Oak Flat Gate (Entrance), Crane Flat, and the Visitor Center in Yosemite Valley. Daily Service is offered between Sonora and Yosemite Valley on varying schedules. One round trip per day is available from May 13th through May 26th, and from Sept. 3rd through Sept. 30th, leaving the Black Oak Hotel and Resort in Tuolumne City at 7:40 a.m. Three round trips per day are available during peak Summer season, May 27th through September 2nd, leaving Black Oak Hotel and Resort at 6:40 a.m.; 7:40 a.m. and 8:40 a.m.

The YARTS Short Range Transit Plan (2018) provides information regarding ridership along each of the four YARTS routes. In 2017, the most recent available year, summer period ridership on the Sonora- Groveland SR 120 route totaled 8,185 persons, with another 1,577 riders in the "shoulder" season. Data by boarding locations revealed that in the highest volume month, 100 riders boarded at Rush Creek Lodge, located 9 miles east of the proposed project. (As a similar lodging facility to the proposed Terra Vi project, the shuttle utilization characteristics would be similar for both lodges.) Additional utilization information is available in terms of the "load factor." Load factor is the percentage of the seats occupied by passengers. In the busiest month (July 2017) the overall load factor was 56 percent on weekdays and 47 percent on weekends. Transit Agency staff report that runs have and do run at capacity (occasionally), particularly by the time they reach the closest destinations to the YNP.[2]

Pedestrian/Bicycle Facilities

Dedicated facilities for pedestrians are limited in rural Tuolumne County, primarily due to the varying terrain and distances involved between destinations. The paved shoulder along SR 120 is available for pedestrian and bicycle modes in the vicinity of the proposed project. The paved shoulder is generally about four feet wide, in many locations the area beyond the shoulder is not available for travel due to roadway cut or fill slopes. This is the case in the area east of Sawmill Mountain Road where the portion of SR 120 towards the Hardin Flat Road intersection was constructed on an embankment (first 500 feet), and in a cut section (subsequent 600 feet).

There are no facilities for pedestrians or bicyclists along Sawmill Mountain Road, but because the volume of traffic is very low, pedestrians and cyclists can share the road with automobiles.

4.15.2 STANDARDS OF SIGNIFICANCE

The proposed project would result in significant transportation impacts if it would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

[2] Summersett, Tyler. Personal communication with Ken Anderson, KDA Transportation Consultants, September 11, 2019.

3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. In combination with past, present, and reasonably foreseeable projects, result in significant cumulative impacts with respect to transportation and traffic.

State Regulations

Senate Bill 743

The project would have a significant impact on the environment if it:

1. Causes substantial additional VMT per capita, per service population, or other appropriate efficiency measure. Specifically,
   - For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
   - For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per employee minus 15 percent.
   - For retail projects greater than 80,000 square feet, a project would cause substantial additional VMT if it results a net increase in citywide total VMT per service population.
2. Conflicts with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay).

Local Regulations

Tuolumne County

Impacts to transit, bicycle or pedestrian facilities could be identified if the proposed project conflicts with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities; specifically:

- A transit impact is considered significant if it would result in development that is inaccessible to transit riders or would generate transit demand that cannot be met by existing or planned transit in the area.
- A pedestrian impact is considered significant if it would:
  - Disrupt existing pedestrian facilities;
  - Interfere with planned pedestrian facilities; or
  - Create inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.
- A bicycle impact is considered significant if it would:
  - Disrupt existing bicycle facilities;
  - Interfere with planned bicycle facilities;

- Create inconsistencies with adopted bicycle system plans, guidelines, policies, or standards; or
- Not provide secure and safe bicycle parking in adequate proportion to anticipated demand.

- Transportation related impacts could also be identified if:
  - The project substantially increases traffic hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses.
  - The project results in inadequate emergency access.

4.15.3 IMPACT DISCUSSION

TRANS-1	**The proposed project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.**

Trip Generation

Project Trip Generation Rates

The amount of new traffic associated with development projects is typically forecast using information developed from recognized national sources. The Institute of Transportation Engineers (ITE) publication Trip Generation, 10th Edition is a source recognized by Caltrans and other local agencies such as Tuolumne County, and potential trip generation rates for the project drawn from that publication are presented in Table 4.15-2 Project Trip Generation Rates.

As shown, the trip generation associated with individual aspects of the proposed project has been considered, and applicable rates have been used. As the operational analysis focuses on peak Saturday conditions along SR 120, Saturday trip generation rates were desirable. However, because some uses lack Saturday data, weekday data has been used where needed to complete the data base.

Lodging

While the ITE Manual includes trip generation rates for Resort Hotels (Code 330), no data is available for Saturdays. Alternatively, Saturday data is available for regular Hotels (310), although the comparable weekday data reveals that Resort Hotels generate fewer trips. To provide a “worst case” analysis the higher rates for regular Hotels were used, and these rates were also applied to the cabin rooms.

Resulting Trip Generation Estimates

As shown in Table 4.15-3, on a peak Saturday the project will result in 598 pass-by trips, which are the share of trips attracted to retail uses typically drawn from the stream of traffic already passing the site. A total of 1,127 “new” trips will be added to the study area circulation system. During the peak hour, 41 pass-by trips and 92 “new” trips are projected.

TABLE 4.15-2 PROJECT TRIP GENERATION RATES

			Weekday							Saturday			
				PM Peak Hour of Adjacent Street			PM Peak Hour of Generator				Peak Hour of Generator		
Code	Description	Unit	Daily	In	Out	Total	In	Out	Total	Daily	In	Out	Total
Rates Relating to Lodge													
310	Hotel	room	8.36	51%	49%	0.60	58%	42%	0.61	**8.19**	**56%**	**44%**	**0.72**
330	Resort Hotel	room	-	43%	57%	0.41	50%	50%	0.50	-	-	-	-
Rates Relating to Employee Housing													
210	Single Family Housing	resident	2.65	66%	34%	0.26	66%	34%	0.28	**2.48**	**54%**	**46%**	**0.27**
		dwelling	9.44	63%	37%	0.99	64%	36%	1.00	9.54	54%	46%	0.93
220	Multifamily Housing – low rise	resident	1.42	-	-	0.13	63%	37%	0.32	-	-	-	-
		dwelling	7.43	63%	37%	0.56	59%	41%	0.67	**8.14**	**50%**	**50%**	**0.70**
Rates Relating to Market													
814	Variety Store	ksf	63.47	52%	48%	6.84	50%	50%	7.42	(63.47)	52%	48%	(7.42)
850	Supermarket	ksf	106.78	51%	48%	9.24	52%	48%	7.60	177.62	51%	49%	10.34
851	Convenience Store without Gasoline Sales	ksf	762.28	51%	49%	49.11	51%	49%	53.51	1084.17	50%	50%	79.12
	Average of available sources									**441.75**	**51%**	**49%**	**32.29**

Bold = Rates Used for Analysis
Source: KD Anderson & Associates, Inc, 2020, Traffic Impact Analysis for Terra Vi Resort

Transit

Development of the proposed project along SR 120 within a few miles of the of Yosemite National Park's Big Oak Flat gate will result in increased demand for transit service by guests and employees. YARTS service runs from May to September from Sonora to Yosemite, and the route passes the project site, with other stops at Sonora, Jamestown, Groveland, Buck Meadows, Yosemite Lakes, Big Oak Flat Gate (Entrance), Crane Flat, as well as Rush Creek Lodge and the Visitor Center in Yosemite Valley. One round trip per day is available from May 13th through May 26th, and from Sept. 3rd through Sept. 30th, and three round trips per day are available during peak Summer season, May 27th through September 2nd.

Without promotion of YARTS the project's transit demand could be similar to that observed at Rusk Creek Lodge which averaged 3 "boardings" per day. However, project proponents have established a goal of 10 percent resort guest using YARTS to reach Yosemite per day during the peak season. It will be appropriate for Terra Vi to include on-site facilities that accommodate YARTS vehicles and to make guests and employees aware of those facilities to help meet that goal.

While decisions regarding any route stop are made by YARTS, adequate access to the Terra Vi Lodge for YARTS will be made available. As shown on Figure 3-12, Site Circulation Plan in Chapter 3, Project Description of this EIR, the project site plan identifies a main Lodge drop-off and loading area with access to Sawmill Mtn Road about 675 feet from SR 120. That entrance is configured as a one-way loop with separated entrances, and exits are each 24 feet wide. This design would accommodate YARTS vehicles. The dedicated loading area of the drop-off zone is about 60 feet long and is preceded and followed by another 40 feet of curb. Within that area a dedicated YARTS zone could be created towards the far end at a location where exiting busses will not be blocked by other vehicles. With these treatments and proposed access improvements to the SR 120 / Sawmill Mtn Road intersection the site will be accessible to YARTS should a decision be made to take the route on-site to a Terra Vi stop.

The relative impact of the project on YARTS is linked to the number of guests who elect to ride and the number of other persons who park at the site and hop on YARTS at this location. If assuming two persons per guest room and that 10 percent of the guests elect to use YARTS, then 25 riders or 52 daily boardings would result. Similarly, if 10 percent of the 30 park & ride spaces are used, with 2.5 persons per automobile, then 7 riders and 14 boardings would result. The total transit demand would be 66 daily boardings. These boardings would be spread among the three daily round trips now offered by YARTS during the peak season, or on average 11 additional riders on each route.

TABLE 4.15-3 TRIP GENERATION ESTIMATE

			Saturday			
				Peak Hour of Generator		
Code	Description	Unit	Daily	In	Out	Total
310	Lodge	100 rooms	819	40	32	72
	Cabins	26 units	213	10	9	19
	Subtotal		1,032	50	41	91
	Less Effect of Employee Housing	(2%)	40	2	2	4
	Less Internal to Market	(24%)	252	11	11	22
	Net External Trips		***740***	***37***	***28***	***65***
210	Individual Employee Housing	20 residents	50	3	3	6
	Less On-Site Commute Match		40	2	2	4
	Less Internal to Market	(14%)	5	1	0	1
	Net External Trips		**5**	**0**	**1**	**1**
851	Market	2.8 ksf	1,237	46	44	90
	Less Internal to Lodging		252	11	11	22
	Less Internal to Employee Residential		5	0	1	1
	Net External		***980***	***35***	***32***	***67***
	Pass-by Trips	61%	598	21	20	41
	Net Primary External		***382***	***14***	***12***	***26***
	Total Gross Trips		2.309	99	88	187
	Total External Trips		1,725	72	61	133
	Total Pass-by Trips		598	21	20	41
	Total Net New Trips		**1,127**	**51**	**41**	**92**

Source: KD Anderson & Associates, Inc, 2020, Traffic Impact Analysis for Terra Vi Resort

The relative impact of this additional YARTS ridership is related to the "load factor" on these routes. Load factor is the percentage of the seats occupied by passengers. In the busiest month with available data (July 2017) the overall load factor was 56 percent on weekdays and 47 percent on weekends. A YARTS coach can accommodate 52 persons, and on average 27 seats are generally available at a 47 percent load factor. On average the project's anticipated transit demand can be accommodated. However, accumulated demand on any run is greatest near the Yosemite National Park entrance, and full runs are reported in the peak season. While three inbound Park runs are available in the morning, project demand may be concentrated in the earlier runs. As a result, it is likely that the project may contribute to more "at capacity" runs than occur today and that project guests could occasionally face the prospect of a "full YARTS" bus at the on-site stop.

The YARTS Joint Powers Authority compiles and analyzes ridership data and other information as part of its transit planning efforts. YARTS utilizes its Short Range Transit Plan to identify and implement needed expansions and improvements to service. As ridership patterns and transit needs change within the county, the YARTS Joint Powers Authority Board and Authority Advisory Committee implement changes to the transit system. Increased system ridership that may occur following the opening of the proposed project would be monitored by the YARTS Joint Powers Authority, which would be responsible for identifying any system changes (such as schedule or route adjustments) to better serve the project and the region as a whole. Nevertheless, the transit demand in excess of available capacity that could result from the proposed project is considered a *significant* impact.

Significance without Mitigation: Significant

Impact TRANS-1.1: The project has the potential to generate transit ridership in excess of available capacity on the YARTS line serving the SR 120 corridor, during the peak usage period (May 27 to September 2).

> Mitigation Measure TRANS-1.1: The project applicant shall provide an on-site transit coordinator to coordinate guest transit use to help ensure smooth operations at the project site bus stop. The on-site transit coordinator would also serve as a point of contact between Terra Vi Lodge, YARTS, and the County to assist in identifying and responding to issues related to transit services that may arise at the project site.
>
> Significance with Mitigation: Less than significant.

Pedestrians and Bicycle Facilities

Development of the proposed project could result in pedestrians and bicyclists circulating between the project site and adjoining residences along Sawmill Mountain Road and the planned camping project along Hardin Flat Road. Beyond the limits of the project the volume of traffic on Sawmill Mountain Road will remain very low and use of the Forest Service Road by all modes does not present a safety impact. Activity may occur between the site and existing and proposed land uses along Hardin Flat Road. The closest RV sites in Thousand Trails are roughly ¾ mile from SR 120 down Hardin Flat Road, or about a mile from the Sawmill Mountain Road intersection. The proposed Yosemite Under Canvas project (refer to Cumulative Impact Section) would take access to Hardin Flat Road near its intersection with SR 120. It is

possible that some guests of Yosemite Under Canvas or Thousand Trails/Yosemite Lakes may elect to walk or ride a bike to Terra Vi Lodge.

The adequacy of that travel has been evaluated with regards to safety, particularly along SR 120. As noted in the existing setting, a 4-foot-wide paved shoulder is available along SR 120 in the area of the proposed project. The Terra Vi site plan includes an emergency vehicular access that links the resort with SR 120 roughly 175 feet from the Hardin Flat Road intersection. Thus, the distance that pedestrians or bicyclists may have to travel along SR 120 is relatively short.

The safety of possible pedestrian activity across SR 120 has been considered. Looking east towards Yosemite National Park from Hardin Flat Road the highway curves to the right but roughly 650 feet of sight distance is available. As noted earlier this satisfies HDM Table 201.1 requirements for travel at more than 60 mph. The view is unobstructed to the left (i.e., towards Groveland). While a formal crosswalk could theoretically be installed, pedestrian activity at this location would be relatively infrequent. The introduction of a marked crosswalk on a high-speed road could actually lead to safety conflicts if pedestrians gain a false sense of security from the marking. A marked crosswalk is not recommended.

Based on these considerations, access to the site by possible pedestrians and bicyclists will be adequate, and the project's impact on these modes is *less than significant*.

Transportation

Construction

The project proposes improvements along the SR 120 frontage at the intersection with Sawmill Mountain Road to provide a left-turn lane on eastbound Highway 120, a right-turn pocket on westbound SR 120, and improved sight distance. The intersection improvements would require changes at this location to the existing drainage located adjacent to SR 120. These improvements are outside of the project site within the Caltrans right-of-way and would require an encroachment permit. In addition, the proposed project will cause construction traffic by employee and trucks taking materials to and from the site. The number of trips made by these vehicles will vary over the duration of project construction but would not exceed the amount of traffic accessing the site during operation of the project. Construction of roadway improvements at the SR 120/Sawmill Mountain Road intersection will require temporary lane closures of varying duration, but a Construction Traffic Control Plan will be required and approved by Caltrans for work in the State right of way. The project will maintain traffic flow on SR 120 and on Sawmill Mountain Road during construction, but occasional one-way controlled traffic is possible. Construction of the project would also result in truck traffic on Sawmill Mountain Road, and truck traffic may result in deterioration of the existing pavement on that road. This is a *significant* impact.

Significance without Mitigation: Less than significant.

Impact TRANS-1.2: The project would result in construction automobile and truck traffic that accesses the site from SR 120 and, in combination with necessary lane closures, this activity would temporarily disrupt background traffic flow. The project's construction truck traffic could result in deterioration of the condition of Sawmill Mountain Road.

Mitigation Measure TRANS-1.2a: The project applicant or contractor shall prepare a Construction Traffic Control Plan as part of the Caltrans encroachment permit application for all work within the state right of way on SR 120.

Mitigation Measure TRANS-1.2b: Prior to the start of any construction activity on-site or in the SR 120/Sawmill Mountain Road intersection, the applicant shall coordinate with the Tuolumne County Public Works Department for an on-site inspection of Sawmill Mountain Road to assess the road surface conditions. Following completion of project construction, but prior to issuance of an occupancy permit, the applicant shall schedule a post-construction inspection to determine if deterioration of the road surface occurred, and if so, the applicant/contractor shall restore the road to pre-construction conditions.

Significance with Mitigation: Less than significant.

TRANS-2	The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).

Background

This analysis quantifies the net effect of the Terra Vi project on regional VMT. These estimates were developed within the context of the direction contained in the OPR's December 2018 publication, *Technical Advisory on Evaluating Transportation Impacts in CEQA*. The following information regarding quantification of project VMT is based on analysis conducted by Wood Rodgers.[3]

Methods/Assumptions

A "tour-based" approach was taken. The Tuolumne County regional travel demand forecasting model was recently updated and calibrated for VMT analysis and is recognized by Tuolumne County as the best available tool for estimating the VMT associated with various land uses. The model's inventory of land uses included visitor lodging (Hotels) and retail uses (Commercial), which are applicable to the project. However, the regional travel demand forecasting model is calibrated to typical average weekday conditions and does not necessarily reflect weekend travel.

As noted in the Wood Rodgers analysis (see Appendix J2), a project weekday trip generation estimate was created for assessment of project VMT impacts. The Terra Vi project is forecast to generate 586 net weekday daily trips.

To identify project VMT, a model traffic analysis zone was created to represent the Terra Vi project, model runs were completed with and without the project, and total regional VMT was identified under model baseline year and future (year 2040) conditions with and without the project. While the model is limited to roadways within Tuolumne County, a post processing routine was created to address the amount of

[3] Wood Rodgers, June 6, 2020, Terra Vi Lodge VMT Analysis.

project VMT occurring outside of the county. Additional information is included in the Wood Rodgers analysis (see Appendix J2).

Results

Project VMT

The model suggests that the total regional VMT in Tuolumne County generated by county land uses in and outside of the county without the Terra Vi project is 3,375,777 under Year 2015 conditions and 3,802,466 under Year 2040 conditions. The Terra Vi project would result in an increase in total countywide weekday VMT of 7,424 (Year 2015) to 8,055 (Year 2040) vehicle miles, as noted in Table 4.15-4.

Separate from the estimate of total regional VMT, the project-specific VMT has been isolated for Terra Vi's land uses. The total regional VMT associated with the project is 13,091 under baseline 2015 conditions.

TABLE 4.15-4 WEEKDAY PROJECT VEHICLE MILES TRAVELED (VMT) ESTIMATES

	Condition	2015	2040
Total Weekday VMT Caused by Land Uses in Tuolumne County	No Project	3,375,777	3,802,466
	With Project	3,383,201	3,810,521
	Net Difference	7,424	8,055
Total Weekday Project VMT		13,091	--

Source: KD Anderson & Associates, Inc, 2020, Traffic Impact Analysis for Terra Vi Resort

Significance Criteria

The CEQA Guidelines state that lead agencies, such as Tuolumne County, may establish "thresholds of significance" to assist with the determination of significant impacts of a project. CEQA Guidelines Section 15064.7 defines a threshold of significance as:

> […] an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.

Tuolumne County is in the process of establishing significance criteria based on VMT thresholds, and alternative criteria are under consideration within the context of OPR guidance. Countywide and regional sub-area thresholds are being discussed. The thresholds under consideration are within the context of OPR guidance, as described below:

- **OPR technical memorandum recommendation for 15 percent reduction from exiting per capita and per employee VMT.** This threshold would compare a project's VMT characteristics to the existing

baseline condition on a per capita or per employee basis, and the impact of those projects failing to achieve a 15 percent reduction from that baseline would be significant.

- **Per capita and per employee VMT reductions based on the characteristic of General Plan future growth in Tuolumne County.** This threshold would consider the project's VMT characteristics against the per capita and per employee VMT reductions forecast with development under the approved Tuolumne County General Plan. The impact of those projects failing to achieve the reduction identified for uses under the approved General Plan would be significant.
- **Thresholds customized to specific regions of Tuolumne County based on sub-regional VMT forecasts under the General Plan.** The third approach is to develop custom thresholds specific to the currently planned vision for various regions of the county, taking into account where and when growth is projected to occur. This threshold recognizes that, as a rural county, development in some locations inherently generates higher levels of VMT than the countywide average for similar development in urbanized areas of the county. This threshold would compare the VMT metrics of the project with the characteristics of similar uses within specific regions of the county.

Impact Assessment

Within each alternative, threshold per capita and per employee VMT rates are identifiable for typical residential and office/industrial uses. However, hotels are not a use that is likely to be addressed on a per capita or per employee basis. Analysis conducted for Tuolumne County has used the countywide model to consider hotels as an individual land use category and identified typical VMT on a "per room basis" for hotels. Data was developed for various regions of the county, including the East County "rural" sub-area containing the Terra Vi site. This information is noted in Table 4.15-5.

TABLE 4.15-5 HOTEL VEHICLE MILES TRAVELED PER ROOM

Land Use	Unit	Location	Total VMT	VMT per Unit
Significance Criteria				
Hotel	Room	East County	--	129.1
Project VMT per Room				
Terra Vi Base VMT	126 Rooms	East County	13,091	103.9
			Percent Difference	*-19.5%*

Source: Wood Rodgers, 2020.

As indicated in Table 4.15-5, the Year 2015 in-county and external VMT per room for hotels in Tuolumne County's East County area is 129.1. Terra Vi's VMT projection divided by its 126 rooms yields a rate of 103.9. As the project's VMT per room is 19.5 percent lower than the Year 2015 VMT, primarily due to:

- The project's proximity to tourism destinations.
- The positive effects of on-site employee housing.
- The positive effects of an on-site retail establishment available to both guests and passersby on Highway 120.

As the project's VMT per room is less than the Year 2015 average for hotels in this subregion, the project's impact under both the Existing plus Project and Cumulative (Year 2040) conditions is *less than significant*.

Significance without Mitigation: Less than significant.

TRANS-3	**The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

The following addresses potential safety issues with the proposed project such as site access, pedestrian and bicycle travel in the area and minimum sight distance. The adequacy of the project design has been evaluated with regards to applicable Caltrans design standards.

Impacts to SR 120 Based on Access Design

SR 120 Left Turn Lane

As described in Chapter 3, Project Description, a new eastbound left turn lane is proposed on SR 120 as part of the proposed project. The new lane would be about 390 feet long and be proceeded by a 50-foot-long bay taper. While the proposed lane meets Caltrans design standards for left turn lane storage (i.e., minimum 50 feet) and deceleration from 55 mph, the final confirmation of design requirements will be by Caltrans during the encroachment permit review process.

SR 120 Receiving Lane

As described in Chapter 3, Project Description, an eastbound receiving lane will be created at the intersection to facilitate left turns from Sawmill Mountain Road onto eastbound SR 120. During busy times the lane would permit motorists to make a two-step left turn by first turning into the lane and subsequently merging with through traffic. The proposed lane is 150 feet long with a 75-foot bay taper, which would appear adequate for the function. However, full acceleration from a stop to 55 mph by a passenger vehicle would require 1,000 feet on level ground, and full acceleration is not accommodated with the proposed receiving lane. The final determination of the design requirements for this lane would be made during the Caltrans encroachment permit process. It may be that the receiving lane will not be provided if Caltrans requirements exceed the proposed design.

Sight Distance

The adequacy of the available sight distance at the SR 120/Sawmill Mountain Road intersection was determined in comparison to Caltrans standards published in the Highway Design Manual (HDM). HDM Table 201.1 identifies the minimum safe stopping sight distance required at various speeds. This is the distance required for an approaching motorist to identify an obstacle and come to a stop. This standard is appropriate for motorists entering from a stop and for motorists approaching an intersection on an approach that does not stop. HDM Table 405.1A identifies the corner sight distance required at various speeds. Corner sight distance identifies distance needed to detect the gap in traffic that is long enough for an entering motorist to identify a gap and move into either traffic lane without forcing approaching motorists to decelerate to avoid the entering vehicle.

Acceptable sight distances are determined by the speed of vehicles on the uncontrolled approaches to the intersection. Table 4.15-6 compares the sight distance requirements at various speeds for passenger cars with corner sight distance requirements across a single opposing lane. As indicated, for the 55-mph speed limit on SR 120, 500 feet is needed to satisfy the minimum sight distance requirement, and 605 feet is needed for corner sight distance when turning left onto the highway.

TABLE 4.15-6 SIGHT DISTANCE STANDARDS

Design Speed	Minimum Stopping Sight Distance (feet) (HDM Table 201.1)	Corner Sight Distance (feet) (HDM Table 405.1)	
		Left Turn from Stop	Cross or Right Turn from Stop
15 mph	100	-	-
20 mph	100	220	190
25 mph	150	275	240
30 mph	200	330	285
35 mph	250	385	335
40 mph	300	440	385
45 mph	360	495	430
50 mph	430	550	475
55 mph	500	605	525
60 mph	580	660	575
65 mph	660	715	620
70 mph	750	770	670

Source: KD Anderson & Associates, Inc, 2020, Traffic Impact Analysis for Terra Vi Resort.

The available sight distance at the SR 120/Sawmill Mountain Road intersection was reviewed in the field. The view to the left (east) is straight towards the Hardin Flat Road intersection, the view is not restricted and both minimum and corner sight distance requirements are met. Looking right (west) from Sawmill Mountain Road, the highway curves to the north, and as a result the view is limited by the hillside and trees. Measured from the location mandated by the HCM (i.e., 15 feet from edge of traveled way) roughly 400 feet of sight distance is available to the west, which does not meet the minimum site distance standard of 500 feet for a 55 mph highway, resulting in a *significant* impact.

Significance without Mitigation: Significant

Impact TRANS-3: The site distance for project-generated traffic turning right (westerly) from Sawmill Mountain Road onto SR 120 is 400 feet, which does not meet the minimum site distance requirements of 500 feet.

Mitigation Measure TRANS-3: Construction of the proposed left turn lane from SR 120 to Sawmill Mountain to accommodate project-generated traffic will require cutting the hillside and vegetation removal in conformance with Caltrans standards, which will open the line of site to an acceptable distance, as determined by Caltrans.

Significance with Mitigation: Less than significant.

Site Access

Access to the proposed project would be provided via two driveways along Sawmill Mountain Road. The driveways are located on the eastern and northern boundary, respectively, of the project site. The eastern driveway would provide ingress and egress to access the public market and the northern driveway would ingress and egress to access the reception area and lodging. Additionally, the proposed project would include the development of an emergency vehicle driveway located at the southeastern boundary of the project site and which is accessible via SR 120.

Pedestrian and Bicycle

The proposed project could result in an increase in pedestrians and cyclists traveling between residences along Sawmill Mountain Road and lodging along Hardin Flat Road. Specifically, some guests of Yosemite Under Canvas or Thousand Trails/Yosemite Lakes, located south of the project site on Hardin Flat Road, may elect to travel to the market at Terra Vi by foot or bicycle. However, as stated above in *Pedestrians and Bicycle Impacts,* the distance that pedestrians or bicyclists may have to travel along SR 120 is relatively short and the path of travel along SR 120 includes a 4-foot-wide paved shoulder which could accommodate pedestrians. Furthermore, approximately 650 feet of sight distance is available from Hardin Flat Road looking east on SR 120 and approximately 1,400 feet of sight distance is available from Hardin Flat Road looking west on SR 120. As shown in 4.13-4, these sight distances satisfy HDM requirements for travel at more than 60 mph.

Summary

The improvements described above are not expected to create adverse safety conditions or incompatible uses. The proposed project would not substantially increase hazards due to a design feature or incompatible uses. Given that the improvements described above are not expected to create adverse safety conditions, and improvements would be reviewed for conformance with the County of Tuolumne standards, the resulting impacts are considered to be *less than significant*.

Significance without Mitigation: Less than significant.

TRANS-4 The project would not result in inadequate emergency access.

As stated above in Impact TRANS-3, ingress and egress for the general public would be provided via two driveways on Sawmill Mountain Road. The proposed project also includes a third driveway along SR 120 which would provide access for emergency vehicles only. The emergency vehicle access point would lead to an access road which in turn splits into two separate access roads going east and west, respectively, and ultimately connecting to the proposed project's circulation system. Therefore, impacts associated with the implementation of the proposed project would be *less than significant*.

Significance without Mitigation: Less than significant.

4.15.4 CUMULATIVE IMPACTS

TRANS-5	**The project, in combination with past, present, and reasonably foreseeable projects, would not in significant cumulative impacts with respect to transportation and traffic, including mass transit, non-motorized transit.**

Four reasonably foreseeable projects were identified by Tuolumne County staff. These include:

- Yosemite Under Canvas: 99 tent camping sites on 85 acres on Hardin Flat Road east of Terra Vi.
- Berkeley Tuolumne Camp Restoration: 90 cabins at 31585 Hardin Flat Road.
- Thousand Trails/Yosemite Lakes RV Expansion: 150 site expansion divided between RV sites, cabins and employee mobile home sites, although the split is unknown.
- Mountain Sage Conditional Use Permit: Permit for events at 18653 Main Street in Groveland.

Cumulative Transit

The demand for transit service by the general public, Terra Vi guests, park & ride users and the cumulative projects listed above could increase in the future. The extent of that increase would depend on factors including traffic conditions on SR 120 to and in Yosemite National Park, comparative travel costs, Yosemite National Park vehicular access policies, and public perceptions as to the overall desirability of the transit system. It is reasonable to expect that overall YARTS "load factors" will increase in the future including increased riders from the proposed project and other reasonably foreseeable projects. "At capacity" runs would become more prevalent and the need for additional service could become more acute. However, the impact of the proposed project on ridership capacity on the YARTS line was found to be less than significant with mitigation, thereby reducing the cumulative contribution of the project on ridership capacity to *less than significant*.

Cumulative VMT

As noted under impact discussion TRANS-2, as the project's VMT per room is less than the Year 2015 average for hotels in this subregion, the project's impact under both the Existing plus Project and Cumulative (Year 2040) conditions is *less than significant*.

Significance without Mitigation: Less than significant.

4.16 UTILITIES AND SERVICE SYSTEMS

This chapter describes the regulatory framework and existing conditions on the project site related to utilities and service systems, and the potential impacts of the project on water, sanitary, solid waste, and energy services.

4.16.1 WATER

4.16.1.1 ENVIRONMENTAL SETTING

This section describes the existing regulatory setting and conditions as well as potential impacts of the proposed project with regard to water supply. The proposed project would install two on-site wells and would not connect to the municipal water supply.

Regulatory Setting

State Regulations

California Water Code Section 13751

In 1949, the California Legislature concluded that collecting information on newly constructed, modified or destroyed wells would be valuable in the event of underground pollution, and would also provide geologic information to better manage California's groundwater resources. Section 13751 of the Water Code requires Well Completion Reports (WCR) forms to be filed with the California Department of Water Resources (DWR) within 60 days from the date that construction, alteration, abandonment, or destruction of a well is completed. Completed WCR forms are sent to the DWR Region Office whose boundaries include the area where the well is located.[1]

The Water Conservation Act of 2009

The Water Conservation Act of 2009,[2] SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for State water grants or loans. SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards.

[1] Department of Water Resources, 1999, How to Fill Out a Well Completion Report, https://static1.squarespace.com/static/57573edf37013b15f0435124/t/57e2c7e103596e4c714a5fc9/1474480098590/How+to+Fill+Out+a+Well+Completion+Report.pdf, accessed February 7, 2020.

[2] California Department of Water Resources, Senate Bill SBX7-7 2009 Information, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920107SB7, accessed March 8, 2020.

State Model Landscape Ordinance

The California Water Conservation in Landscaping Act, also known as the State Landscape Model Ordinance, was amended pursuant to Assembly Bill (AB) 2717 and AB 1881. AB 1881 required cities and counties to adopt landscape water conservation ordinances by January 31, 2010, or to adopt a different ordinance that was at least as effective in conserving water as the California Updated Model Water Efficient Landscape Ordinance (MWELO) that went into effect in October 2009.

The updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by February 1, 2016 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance.

California Green Building Standards Code

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in the code, throughout the State of California. CALGreen established planning and design standards for sustainable site development, including water conservation measures and requirements that new buildings reduce water consumption by 20 percent. The building efficiency standards are enforced through the local building permit process.

Regional Regulations

Tuolumne County Code of Ordinances

The purpose of Chapter 15.28, *Landscaping Requirements,* of the Tuolumne County Ordinance Code is to promote the values and benefits of landscaping while recognizing it is in the public interest to conserve water. This Chapter implements this purpose by establishing regulations for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and in rehabilitated landscape areas. The regulations have been prepared in accordance with the Water Conservation in Landscaping Act codified in the Section 65591 et seq. of the California Government Code.

Chapter 13.16, *Water Wells,* regulates the construction, reconstruction, modification, abandonment and destruction of domestic and agricultural wells, cathodic protection wells, industrial wells, geothermal heat exchange wells, monitoring and observation wells, test wells and test holes and exploration holes in such a manner that the groundwater of the county will not be contaminated or polluted and that water obtained from wells will be suitable for beneficial use and will not jeopardize the health, safety or welfare of the people of the county.

Tuolumne County General Plan

Policies of the Tuolumne County updated General Plan relating to water supply are included below in Table 4.16-1.

TABLE 4.16-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO WATER SUPPLY

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
HOUSING ELEMENT	
Policy 2.F.2	Promote green design in residential construction and rehabilitation.
Implementation Program 2.F.b	(1) Encourage safe sustainability practices through the collection of rainwater and the use of grey water systems in order to reduce the impact on the environment, promote water conservation and improve the longevity of septic systems. Post information on the County website concerning grey water and rainwater design and permit procedures. (2) Continue to enforce the most current California Green Building Standards Code and California Energy Code as adopted by the California Building Standards Commission.
UTILITIES ELEMENT	
Policy 3.B.2	Consider whether the water system proposed to serve a new development has a reliable source of water, sized to serve their existing and future customer's' foreseeable demands. Projects shall only be approved where the water supply system has reliable sources of water capable of meeting present and future demands.
WATER SUPPLY ELEMENT	
Policy 14.B.2	Increase water conservation efforts to maximize water use efficiency within Tuolumne County through conservation, recycling and education.
Implementation Program 14.B.b	Encourage water reuse programs in new development to conserve raw or potable water supplies consistent with State Water Resources Control Board guidelines through the application review process.
Implementation Program 14.B.d	Encourage water reuse/recycling through the treatment and distribution of treated wastewater by working with new development to identify ways to incorporate reuse/recycling into projects.
Implementation Program 14.B.e	Ensure the conservation of water through the implementation of the Tuolumne County Landscaping Requirements, Chapter 15.28 of the Tuolumne County Ordinance Code, which provide for the use of xeriscape landscaping plants and materials to conserve water, the use of water conserving irrigation systems for landscaping, and the use of reclaimed or reused water for irrigation.
Implementation Program 14.B.i	Explore the feasibility of reducing wastewater through the use of dry/composting toilets in new construction.
Implementation Program 14.B.k	Provide information on water conservation measures to the general public and consult with conservation efforts of the water districts.
Implementation Program 14.B.o	Support development of new technology to improve efficient use of water.
Implementation Program 14.B.r	Develop incentives, such as fee reductions, for the installation of rainwater harvesting and storage facilities to conserve water and minimize water loss in areas where such systems are allowed by the applicable water or sewer purveyor.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Existing Conditions

Groundwater is the only water supply source for many of the small water systems in Tuolumne County, particularly for rural residential development in outlying areas. The majority of small water systems that are regulated by the State Water Resources Control Board (SWRCB) rely exclusively on individual small capacity wells. Rather than large groundwater basins, most of the areas served by private wells are

underlain by fractured rock. Fractured rock provides inconsistent groundwater conditions; some parcels are underlain by small pools of groundwater that are reliable, and others tap into less reliable subsurface rills and streamlets.. The Tuolumne-Stanislaus Integrated Regional Water Management Plan determined that existing data are insufficient to quantify the total available sustainable groundwater supply. This is not atypical in fractured rock environments such as those that occur throughout the Sierra foothills.[3]

4.16.1.2 STANDARDS OF SIGNIFICANCE

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

4.16.1.3 IMPACT DISCUSSION

This section analyzes the proposed project's potential impacts to water supply and distribution facilities.

UTIL-1	**The proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.**

The project proposes an on-site public water system that would be developed from two on-site wells that are currently in place. One well at a time would be pumped at a rate of 26.5 gallons/minute (gpm) to meet the estimated daily water demand of approximately 16,636 gallons per day (gpd). The pumped groundwater would be treated and stored in two 60,000-gallon water tanks located along the northern boundary of the project site, just east of the employee housing. Non-potable water needs would be met by using captured rainwater and treated grey water, which will be stored in a 60,000-gallon tank next to the potable water tanks. Fire suppression systems and site hydrants for fire protection would be provided using a combination of reclaimed, treated greywater, and potable water storage.

The project proposes to minimize water consumption through the following measures:

- Low low-flow plumbing fixtures, high efficiency equipment such as washers, dryers, and dishwashers.
- Education programs to educate hotel staff and guests about sustainability. Staff would be trained on how to reduce solid waste disposal, food waste generation, and water consumption. Guests would also be encouraged to reduce their water consumption and waste generation. Below are examples of the conservation programs the hotel would implement:
    - Reduced frequency of housekeeping: the hotel would educate the guests on the impacts of servicing the rooms less often and the importance of reusing towels and linens.

[3] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed February 7, 2020.

- Guest room water usage monitoring: the hotel will incorporate water flow technology to provide guests real time information on water usage per room. Guests will be educated on water usage and impacts on the environment.
- On-site water treatment and storage to reduce the use of potable water consumption.
- Grey water systems for landscape irrigation.
- Rainwater collection and storage.

As indicated under impact discussion HYD-2 in Chapter 4.10, Hydrology and Water Quality, a groundwater capacity assessment was conducted in October 2019. The two on-site wells were pumped concurrently at a combined constant rate of 53 gpm for 10 days and water level responses were measured in the two on-site pumping wells, three monitoring wells on the northern edge of the project site, and three nearby domestic wells. (See Figure 4.16-1.) The assessment found that the wells met the requirements of the SWRCB for capacity testing of a new water source, and that each well can be pumped safely at a rate of 26.5 gpm, or 38,160 gpd. The proposed project intends to operate the wells in an alternating pattern, with one well pumping and the other well on standby. Since the water demand for the proposed project would be 16,636 gpd, each well can individually supply the proposed project's demand.

Therefore, the proposed project would not result in the construction of new water treatment or distribution facilities and the impact would be *less than significant*.

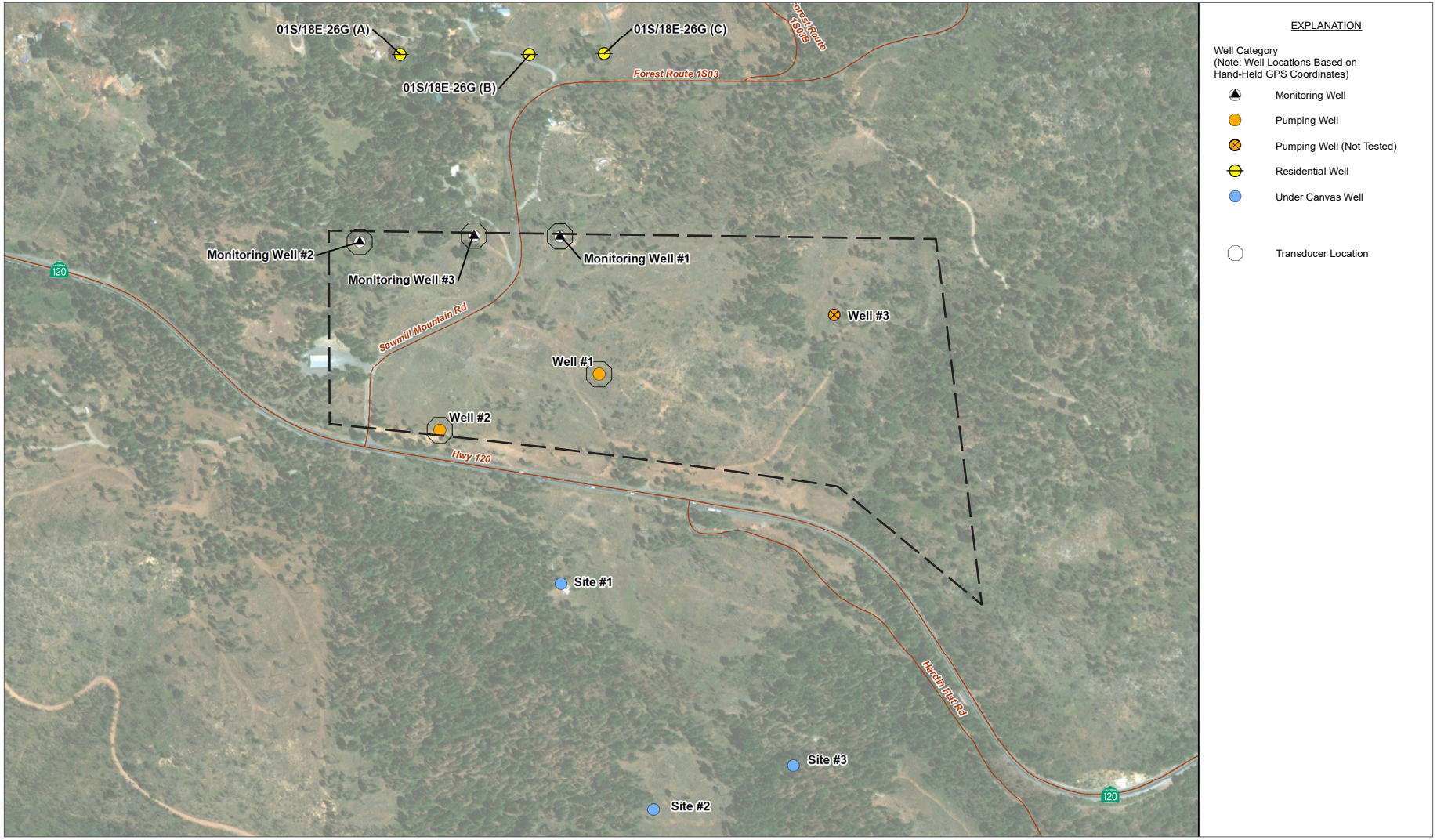
Significance without Mitigation: Less than significant.

UTIL-2	**The proposed project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.**

The potable water demand for the proposed project was calculated at 16,636 gpd (approximately 11.4 gpm), with the installation of water efficient plumbing fixtures as per the CALGreen building standards code.[4] A 10-day pumping test was conducted by GeoScience using the two on-site groundwater wells to determine if there would be sufficient water supplies available to serve the project and the surrounding community during normal, dry, and multiple dry years.[5]

[4] Shamim Engineering Consultants, 2020, Water Demand Calculations for Terra Vi Lodge. Dated February 11, 2020.

[5] GeoScience, March 30, 2020, Revised Assessment of Source Water Capacity and Groundwater Pumping Influence for Two Supply Wells, Terra Vi Yosemite, Located near Groveland, Tuolumne County.



Source: 2020 Microsoft Corporation, 2020 DigitalGlobe, CNES (2020) Distribution Airbus DS.

0 800
Scale (Feet)

Approximate Project Site Boundary

Figure 4.16-1
Well Locations

The 10-day pumping test was completed in October 2019 during the end of the dry period to maximize stress on the aquifer and provide conservative estimates of available production capacity. Both wells were pumped at the same time for a total combined pumping rate of 53 gpm to provide conservative estimates of potential impacts to neighboring properties. Only one well will be pumped at a time during site operations. Also, the test was conducted at the same time that the Under Canvas wells, which are located south of the site, were being pumped to ensure that the source capacity assessment would include potential long-term influences of nearby off-site wells operating at the same time. Three monitoring wells at the northern edge of the site property and three residential wells at vacation cabins to the north off Sawmill Mountain Road were also monitored during the test to determine the impact of site pumping on water levels in these wells.

According to the SWRCB, the well capacity is determined to be half of the 10-day pumping rate, which equates to 26.5 gpm. The calculation of well capacity includes a significant safety factor (50 percent), to account for sustainable production during single and multiple dry years. Water levels in the aquifer beneath the site stabilized while the wells were pumping 53 gpm, which is more than four times the peak demand. The water levels stabilized approximately 188 feet above the most productive fractures in Well PW-1 and approximately 354 feet above the most productive fractures in Well PW-2. Therefore, even in periods of single and multiple dry years, the on-site wells have more than enough capacity to meet the water demands of the site.

The water levels in the on-site Terra Vi wells showed no impact during the pump testing of the Yosemite Under Canvas wells to the south. Therefore, simultaneous pumping from wells on the Terra Vi property or the Yosemite Under Canvas property would not impact the other property. The two properties are on different sides of a watershed boundary and likely are accessing different fracture zones. Based on these results, both properties would be able to meet their water demands during single and/or multiple dry years.

For the three monitoring wells along the northern boundary of the site and the three off-site residential wells to the north, three of the wells had water levels that responded to pumping from the source wells (MW-3, 26G(B), and 26G(C)) and three of the wells had water levels that had muted or no response from pumping of the source wells (MW-1, MW-2, and 26G(A)). The wells that responded to pumping with changes in water levels suggest that they produce from the same interconnected fractures. Fractures can produce varying amounts of water depending on the density and volume of the fractures. When the off-site residential well 26G(B) was pumping, there was also a response in the Terra Vi on-site source wells.

To determine if the off-site wells would be able to maintain their capacity during single or multiple dry years, the available well logs were reviewed and evaluated with respect to the reported drawdown levels during the pumping test. The results of the Terra Vi pumping test were somewhat confounded by the fact that Well 26G(B) was also being pumped at the same, resulting in significant drawdown in Well 26G(B) and lesser drawdown impacts in the adjacent Well 26G(C) and monitoring well MW-1. However, according to the well log of 26G(B), when the well was not being pumped and the two Terra Vi source wells were pumping at the same time, (i.e., at more than four times the anticipated peak demand), the water levels in Well 26G(B) were approximately 68 feet above the highest fracture zone and 147 feet above the most productive fracture zone. Even during the pumping of Well 26G(B), the reported water levels in this well were always above the fracture zones. Therefore, during single or multiple dry years, these wells would

not be adversely impacted by the more limited pumping rate that would occur during proposed site operations.

Furthermore, non-potable water needs would be met using captured rainwater and treated grey water to irrigate a landscaped area of approximately 98,440 square feet.[6] Irrigated areas would be located around vehicle entry and drop-off, the active-use outdoor amenity areas, and the areas immediately surrounding the buildings. The California DWR's Water Budget Workbook was used to calculate the maximum allowed irrigation water allowance for compliance with MWELO and CalGreen standards. The landscaped area for the proposed project is specified as being a special landscape area in the workbook since it would be irrigated by reclaimed water. The effective precipitation is specified as being 36.5 inches per year.[7] The maximum allowable outdoor water demand for the proposed project is approximately 5,396 gpd.[8] Outdoor water demand would be supplied by the grey water system on-site. This system has a capacity of 7,000 gpd and can therefore accommodate the irrigation water demand for the proposed project. In addition, return flow from the grey water irrigation system and from the on-site septic system will provide additional recharge to the groundwater aquifer beneath the site.

Therefore, the proposed project, existing development in the area, and any proposed future development would have sufficient water supplies to meet water demands during normal, single, and multiple dry years and the impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.16.1.4 CUMULATIVE IMPACTS

UTIL-3	**The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to water service.**

Groundwater in bedrock terrain flows through spaces that occur in fractures in the rock. Closely spaced fractures can transmit more water since they provide more volume for water to flow through. In bedrock, groundwater will flow by gravity downgradient along the fractures. Groundwater will also flow in faults in the rocks. Lineaments typically develop along weaknesses in the rock such as along faults or fracture sets. The Draft Assessment of Source Water Capacity evaluates the potential for connection between the project wells and off-site wells by mapping lineaments in the bedrock terrain. Lineaments observed on the

[6] Avrp Skyport, October 4, 2019, Illustrative Landscape Plan. The irrigated area is approximate based on where new trees are shown on the Landscape Plan around vehicle entry and drop-off, the active-use outdoor amenity areas, and the areas immediately surrounding the buildings.

[7] National Park Service, Average Temperatures & Precipitation, Yosemite Valley, https://www.nps.gov/yose/planyourvisit/weather.htm, accessed March 9, 2020.

[8] Outdoor water demand was calculated by using the California Department of Water Resources' Water Budget Workbook. California Department of Water Resources, 2015, Water Budget Workbook for Compliance with MWELO and CalGreen, Part 11, Title 24, https://water.ca.gov/LegacyFiles/wateruseefficiency/docs/2015/BSCWaterBudget105.xls, accessed March 8, 2020.

project site and in close vicinity show a predominant pattern of northeast-southwest trending lineaments and a set of northwest-southeast trending lineaments.[9]

The area considered for cumulative water supply impacts are areas surrounding the site that may drill wells into lineaments that are interconnected with the proposed project. Cumulatively, these wells could potentially decrease groundwater supplies. Tuolumne County has identified four projects within the vicinity of the proposed project: the Yosemite Under Canvas project, the Berkeley Tuolumne Camp Restoration project, the Thousand Trails / Yosemite Lakes RV Expansion project, and the Mountain Sage Conditional Use Permit project. The Berkeley Tuolumne Camp Restoration project relies on water supply provided within the Special Use Permit area and not on municipal utilities; it would install new on-site water facilities to serve the project. Details regarding the Thousand Trails/Yosemite Lakes RV Expansion project have not been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. The Mountain Sage Conditional Use Permit project site currently utilizes public water utilities provided by the Groveland Community Services District, which the proposed project would not. As noted under impact discussion UTIL-2, pump testing on the project site was conducted during the period when the Yosemite Under Canvas wells were also being tested to ensure that the source capacity assessment would include the potential long-term influences of nearby off-site wells operating at the same time. Therefore, the project-level analysis addresses the cumulative impacts of operating the Terra Vi and Under Canvas wells simultaneously, and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.16.2 SANITARY WASTEWATER (SEWER)

This section describes the existing regulatory setting and conditions as well as potential impacts of the proposed project with regard to wastewater collection and treatment facilities. The proposed project includes the installation of a wastewater system to treat sanitary sewage on-site.

4.16.2.1 ENVIRONMENTAL SETTING

Regulatory Setting

Basin Plan for the Sacramento and San Joaquin River Basins

The preparation and adoption of water quality control plans (Basin Plans) is required by the California Water Code (Section 13240) and supported by the Federal Clean Water Act. Section 303 of the Clean Water Act requires states to adopt water quality standards which "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." Th Basin

[9] Geoscience, March 30, 2020, Revised Assessment of Source Water Capacity and Groundwater Pumping Influence for Two Supply Wells, Terra Vi Yosemite, Located near Groveland, Tuolumne County.

Plan covers the entire area included in the Sacramento and San Joaquin River drainage basins including the Upper Tuolumne Watershed.[10]

State Water Resources Control Board General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems

Water Code section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, that could affect the quality of the waters of the state, file a Report of Waste Discharge (ROWD) to obtain coverage under Waste Discharge Requirements (WDRs) or a waiver of WDRs. Discharges to land from small domestic wastewater treatment systems have certain common characteristics, such as similar constituents, concentrations of constituents, disposal techniques, flow ranges, and they require the same or similar treatment standards. These types of discharges are appropriately regulated under a General Waste Discharge Requirements Order. State Water Board Water Quality Order 97-10-DWQ (WQO 97-10DWQ) is a 1997 General Order addressing Small Domestic Systems. Only Small Domestic Systems, with a monthly average flow rate of 100,000 gpd or less, that discharge to land are eligible for coverage under this General Order.[11]

Tuolumne County Code of Ordinances

Chapter 15.04, Construction Codes, adopts the California Plumbing Code, 2016 Edition by reference and regulates the design and installation of indoor and outdoor plumbing systems.

Requirements for the construction of on-site wastewater treatment systems treatment and disposal are outlined in Chapters 13.04 and 13.08, respectively, of the Tuolumne County Ordinance Code.

Existing Conditions

There are no structures and no land use that generate wastewater on-site. Therefore, the project site is not connected to the public sewer system and does not contain on-site wastewater treatment facilities (such as septic tanks).

4.16.2.2 STANDARDS OF SIGNIFICANCE

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

[10] Central Valley Water Quality Control Board, 2018, The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Board Central Valley Region, The Sacramento River Basin and The San Joaquin River Basin, https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf, accessed March 8, 2020.

[11] State Water Resources Water Quality Control Board, September 23, 2014, General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems, https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0153_dwq.pdf, accessed March 8, 2020.

4.16.2.3 IMPACT DISCUSSION

This section analyzes the proposed project's potential impacts to wastewater collection and treatment facilities.

UTIL-4	**The proposed project would result in the construction of new wastewater treatment facilities, the construction of which would not cause significant environmental effects.**

Wastewater from the proposed project would flow to an on-site wastewater treatment system. The wastewater system would be divided between five separate wastewater systems sized for less than 10,000 gpd of sewage loading each. An area has been planned for and set aside for a 100 percent replacement future leach system area. The food service wastewater treatment system would include a technologically advanced aerobic treatment system that would be continuously monitored. Specifically, a microprocessor-controlled treatment system would provide remote telemetry to a qualified service provider for 24-hour wastewater treatment system monitoring. All wastewater would be separated into black water and greywater and treated on-site. The black water would be disposed through the proposed leach system, and the greywater would be treated, stored, and re-used for on-site landscape irrigation. The proposed wastewater treatment and pumping system would be located on the southern border of the project site, between Highway 120 and the proposed fire access road. Surplus greywater would be disposed in the leach field.

The construction-related impacts associated with these improvements are analyzed throughout this Draft DEIR. Impacts to water quality from the leach fields are addressed in Chapter 4.10, Hydrology and Water Quality. Furthermore, plumbing on-site would be installed in accordance with the California Plumbing Code and construction of the on-site wastewater treatment system (OWTS) and leach field would be regulated by the Central Valley RWQCB pursuant to the SWRQB's General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems (Order WQ 2014-0153-DWQ). The project applicant shall file a Report of Waste Discharge (ROWD) with the Central Valley RWQCB to obtain coverage under the Waste Discharge Requirements (WDRs). The ROWD shall include a technical report that describes the wastewater generation, treatment, storage, and disposal. Upon review of the ROWD, the Central Valley Regional Water Board's Executive Officer will issue a Notice of Applicability (NOA) when coverage under the General Order has been authorized. The NOA will contain the necessary site-specific monitoring and reporting requirements. Furthermore, the proposed project would comply with the requirements of the Basin Plan including any prohibitions and/or water quality objectives, governing the discharge from the OWTS and leach field. Upon implementation of these regulatory requirements the impact would be less than significant.

Significance without Mitigation: Less than significant.

UTIL-5	**The proposed project would not connect to the public sewer system and would not impact the wastewater treatment provider.**

As indicated in Impact UTIL-4, wastewater generated from the proposed project would be treated by an on-site wastewater treatment plant. Since wastewater is treated on-site, the local wastewater treatment provider would not serve the proposed project and there would be no impact to the provider's wastewater treatment capacity.

Significance without Mitigation: No impact.

4.16.2.4 CUMULATIVE IMPACTS

UTIL-6	**The proposed project, in combination with past, present, and reasonably foreseeable projects would result in less-than-significant cumulative impacts with respect to wastewater service.**

The wastewater from the proposed project would be treated on-site and would not be conveyed to a system that receives wastewater from beyond the project site. As such, the proposed development would not cumulatively contribute to a centralized sewer conveyance and treatment system and impacts would be less than significant.

Significance without Mitigation: Less than significant.

4.16.3 SOLID WASTE

4.16.3.1 ENVIRONMENTAL SETTING

This section describes the existing regulatory setting and conditions as well as potential impacts of the proposed project with regard to solid waste collection and treatment facilities. Tuolumne County Solid Waste Division (TCSWD) oversees the collection, transport, and disposal of solid waste within Tuolumne County and is responsible for ensuring that solid waste disposal services meet state and federal mandates for integrated waste management. Curbside collection is provided by Moore Brothers Scavenger Company. Collected solid waste is processed at the Groveland transfer station and disposed of at the Highway 59 Disposal Site landfill at 7040 North State Highway 59, Merced, California. The landfill is located approximately 42 miles southwest of the project site.

Regulatory Setting

State Regulations

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989, AB 939, subsequently amended by SB 1016, set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000 through source reduction, recycling, and composting. To help achieve this, the

Act required that each city and county prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. The California Integrated Waste Management Board was replaced by the California Department of Resources Recycling and Recovery (CalRecycle) in 2010. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.

In 2011, AB 341 was passed that sets a State policy goal of not less than 75 percent of solid waste that is generated to be source reduced, recycled, or composted by the year 2020. In August 2015, CalRecycle submitted a report to the legislature outlining the strategy to achieve this policy goal.[12]

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires areas in development projects to be set aside for collecting and loading recyclable materials. This Act required CalRecycle to develop a model ordinance for adoption by any local agency. Local agencies are required to adopt the model, or an ordinance of their own, providing for adequate areas in development projects for the collection and loading of recyclable materials.

Global Warming Solutions Act of 2006, Scoping Plan

The California Global Warming Solutions Act of 2006 (also known as AB 32) Scoping Plan, which was adopted by the California Air Resources Board, included a Mandatory Commercial Recycling Measure. The Mandatory Commercial Recycling Measure focuses on diverting commercial waste as a means to reduce GHG emissions, with the goal of reducing GHG emissions by 5 million metric tons of carbon dioxide equivalents, consistent with the 2020 targets set by AB 32. To achieve the Measure's objective, the commercial sector will need to recycle an additional 2 to 3 million tons of materials annually by 2020.

CalRecycle adopted this Measure at its January 17, 2012 monthly public meeting. The regulation was approved by the Office of Administrative Law on May 7, 2012 and became effective immediately. On June 27, 2012, the Governor signed SB 1018, which included an amendment requiring both businesses that generate 4 cubic yards or more of commercial solid waste per week and multi-family residences with 5 or more units to arrange for recycling services. This requirement became effective on July 1, 2012.

CALGreen Building Code

CALGreen Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 65 percent of non-hazardous construction and demolition debris must be recycled or salvaged. This Code requires that project applicants prepare a

[12] California Department of Resources Recovery and Recycling, AB 341 Report to the Legislature, https://www.plasticsindustry.org/sites/default/files/CaliforniaAB341_EdgeArticleLink.pdf, accessed March 8, 2020.

Waste Management Plan, for on-site sorting or construction debris, which is submitted to the County for approval.

The Waste Management Plan is required to include the following:

- Identify the materials to be diverted from disposal by recycling, reuse on the project, or salvage for future use or sale.
- Specify if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identify the diversion facility where the material collected can be taken.
- Identify construction methods employed to reduce the amount of waste generated.
- Specify that the amount of materials diverted shall be calculated by weight or volume, but not by both.

Regional Regulations

Tuolumne County Code of Ordinance

Title 7, *Integrated Waste Management*, of the County's Code of Ordinances was adopted to provide for an integrated solid waste management system which would preserve public health, safety, welfare, convenience and necessity, and provide for a stable revenue source with which the county and authorized service providers may furnish adequate management of solid waste.

Chapter 8.05, *Refuse, Rubbish, and Recyclables Storage and Handling,* establishes minimum standards for the storage of generally nontoxic/nonhazardous wastes and removal of wastes within the unincorporated areas of Tuolumne County.

Tuolumne County Integrated Waste Management Plan

The County Integrated Waste Management Plan is a plan developed pursuant to Section 40000 et seq. of Division 30 of the California Public Resources Code to provide for planned management of solid waste within Tuolumne County. The Plan includes provisions for reduction of solid waste, recycling, management of household hazardous waste, and siting of solid waste facilities.[13]

Tuolumne County General Plan

Policies and implementation programs of the Tuolumne County updated General Plan relating to solid waste are included below in Table 4.16-2.

[13] Tuolumne County, 2018, Tuolumne County General Plan Volume II: Technical Background Report.

TABLE 4.16-2 TUOLUMNE COUNTY GENERAL PLAN POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO SOLID WASTE

Policy/ Implementation Program Number	Policy/Implementation Program Text
UTILITIES ELEMENT	
Policy 3.F.1	Require proposed solid waste facilities and all other new development to comply with the Tuolumne County Integrated Waste Management Plan and all adopted elements thereof.
Implementation Program 3.F.a	Encourage alternative methods of disposal of vegetative matter, including, but not limited to, composting, mulching or transporting the material to biomass facilities that accept it.
Implementation Program 3.F.b	Continue to offer a program for processing brush and yard debris in the County which avoids adverse impacts to energy consumption and generates a usable product, such as the Cal Sierra Earth Resource Facility.
Policy 3.F.2	Encourage the recycling of products and materials and support the efforts of agencies, businesses and the general public to reduce the waste stream.
Implementation Program 3.F.c	Support existing and encourage the development of new recycling facilities.
Implementation Program 3.F.d	Continue to require franchise waste haulers to offer the Commingled Recycled System or a similar recycling program.
Implementation Program 3.F.e	Create and implement a countywide green waste and recycling program for residential and non-residential land uses. Implement a program to educate residents and business owners about recycling requirements and opportunities.
Implementation Program 3.F.f	Encourage the development of new and expansion of existing businesses which reuse products and materials, recycle waste materials or convert waste products to energy.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Existing Conditions

The TCSWD provides solid waste collection, transportation, and disposal services in the project area and contracts with franchise haulers for curbside collection. Moore Brothers Scavenger Company services the project area and operates the Groveland Transfer Station.[14] The More Brothers Scavenger Company provides garbage and rubbish collection, drop-off recycling, and container rentals. Hazardous household waste can be disposed of at the transfer station and recyclable materials can be dropped off at the waste hauler's main office.[15]

There are 8 landfills that serve the unincorporated area in the County of Tuolumne. Approximately 92 percent of the solid waste is sent to the Highway 59 Landfill, located in Merced.[16] The landfill is estimated to have a remaining capacity of approximately 24,000,000 cubic yards, or 66 percent of its total capacity, as of 2014. The closure date for this landfill is 2065. The Highway 59 Landfill has a permitted throughput

[14] Tuolumne County, Curbside Collection, https://www.tuolumnecounty.ca.gov/577/Curbside-Collection, accessed November 18, 2019.

[15] Moore Brothers Scavenger Company, https://www.moorebrosscavenger.com/, accessed November 18, 2019.

[16] California Department of Resources Recovery and Recycling, 2019, Jurisdiction Disposal by Facility, https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility, accessed November 18, 2019.

of 1,500 tons per day.[17] In 2017, the daily throughput for the Highway 59 Landfill was 840 tons per day.[18] Therefore, the landfill has a residual capacity for 659 tons per day.

Compliance with AB 939 target since 2007 for the unincorporated areas of Tuolumne County is shown in Table 4.16-3.[19] Per capita disposal for residents is mostly in compliance except for the years 2007 and 2017. Employment per capita disposal rate is also mostly in compliance except for the years 2007, 2010, and 2017.

TABLE 4.16-3 PER CAPITA DISPOSAL RATE TRENDS

Report Year	Target Disposal Rate Population	Per Capita Population PPD	In Compliance	Target Disposal Rate Employment	Per Capita Employment PPD	In Compliance
2007	4.1	4.5	No	17.7	18.5	No
2008	4.1	4.0	Yes	17.7	16.6	Yes
2009	4.1	3.8	Yes	17.7	16.6	Yes
2010	4.1	3.7	Yes	17.7	19.5	No
2011	4.1	3.5	Yes	17.7	16.2	Yes
2012	4.1	3.4	Yes	17.7	15.3	Yes
2013	4.1	3.6	Yes	17.7	16.5	Yes
2014	4.1	3.4	Yes	17.7	15.2	Yes
2015	4.1	3.5	Yes	17.7	15.6	Yes
2016	4.1	3.8	Yes	17.7	16.9	Yes
2017	4.1	4.3	No	17.7	18.4	No

Notes: PPD = pounds per person per day
Source: California Department of Resources Recovery and Recycling (CalRecycle), 2019, Jurisdiction Review Reports, https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports/PerCapitaDisposalTrends.

4.16.3.2 STANDARDS OF SIGNIFICANCE

- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

[17] Merced County Regional Waste Management Authority, 2016, Notice of Regular Meeting of the Merced County Regional Waste Management Authority/Transit Joint Power Authority for Merced County/MCAG Governing Board, https://www.mercedthebus.com/AgendaCenter/ViewFile/Agenda/_05192016-39, accessed February 7, 2020.

[18] California Department of Resources Recovery and Recycling, 2019, 2017 Landfill Tonnage Report, https://www2.calrecycle.ca.gov/LandfillTipFees/, accessed February 7, 2020.

[19] California Department of Resources Recovery and Recycling, 2019, Jurisdiction Review Reports, https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports, accessed February 7, 2020.

4.16.3.3 IMPACT DISCUSSION

This section analyzes the proposed project's potential impacts to solid waste facilities.

UTIL-7 The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs.

For the construction phase of the project, and as required by CalGreen, the construction contractor would divert a minimum of 65 percent of the total construction waste.

For the operational phase, the proposed project would generate a net increase in solid waste generation of approximately 272 pounds per day (0.13 tons/day) (see Table 4.16-4), or 47.5 tons/year.

TABLE 4.16-4 ESTIMATED PROJECT SOLID WASTE GENERATION

Land Use	Quantity (Rooms)	Rate[a] (pound/room/day)	Total (Pounds/ Day)
Hotel/Guest Cabins	126	2	252
Employee Apartments	5	4	20
Total			272

a. Source: CalRecycle, 2019, Estimated Solid Waste Generation Rates, https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates.

The proposed project would incorporate solid waste disposal reduction features, including a recycling and composting program during both construction and operation, and implementation of a food waste program to limit the amount of food waste generated. Food waste reduction starts with education. The hotel would educate the staff and guests on the impacts of food waste. The food waste program would include:

- Conducting food waste audits.
- Developing recipes to reduce waste and cross utilizing ingredients.
- Providing left over food to employees.
- If available, working with local composting sites.

The proposed hotel would not use mini disposable toiletries, rather large refillable dispensers would be used to eliminate waste. Furthermore, the proposed project would implement the requirements of Chapter 8.05 of the County's Code of Ordinances pertaining to the storage, recycling, and handling of nonhazardous wastes. Prior to the issuance of the building permit, the project applicant would submit a design for the refuse and recyclable storage facilities to the Tuolumne County Division of Building and Safety. The submitted design would demonstrate compliance with the guidelines of Chapter 8.05 of the County's Code.

Both construction and operational waste generation represent an insignificant amount compared to the 659 tons of remaining daily throughput capacity of Highway 59 Landfill. Therefore, the proposed project would not cause the landfill to exceed permitted capacity and the impact is *less than significant.*

Significance without Mitigation: Less than significant.

UTIL-8	**The proposed project would comply with federal, State, and local statutes and regulations related to solid waste.**

In 2016, the solid waste disposed from residents and businesses in unincorporated areas of Tuolumne County totaled 39,437 tons.[20] As discussed under impact discussion UTIL-8, the proposed project would generate approximately 47.5 tons per year.

The unincorporated area has been mostly in compliance with the intent of AB 939 since 2007, which is the year when the per capita disposal measurement system was adopted to identify whether goals established by the Integrated Waste Management Act of 1989 have been met (see Table 4.16-3). Furthermore, the Moore Brothers Salvage Company implements a series of programs for recycling materials that reduce the amount of waste the County sends to landfills. Currently services for residential users include a drop-off recycling location for metal, glass, paper, and hazardous household waste recycling. In 2014, approximately 12.9 percent of solid waste was diverted for recycling.[21] In addition, proposed projects would be subject to CalGreen requirements for the recycling of construction debris. CalGreen mandates that 65 percent of the construction debris tonnage be diverted from landfills. The project would divert 65 percent of construction waste. The proposed project would also be compliant with the Tuolumne County Integrated Waste Management Plan and the County's Code of ordinance. Compliance with applicable State and local regulations would ensure that the impact would be *less than significant.*

Significance without Mitigation: Less than significant.

4.16.3.4 CUMULATIVE IMPACTS

UTIL-9	**The proposed project, in combination with past, present, and reasonably foreseeable development, would not result in significant impacts with respect to solid waste.**

The area considered for cumulative impacts is the unincorporated area in the County of Tuolumne. This area is primarily serviced by one landfill—the Highway 59 Landfill.[22]

Other projects would result in increased population and employment in the unincorporated area. The total population is projected to increase by 8,906 residents between the year 2018 and 2040. The number of jobs is projected to increase by 1,735 for the same period.[23] Using the statewide residential per capita

[20] California Department of Resources Recovery and Recycling, 2019, Jurisdiction Disposal and Alternative Daily Cover Tons by Facility, https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility, accessed February 7, 2020.

[21] Tuolumne County, 2018, Tuolumne County General Plan Volume II: Technical Background Report.

[22] California Department of Resources Recovery and Recycling, 2019, 2017 Landfill Summary Tonnage Report, https://www2.calrecycle.ca.gov/LandfillTipFees/, accessed February 7, 2020.

[23] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed February 7, 2020.

disposal rate of 4.9 PPD, and the statewide employee per capita disposal rate of 11.4 pound per employee per day,[24] Table 4.16-5 shows that the total increase in solid waste generation from 2018 to 2040 is 64,289 pounds/day or 32 tons/day. The existing remaining capacity of the landfill is approximately 659 tons per day.[25] Thus there is sufficient landfill capacity in the region for the cumulative increase in solid waste disposal.

TABLE 4.16-5 INCREASE IN SOLID WASTE GENERATION, 2010-2040

Solid Waste Generation Source	Increase	Solid Waste Generation Rate[a] (PPD)	Solid Waste Generated (pounds/day)
Residents	8,906	4.9	43,639
Employees	1,735	11.9	20,647
Total			64,286

Notes PPD = pounds per person per day
a. Source: California Department of Resources Recovery and Recycling (CalRecycle), California's Statewide Per Resident, Per Employee, and Total Disposal Since 1989, http://www.calrecycle.ca.gov/lgcentral/GoalMeasure/DisposalRate/Graphs/Disposal.htm.
Source: PlaceWorks, 2018.

Furthermore, as required by CalGreen, all development projects must divert a minimum of 65 percent of their total construction debris from landfills. Compliance with these regulations would help to divert solid waste from cumulative development within the unincorporated area.

Overall, because existing landfill capacity would be sufficient to accommodate projected growth in the county and cumulative projects would be required to comply with applicable solid waste generations, cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

4.16.4 STORMWATER INFRASTRUCTURE

This section outlines the regulatory setting, describes environmental setting, and discusses potential impacts of the proposed project regarding stormwater infrastructure.

[24] California Department of Resources Recovery and Recycling, California's Statewide Per Resident, Per Employee, and Total Disposal Since 1989, http://www.calrecycle.ca.gov/lgcentral/GoalMeasure/DisposalRate/Graphs/Disposal.htm, accessed February 7, 2020.

[25] California Department of Resources Recovery and Recycling, 2018, SWIS Facility/Site Search, https://www2.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx, accessed March 8, 2020.

4.16.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Clean Water Act and National Pollution Elimination Discharge System

The Clean Water Act (CWA) establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters (US Code, Title 33, §§ 1251 et seq.). Under the act, the US Environment Protection Agency (EPA) is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES program, permits are required for all new developments that discharge directly into Waters of the United States. The federal Clean Water Act requires wastewater treatment of all effluent before it is discharged into surface waters. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs.

Regional Regulations

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code Section 13000 *et seq.*) is the basic water quality control law for California. Under this Act, the State Water Board has ultimate control over state water rights and water-quality policy. In California, the EPA has delegated authority to issue NPDES permits to the State Water Board. The nine RWQCBs carry out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a Water Quality Control Plan, or Basin Plan, that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water-quality conditions and problems.

The project site is in the Upper Tuolumne Watershed, which is under the jurisdiction of the Central Valley RWQCB. The Central Valley RWQCB has two Basin Plans: one for the Tulare Lake Basin and one for the Sacramento and San Joaquin River Basins. The San Joaquin River Basin includes the entire area drained by the San Joaquin River, including the Stanislaus and Tuolumne Rivers in Tuolumne County.[26]

State General Permit for Small Municipal Separate Storm Sewer Systems

In 1987, amendments to the CWA established a two-phase program to regulate 13 classes of stormwater discharges. Under Phase I, which began in 1990, the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities or metropolitan areas. As part of Phase II, the SWRCB adopted a General Permit for the Discharge of Stormwater for Small Municipal Separate Storm Sewer Systems (MS4s) (WQ Order No. 2013-00015-DWQ or General Permit) to provide permit coverage for smaller municipalities, including non-traditional small

[26] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/5764/49-HydrologyandWaterQuality?bidId=, accessed February 7, 2020.

MS4s (e.g., public campuses). The MS4 permit requires a discharger (e.g., the County) to develop and implement a Stormwater Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP).

Tuolumne County Water Quality Plan

Tuolumne County Water Quality Plan (WQP) contains a comprehensive program that addresses a wide range of water quality concerns within the County. The WQP emphasizes surface (e.g., lakes, streams) water quality, factors affecting surface water quality including stormwater runoff, and mechanisms for maintaining and improving surface water quality.

The WQP includes both regulatory and non-regulatory components. The regulatory component builds upon many existing environmental programs and activities implemented by various County departments and focuses on land development activities subject to the County's permitting requirements and on County public works projects. The non-regulatory stewardship component of the WQP encourages voluntary community participation in maintaining and improving the County's water quality.

Although the County is not currently identified as a small MS4, the WQP represents a proactive approach by the County to address pre-existing water quality issues in terms of the State General Permit for Small Municipal Separate Storm Sewer Systems. Consistent with the requirements for small MS4s, the WQP provides a framework for consistent, effective, and efficient implementation of stormwater management practices for discharges entering drainage conveyance systems. Programs contained in the WQP are intended to provide the initial framework for complying with the requirements of the Phase II NPDES Program.[27]

Tuolumne County Code of Ordinances

Chapter 15.28, *Landscaping Requirements,* includes requirements for landscaping that are intended to conserve water and protect water resources. Provisions for stormwater management, recycling and greywater use, and other site management provisions to control runoff and infiltration are detailed in this chapter.

Tuolumne County General Plan

Policy 17.C.2 from the Natural Hazards Element of the Tuolumne County updated General Plan is to continue to require evaluation of potential flood hazards prior to approval of development projects and require on-site mitigation to minimize off-site flows. In addition, Implementation Program 17.C.e requires new development to mitigate impacts on downstream drainages if new development results in increased peak flows because of project-generated stormwater runoff. Measures necessary to mitigate impacts will be attached to development entitlements issued by the County, which may include retention/detention facilities, permeable surfacing materials, greywater systems, and green roofs.

[27] Tuolumne County, 2007, Water Quality Plan, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/7570/Tuolumne-County-Water-Quality-Plan?bidId=, accessed February 7, 2020.

Existing Conditions

Because of the elevation gradient and existence of multiple upper watershed reservoirs severe flooding has not historically been a major concern in Tuolumne County. However, management and containment of localized flooding of creeks and tributaries, particularly in developed areas, and along some local roadways has been a challenge and many storm water conveyance systems in Tuolumne County are in need of improvements to reduce the potential for catastrophic flooding. The Tuolumne County Community Development Department has identified areas of Sullivan, Sonora, Mormon, Woods, and Curtis Creeks to be problematic. In addition, some more rural areas with County or ranch roads have low water fords which flood and prevent access at times.[28]

The existing site character is rural in nature, and no structures exist on-site. The project site was heavily burned in the 2013 Rim Fire, resulting in a significant burn scar that extends several acres into the site from Highway 120, and which destroyed most of the mature trees on-site. Due to the topography of the surrounding area, there is very little stormwater that runs on to the site. The areas of the site that drain towards the south converge at a 24-inch culvert that passes under Highway 120. Stormwater then drains into the Tuolumne River.

4.16.4.2 STANDARDS OF SIGNIFICANCE

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

4.16.4.3 IMPACT DISCUSSION

This section analyzes the proposed project's potential impacts to stormwater facilities.

UTIL-10	**The proposed project could require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.**

Of the 64 acres that make up the project site approximately 11.5 acres, or 18 percent, would be mass graded for the buildings, roads, and parking. The area affected by the installation of the primary septic system is an additional 1.4 acres. The increase in impervious surfaces on-site would increase stormwater runoff. The drainage design would detain stormwater on-site during storm events and meter the outflow in order not to exceed the capacity of the existing culvert under Highway 120. Roof drainage and landscape area drains would direct stormwater underground to detention areas. Sheet flow from roads and parking areas would be captured in surface drainage swales which would also be directed to detention areas. Drainage swales and detention areas would be landscaped. Furthermore, the proposed project would implement rainwater collection and storage which further reduces runoff.

[28] Ascent Environmental, August 2018, Draft Environmental Impact Report Tuolumne County General Plan Update Project, https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11308/Tuolumne-County-GPU-Recirculated-DEIR-full-report, accessed February 7, 2020.

The proposed project would implement the requirements for landscaping, as detailed in Chapter 15.28 of the County's Code of Ordinances, that are intended to conserve water and reduce runoff. Provisions for stormwater management as detailed in the same chapter would also be implemented on-site. However, to ensure that the BMPs are in accordance with Implementation Program 17.C.e of the updated General Plan and that post-project stormwater volumes do not exceed pre-project development volumes further mitigation is required. Without mitigation the proposed project could modify the timing and volume of runoff and expansion of existing stormwater facilities or the construction of new facilities by the County maybe required. Therefore, the project would result in a *significant* impact with respect to storm drain facilities.

Furthermore, the proposed project does include the construction of drainage facilities on-site. The construction-related impacts associated with these improvements are analyzed throughout the EIR. The analysis under this impact focuses on whether the County would need to expand its storm system capacity in order to handle the runoff generated by the project.

Significance without Mitigation: Significant.

Impact UTIL-10: The proposed project would increase post-project runoff and may result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Mitigation Measure UTIL-10: Implement Mitigation Measures HYD-1a and HYD-1b.

Significance with Mitigation: Less than significant.

4.16.4.4 CUMULATIVE IMPACTS

UTIL-11	**The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to stormwater infrastructure.**

The area considered for cumulative impacts includes the areas within Tuolumne County that discharge stormwater to the same storm drain system as the project site, with ultimate discharge into the Tuolumne River. Additional projects include cumulative growth associated with County-approved projects and other foreseeable future projects. Development of approved and future projects within the County could increase stormwater runoff.

The Berkeley Tuolumne Camp Restoration project would implement a series of structural and non-structural stormwater management facilities and utilize stormwater runoff best management practices; the 2018 Final Mitigated Negative Declaration/Initial Study for this project did not find significant impacts related to stormwater infrastructure. Details regarding the Thousand Trails / Yosemite Lakes RV Expansion project have not been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. Other new development or redevelopment projects in the County, such as the Yosemite Under Canvas project and the Mountain Sage Conditional Use Permit project, would be required to comply with the General Plan Implementation Program 17.C.e that requires

new development to mitigate impacts on downstream drainages. Measures necessary to mitigate impacts will be attached to development entitlements issued by the County. New development would also need to comply with the requirements of the County's Code of Ordinances. Therefore, impacts of the proposed project and cumulative projects would have a *less-than-significant* cumulative impact on stormwater infrastructure.

Significance without Mitigation: Less than significant.

4.16.5 OTHER UTILITIES

4.16.5.1 ENVIRONMENTAL SETTING

This section provides a general description of the regulatory setting addressing existing electric and natural gas services and infrastructure, and supply and demand in the unincorporated areas in Tuolumne County.

Regulatory Setting

Federal Regulations

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

State Regulations

California Public Utilities Commission Long Term Energy Efficiency Strategic Plan

Adopted in September 2008 and updated in January 2011, the California Public Utilities Commission (CPUC) Long Term Energy Efficiency Strategic Plan provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-, mid-, and long-term strategies to assist in achieving these goals. The Plan sets forth the following four goals, known as "Big Bold Energy Efficiency Strategies," to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation and air conditioning will be transformed to ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

The CPUC and the California Energy Commission have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- Goal 1: New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- Goal 2: 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- Goal 3: Transform the commercial lighting market through technological advancement and innovative utility initiatives.

California Energy Code

The State of California provides a minimum standard for energy conservation through Title 24, Part 6 California Code of Regulations, commonly referred to as the California Energy Code. The California Energy Code was first adopted by the California Energy Resources Conservation and Development Commission in June 1977. The standards are updated on a three- year cycle to allow for consideration and possible incorporation of new energy efficiency technologies and methods. In June 2015, the California Energy Code adopted the 2016 Building and Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building and Energy Efficiency Standards, which were adopted on May 9, 2018, go into effect starting January 1, 2020.

CALGreen Building Code

CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The building efficiency standards are enforced through the local building permit process.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design.
- Energy efficiency.
- Water efficiency and conservation.
- Material conservation and resource efficiency.
- Environmental quality.

Compliance with CALGreen is not a substitution for meeting the certification requirements of any green building program. CALGreen requires new buildings to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

2016 Appliance Efficiency Regulations

The 2016 Appliance Efficiency Regulations (Title 20, California Code of Regulations Sections 1601 through 1608) include standards for both federally regulated appliances and non-federally-regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state, and those designed and sold exclusively for use in recreational vehicles or other mobile equipment. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

State Greenhouse Gas Regulations

The Governor’s GHG Reduction Executive Order S-3-05 was signed on June 1, 2005, and set GHG reduction targets for the State. Soon after, AB 32, the Global Warming Solutions Act (2006) was passed by the California State legislature on August 31, 2006, to place the State on a course toward reducing its contribution of GHG emissions. In response to AB 32, the California Air Resources Board developed a Scoping Plan to be updated every five years, outlining California’s approach to reducing GHG emissions. The latest Update to the Climate Change Scoping Plan sets a 2030 target of 40 percent GHG emissions reductions below 1990 levels.[29] The California Air Resources Board approved the Update to the Climate Change Scoping Plan on December 14, 2017, as required by AB 32. For a detailed discussion on these regulations, see Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR.

California Energy Benchmarking and Disclosure

AB 1103 (2007) required that electric and gas utilities maintain records of the energy consumption data of all non-residential buildings to which they provide service and, upon authorization of a non-residential building owner or operator, upload all of the energy consumption data to the EPA Energy Star Portfolio

[29] California Air Resources Board, 2017, California’s 2017 Climate Change Scoping Plan, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed March 8, 2020.

Manager. This statute further required that a non-residential building owner or operator disclose Energy Star Portfolio Manager benchmarking data and ratings, for the most recent 12-month period, to a prospective buyer, lessee, or lender.

On October 8, 2015, the Governor signed AB 802 which revised and recast the above provisions. The new law directed the California Energy Commission to establish a statewide energy benchmarking and disclosure program, and enhanced the Commission's existing authority to collect data from utilities and other entities for the purposes of energy forecasting, planning, and program design. Among the specific provisions, AB 802 required utilities to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete months. The bill required each utility, upon the request and authorization of the owner, owner's agent, or operator of a covered building, to deliver or provide aggregated energy usage data for a covered building to the owner, owner's agent, operator, or to the owner's account in the Energy Star Portfolio Manager. The bill also authorized the Commission to specify additional information to be delivered by utilities for certain purposes.

Regional Regulations

Tuolumne County General Plan

Policy 2.F.2 from the Housing Element of the Tuolumne County updated General Plan is to promote green design in residential construction and rehabilitation. In addition, Implementation Program 2.F.c is to provide information to the public on the County website regarding the efficient use of energy in the home and ways to improve the energy efficiency of new construction. Topics may include energy saving techniques, xeriscaping, green retrofitting and the availability of low-interest energy loan programs.

Existing Conditions

Electric service in Tuolumne County is provided by Pacific Gas and Electric Company (PG&E). PG&E is a publicly traded utility company which generates, purchases, and transmits energy under contract with the CPUC. PG&E's service territory is 70,000 square miles in area, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada mountain range to the Pacific Ocean.[30]

PG&E's electricity distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines. The electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy such as wind turbines and photovoltaic plants or "solar farms." "The Grid," or bulk electric grid, is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.

PG&E produces or buys its energy from a number of conventional and renewable generating sources, which travel through PG&E's electric transmission and distribution systems. The power mix PG&E provided to customers in 2018 consisted of non-emitting nuclear generation (34 percent), large

[30] PG&E, 2018, Company Info, http://www.pge.com/about/company/profile/, accessed March 8, 2020.

hydroelectric facilities (13 percent), and eligible renewable resources (39 percent), such as wind, geothermal, biomass, solar and small hydro.[31] The remaining portion came from natural gas (15 percent). In addition, PG&E has plans to increase the use of renewable power. For instance, PG&E purchases power from customers that install small-scale renewable generators (e.g., wind turbines or photovoltaic cells) up to 1.5 megawatts in size. In 2016, PG&E served 28 percent of their retail electricity sales with renewable power. PG&E's percentage of renewable power currently under contract for 2020 is 33 percent.[32]

In 2017 PG&E's preliminary projected average annual electricity demand growth (mid-demand forecast) between 2018 and 2028 is 0.99 percent. Total mid-electricity consumption in PG&E's service area was 281,666 gigawatt-hour per year in 2015 and is forecast to increase to 319,484 G gigawatt-hours in 2027.[33]

There is no natural gas consumption in Tuolumne County; however, there is propane consumption.

4.16.5.2 STANDARDS OF SIGNIFICANCE

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

4.16.5.3 IMPACT DISCUSSION

This section analyzes the proposed project's potential impacts to electricity and natural gas facilities.

UTIL-12	**The proposed project would not result in a substantial increase in electrical service demands and would not require new energy supply facilities and transmission infrastructure or capacity enhancing alterations to existing facilities.**

The proposed project would be served by existing PG&E distribution systems and augmented by photovoltaic systems located on the roof of the proposed hotel. An existing Pacific Gas & Electric overhead transmission line traverses the project site within an easement. The project seeks to underground the portion of the transmission line from Sawmill Mountain Road eastward to the lot line between the two project site parcels.

[31] PG&E, 2016, PG&E's 2016 Power Mix, https://www.pge.com/pge_global/local/assets/data/en-us/your-account/your-bill/understand-your-bill/bill-inserts/2017/november/power-content.pdf, accessed March 8, 2020.

[32] PG&E, 2018, Exploring Clean Energy Solutions, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page, accessed March 8, 2020.

[33] California Energy Commission, 2017, California Energy Demand 2018-2028 Preliminary Forecast, https://efiling.energy.ca.gov/getdocument.aspx?tn=220615, accessed March 8, 2020.

As shown in Table 4.16-6, the proposed project would require electrical services totaling an estimated 1,538,592 kilowatt-hours per year (KWhr/yr). This energy consumption rate is typical for projects of this size and are modest increases in energy use when considered in the context of PG&E's service territory. In addition, the proposed project would be required to comply with energy efficiency standards set forth by Title 24 of the California Administrative Code and the Appliance Efficiency Regulations. The project would also comply with CalGreen requirements related to energy and water conservation. These measures will decrease electricity consumption. Therefore, the proposed project would not result in a substantial increase in electrical service demands. PG&E would not need to expand its supply and transmission facilities in order to handle the demand generated by the project and the impact would be *less than significant*.

TABLE 4.16-6 ESTIMATED ELECTRICAL CONSUMPTION

Land Use	Electricity Use (KWhr/yr)
Public Market	37,856
Hotel and Guest Cabins	1,364,820
Parking Lot	83,853
Employee Housing	52,063
Total	**1,538,592**

Source: CalEEMod 2016.3.2.

Significance without Mitigation: Less than significant.

4.16.5.4 CUMULATIVE IMPACTS

UTIL-13 The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to energy conservation.

The area considered for cumulative impacts to electricity supplies and facilities is PG&E's service area. The total mid-electricity consumption is projected to be 319,484 G gigawatt-hours in 2027. Other projects throughout PG&E's service area would increase electricity demands.

The forecasts provided by California Energy Commission are used in several applications, including CPUC resource planning. The CPUC has identified the Integrated Energy Policy Report process as "the appropriate venue for considering issues of load forecasting, resource assessment, and scenario analyses, to determine the appropriate level and ranges of resource needs for load serving entities in California." The final forecasts will also be an input to the California Independent System Operator Transmission Planning Process as well as controlled grid studies and in electricity supply-demand (resource adequacy) assessments.[34]

[34] California Energy Commission, 2017, California Energy Demand 2018-2028 Preliminary Forecast, https://efiling.energy.ca.gov/getdocument.aspx?tn=220615, accessed March 8, 2020.

Of the current projects near the proposed project, the Berkeley Tuolumne Camp Restoration project is a reconstruction of camp facilities that were destroyed by the Rim Fire and is designed to operate at a capacity that matches but does not exceed pre-fire staff and camper capacity. Details regarding the Thousand Trails / Yosemite Lakes RV Expansion project have not been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. Other projects, including the proposed project, the Yosemite Under Canvas project, and the Mountain Sage Conditional Use Permit project, within PG&E's service area would be required to comply with energy efficiency, energy conservation, and water conservation standards set forth by Title 24 of the California Administrative Code and CalGreen. These measures would reduce the overall consumption of electricity. It is anticipated that electricity demands by most other projects would be accounted for in the above-referenced demand forecasts. Cumulative impacts would be *less than significant*, and project impacts would not be cumulatively considerable.

Significance without Mitigation: Less than significant.

4.17 WILDFIRE

This chapter describes the potential impacts associated with the implementation of the proposed project related to wildfire. A summary of the relevant regulatory framework and existing conditions is followed by an analysis of the potential for the project to result in wildfire impacts and mitigation measures that would avoid or reduce significant impacts.

4.17.1 ENVIRONMENTAL SETTING

4.17.1.1 REGULATORY FRAMEWORK

This section summarizes key federal, State, and local regulations and programs related to wildfire that are considered in evaluating the potential for the proposed project to have a significant effect related to wildfire.

Federal Regulations

Healthy Forests Restoration Act

The Healthy Forests Restoration Act (US Code Title 16, Chapter 84, Section 6501) was approved on December 3, 2003 to reduce wildfire risk to communities, municipal water supplies, and other at-risk federal land through planning, prioritizing, and hazardous fuel reduction projects. This act provides regulations for the protection of watersheds, forests, and rangeland, such as the land surrounding the proposed project, from catastrophic wildfires across the landscape. This includes improving systems to detect insect and disease infestations in hardwood forests.

National Cohesive Wildland Fire Management Strategy

In the Federal Land Assistance, Management, and Enhancement Act of 2009 (FLAME Act), Congress mandated the development of a national cohesive wildland fire management strategy for all lands within the United States. The strategy includes a set of guidelines for safe and effective response to wildfires, including structural protections and wildfire prevention to maximize the effectiveness of response efforts. This strategy also provides guidance on vegetation and fuels management, including designing and placing fuel treatments; increasing use of prescribed burns; and expanding the use of all methods to improve the resiliency of forests.

State Regulations

California Building Code

<u>Building Design Standards</u>

The California Building Code (CBC), contained in Part 2 of 24 California Code of Regulations, identifies building design standards, including those for fire safety. The CBC is updated on a three-year cycle and the current 2019 CBC went into effect in January 2020. It is effective statewide, but a local jurisdiction may

adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Commercial and residential buildings are plan-checked by local County building officials for compliance with the CBC and any applicable local edits. Typical fire safety requirements of the CBC include the installation of fire sprinklers in all new residential, high rise, and hazardous materials buildings; the establishment of fire resistance standards for fire doors and walls, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. Tuolumne County regularly adopts each new CBC update under the Tuolumne Code of Ordinances, Chapter 15.04, Construction Codes.

Materials and Construction Methods for Exterior Wildfire Exposure

Chapter 7A of the CBC, Materials and Construction Methods for Exterior Wildfire Exposure, prescribes building materials and construction methods for new buildings in any Fire Hazard Severity Zone or Wildland-Urban Interface Fire Area. Chapter 7A contains requirements for roofing; attic ventilation; exterior coverings; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and accessory structures.

California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official Fire Code for the State and all political subdivisions. It is found in California Code of Regulations Title 24, Part 9 and, like the CBC, it is revised and published every three years by the California Building Standards Commission. Also like the CBC, the CFC is effective Statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire and smoke protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Typical fire safety requirements include installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas. Tuolumne County regularly adopts each new Fire Code update under the Tuolumne Code of Ordinances, Chapter 15.04, Construction Codes.

California Public Resources Code

California Public Resources Code (PRC) Sections 4291 *et seq.* requires that – for buildings on or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land covered in flammable materials – brush, flammable vegetation, or combustible growth within 100 feet of buildings be removed.

California PRC Section 4290 requires the State Board of Forestry and Fire Protection to adopt regulations implementing minimum fire safety standards for defensible space that would be applicable to lands within the State Responsibility Area (SRA) and lands within very high fire hazard severity zones.

California PRC Section 4442 regulates the use of internal combustion engines that use hydrocarbon fuels on forest-covered land, brush-covered land, and grass-covered land. Internal combustion engines, like those used in construction, must be equipped with a spark arrester, which is a device used for removing

and retaining carbon and other flammable particles from the exhaust flow for engines that use hydrocarbon fuels. These engines must be maintained in effective working order or be constructed equipped, and maintained for the prevention of fire.

State Responsibility Areas Fire Safe Regulations

SRA Fire Safe Regulations outline basic wildland fire protection standards and can decrease the risk of wildfire events. SRA Fire Safe Regulations do not supersede local regulations that equal or exceed minimum State regulations. The State statute for wildfire protection is PRC Section 4290. Requirements in the PRC include information on:

- Road standards for fire equipment access
- Standards for signs identifying streets, roads, and buildings
- Minimum private water supply reserves for emergency fire use
- Fuel breaks and greenbelts
- Basic emergency access

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Office of the State Fire Marshal supports CAL FIRE's mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education. The Office of the State Fire Marshal provides for fire prevention by enforcing fire-related laws in State-owned or-operated buildings; investigating arson fires in California; licensing those who inspect and service fire protection systems; approving fireworks for use in California; regulating the use of chemical flame retardants; evaluating building materials against fire safety standards; regulating hazardous liquid pipelines; and tracking incident statistics for local and State government emergency response agencies. The California Fire Plan is the State's road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health. The California Fire Plan is a cooperative effort between the State Board of Forestry and Fire Protection and CAL FIRE.

California Office of Emergency Services

The California Office of Emergency Services (Cal OES) was established on January 1, 2009 and created by Assembly Bill 38, which merged the duties, powers, purposes, and responsibilities of the former Cal OES with those of the Governor's Office of Homeland Security. Cal OES is responsible for the coordination of overall State agency response to major disasters in support of local government. Cal OES is responsible for ensuring the State's readiness to respond to and recover from all hazards—natural, manmade, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts. In 2018, Cal OES completed a State Hazard Mitigation Plan, which designated fire hazard severity zones and wildland-urban interface areas.[1]

[1] California Office of Emergency Management, 2018, California State Hazard Mitigation Plan, https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP_FINAL_ENTIRE%20PLAN.pdf, accessed September 26, 2019.

2018 Strategic Fire Plan for California

CAL FIRE produced the 2018 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments.[2] The 2018 Strategic Fire Plan for California focuses on fire prevention and suppression activities to protect lives, property, and ecosystems, in addition to providing natural resource management to maintain State forests as a resilient carbon sink to meet California's climate change goals. This plan provides State Responsibility Fire Safe Regulations, which require that all parcels one acre or larger provide a minimum 30-foot setback for buildings from all property lines and/or the center of the road. A key component of the 2018 Strategic Fire Plan for California is the collaboration between communities to ensure fire suppression and natural resource management are successful.[3]

Public Utilities Commission

In 2007, wildfires in southern California were ignited by overhead utility power lines and aerial communication facilities near power lines. In response, the California Public Utilities Commission (CPUC) began considering and adopting regulations to protect the public from fire hazards due to overhead power lines and nearby aerial communication facilities. The CPUC publishes a Fire-Threat Map under Rulemaking 15-05-006, following procedures in Decision 17-01-009, revised by Decision 17-06-024, which adopted a work plan for the development of a utility High Fire-Threat District where enhanced fire safety regulations in Decision 17-12-024 apply.[4] The fire regulations require electric utilities to:[5]

- Prioritize the correction of safety hazards.
- Correct non-immediate fire risks in "Tier 2" (elevated fire threat) areas on the CPUC High Fire-Threat District within 12 months, and in "Tier 3" (extreme fire threat) areas within 6 months.
- Maintain increased clearances between vegetation and power lines within the High Fire-Threat District.
- Maintain stricter wire-to-wire clearances for new and reconstructed facilities in Tier 3 areas.
- Conduct annual inspections of overhead distribution facilities in rural areas of Tier 2 and Tier 3 areas.
- Prepare a fire prevention plan annually if overhead facilities exist in the High Fire-Threat District.

[2] California State Board of Forestry and Fire Protection, 2018, 2018 Strategic Fire Plan for California, http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf, accessed September 26, 2019.

[3] California State Board of Forestry and Fire Protection, 2018, 2018 Strategic Fire Plan for California, http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf, accessed September 26, 2019.

[4] California Public Utilities Commission, http://www.cpuc.ca.gov/firethreatmaps/, accessed September 26, 2019.

[5] California Public Utilities Commission, press release: CPUC Adopts New Fire-Safety Regulations, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K352/201352402.PDF, accessed September 26, 2019.

California Code of Regulations Title 14 Section 1250 et seq.: Fire Prevention Standards for Electric Utilities

California Code of Regulations (CCR) Title 14 Section 1250 *et seq.* set forth fire prevention standards for electric utilities. Sections 1254 and 1256 set forth requirements for vegetation clearance from poles, towers, and wires.[6]

Section 1254

The firebreak clearances required by PRC Section 4292 are applicable within an imaginary cylindroidal space surrounding each pole or tower on which a switch, fuse, transformer or lightning arrester is attached and surrounding each dead end or corner pole unless such pole or tower is exempt from minimum clearance requirements by provisions of Title 14 CCR Section 1255 or PRC Section 4296. The radius of the cylindroid is 3.1 meters (10 feet). Flammable vegetation and materials located wholly or partially within the firebreak space shall be treated as follows:

(a) At ground level: remove flammable materials, including, but not limited to, ground litter, duff and dead or desiccated vegetation that will allow fire to spread.

(b) From 0 to 2.4 meters (0 to 8 feet) above ground level: remove flammable trash, debris or other materials, grass, herbaceous, and brush vegetation. All limbs and foliage of living trees shall be removed up to a height of 2.4 meters (8 feet).

(c) From 2.4 meters (8 feet) to horizontal plane of highest point of conductor attachment: remove dead, diseased or dying limbs and foliage from living sound trees and any dead, diseased, or dying trees in their entirety.

Section 1256

Minimum clearance required by PRC Section 4293 shall be maintained with the specified distances from conductors. Minimum clearance shall include:

(1) Any position through which the conductor may move, considering, among other things, the size and material of the conductor and its span length.

(2) Any position through which the vegetation may sway, considering, among other things, the climatic conditions, including such things as foreseeable wind velocities and temperature, and location, height and species of the vegetation.

Local Regulations

Emergency Operations Plan for Tuolumne County

The Emergency Operations Plan (EOP) for Tuolumne County, adopted in June 2012, establishes County procedures and policies when responding to significant disasters, including wildland fires. The area covered by this plan encompasses Tuolumne County, private agencies, and businesses within jurisdiction

[6] Wires are referred to as “conductors” in CCR Title 14 Section 1256.

limits of the county. The EOP describes how emergencies will be managed through the Standard Emergency Management System and the Incident Command System, to ensure effective management of emergency operations within Tuolumne County. Emergency operations are split into eight phases:

- Event recognition
- Notification of response personnel
- Mobilization of response personnel
- Activation of emergency response facilities and resources
- Situation Reporting and Assessment
- Public alerting and information
- Protective action determination and implementation
- Re-entry and recovery

Tuolumne County Community Wildfire Protection Plan

The Tuolumne County Community Wildfire Protection Plan, adopted in December 2004, is intended to provide a foundation for and facilitate continued collaboration between multiple agencies providing wildfire protection within Tuolumne County. The overall goal of the Community Wildfire Protection Plan is to reduce total costs and losses from wildland fire in the county by protecting assets at risk through pre-fire management and enhancement of strategic fire defense systems. This goal is followed by five key objectives: 1) identify projects which, when completed, will reduce the risks to citizens and firefighters; 2) assess all wildland areas; 3) identify and analyze key policy issues and develop recommendations for changes in public policy; 4) have a strong fiscal policy focus and monitor the wildland fire protection system in fiscal terms; and 5) translate the analysis into public policies.

Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan

The Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), adopted in December 2017, is a guide to hazard mitigation throughout the county and services as a tool to help decision makers direct hazard mitigation activities and resources. In the context of the MJHMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including wildfire. The MJHMP contains the hazard mitigation actions to help reduce the risk of damage and injury from wildfire under Goal 5: Minimize the level of damage and losses to people, existing and future critical facilities, and infrastructure due to wildland fires.

Tuolumne County General Plan

The Public Safety Element and Natural Hazards Element of the County’s General Plan include goals, policies, and programs relevant to environmental factors potentially affected by the proposed project. The County's General Plan includes the following goals, policies, and implementation programs specific to wildfire protection and applicable to the proposed project:

TABLE 4.17-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO WILDFIRE

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
PUBLIC SAFETY ELEMENT	
Goal 9A	Consult with all affected agencies on fire protection planning within Tuolumne County.
Implementation Program 9.A.a	Assess the effects of land development applications on fire protection capability during the review of applications. The assessment should incorporate comments from all affected fire protection agencies, not just those with jurisdiction over the project site because wildland fire originating on the site could cross jurisdictional boundaries. Appropriate measures should be formulated and implemented to reduce the safety concerns and fire hazards which could result from approval of the application. Recommendations should specify the source of funding for implementation and maintenance of identified fire protection measures.
Goal 9E	Provide structural fire protection to persons and property within Tuolumne County consistent with the needs dictated by the level of development and in accordance with current Federal, State, and local fire protection agency regulations and policies.
Policy 9.E.1	Evaluate the circulation system to identify areas causing delay of emergency vehicle response and evacuation due to traffic congestion.
Implementation Program 9.E.b	Require that new development be provided with access roads that allow for safe and efficient response by emergency apparatus and the safe evacuation of residents in the event of structural or wildland fire.
Implementation Program 9.E.c	Consider roadways designated as arterials in the Transportation Element as primary evacuation routes on a County-wide basis. Such routes provide the highest vehicle capacity and serve as the primary means of egress from the County. The routes designated as collector routes shall be considered secondary evacuation routes on a Countywide basis. These routes provide egress from local neighborhoods and communities. Require new development to be served by roads which provide safe emergency vehicle response and safe evacuation routes to the nearest arterial or collector route in the event of wildland fire emergency pursuant to Chapter 11.12 of the Tuolumne County Ordinance Code.
Policy 9.E.3	Require new development to be consistent with State and County regulations and policies regarding fire protection.
Implementation Program 9.E.f	Forward applications for new development to the Tuolumne County Fire Department/CAL FIRE for evaluation and identification of necessary fire protection measures for such development based upon contemporary fire prevention measures and protection standards.
Implementation Program 9.E.g	Revise Title 15 of the Tuolumne County Ordinance Code as necessary to require new structures to incorporate all fire protection measures required by the current editions of the California Building Code and the California Fire Code, including Automatic Engineered Fire Sprinkler Systems and Automatic Electronic Fire Alarm Systems, referenced in National Fire Protection Association (NFPA) 13 and 72, where necessary.
Goal 9G	*Establish and maintain a codified fire protection risk management strategy which requires new development within Tuolumne County to incorporate or supply fire protection infrastructure and improvements necessary so that such development does not exceed the capabilities of the County's fire protection resources.*
Policy 9.G.2	Require new residential development to have adequate fire protection, which may include design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire.
Policy 9.G.3	Determine the impact proposed development will have on the provision of fire protection services and maintain the established level of service as outlined in the current Tuolumne County Fire Department Service Level Stabilization Plan.

TABLE 4.17-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO WILDFIRE

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
Goal 9H	*Establish reliable sources of funding for fire protection services in Tuolumne County in order to maintain the services at an acceptable level.*
Policy 9.H.2	Enforce the provisions found in Title 15 of the Tuolumne County Ordinance Code and the California Fire Code for built-in fire suppression equipment in all new development in order to improve fire safety and offset the need for increased fire department staffing and equipment.
NATURAL HAZARDS ELEMENT	
Goal 17A	*Avoid the exposure of people and structures to potential substantial adverse effects, including the risk of loss, injury or death involving natural hazards.*
Policy 17.A.6	Ensure that all new construction is completed in a way most resistant to loss or damage from natural hazards.
Implementation Program 17.A.e	Through the development review process, ensure that projects located in or near areas that may pose public health and safety hazards are designed to minimize potential impacts on people and property.
Goal 17E	*Provide protection to County residents and natural resources from the losses associated with wildland fire.*
Policy 17.E.1	Reduce the exposure to risk from wildland fire to an acceptable level by only allowing development in high or very high fire hazard areas if it can be made safe by planning, construction, or other fire safety measures.
Implementation Program 17.E.a	Utilize the CAL FIRE Forest and Resource Assessment Program "Fire Hazard Severity Zone Map", including revisions thereto, as a basis for determining the significance of fire hazards when reviewing development applications.
Implementation Program 17.E.b	New development in very high fire hazard zones in local or state responsibility areas shall meet California Building and Fire Codes, including Wildland-Urban Interface Building Codes. For new development proposed in very high fire hazard zones, the County will consult with the State fire agency (CAL FIRE) to determine that all feasible wildfire mitigation measures are included and that safe ingress/egress criteria are met.
Policy 17.E.2	Require the maintenance of defensible space setbacks in areas proposed for development if wildland fire hazards exist on adjacent properties.
Policy 17.E.3	Require new development to have adequate fire protection and to include, where necessary, design and maintenance features that contribute to the protection of the County from the losses associated with wildland fire.
Implementation Program 17.E.c	Require new development to mitigate wildland fire hazards in such a manner that it minimizes the chance of wildland fire originating outside the development from entering the development and minimizes the chance of fire originating within the development escaping to adjoining property and adjacent wildland.
Implementation Program 17.E.d	Require developers to incorporate fire protection improvements into project designs where determined necessary by the Tuolumne County Fire Department and require maintenance of these improvements. Fuel breaks, green belts, long-term comprehensive fuel management programs, access to developed water sources, strategic helispots (with water supply), and perimeter road systems can all serve to reduce the fire hazard on project sites as well as adjacent property.
Implementation Program 17.E.e	Require new development in areas subject to wildland fire to provide safe ingress and egress in accordance with Chapter 11.12 of the Tuolumne County Ordinance Code. Encourage new development that complies with Chapter 11.12 to provide multiple access routes, especially in very high fire hazard severity zones or where one access route is susceptible to closure by landslide, loss of a bridge or other cause.

TABLE 4.17-1 TUOLUMNE COUNTY GENERAL PLAN GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS PERTAINING TO WILDFIRE

Goal/Policy/ Implementation Program Number	Goal/Policy/Implementation Program Text
Implementation Program 17.E.f	Support the efforts of the Tuolumne County Fire Department to prevent loss of life, property and resources. Refer land development applications which would permit structures in areas subject to wildland fire to the Tuolumne County Fire Department/CAL FIRE for review and identification of measures necessary to mitigate the fire hazard.
Implementation Program 17.E.g	Consult the U.S. Forest Service, National Park Service and other federal land management agencies regarding applications for development on privately owned lands located adjacent to or within these agencies' boundaries to obtain comments regarding the impact of the project on the wildland fire protection mission of that agency.
Implementation Program 17.E.h	Revise and enforce County fire protection regulations such that new development in areas subject to wildland fire provides for clearing adjacent to access roads in order to reduce radiant heat received by vehicles on the roadway and thereby facilitate safe evacuation of residents and response by emergency vehicles in the event of wildland fire.
Policy 17.E.8	Require property owners to maintain wildlands in a fire resistant manner consistent with Section 4291 of the Public Resources Code. Assist fire protection agencies in their efforts to enforce Section 4291.
Implementation Program 17.E.t	Require property owners to remove trees killed by drought, disease, insects and other pests to utilize the timber value and reduce the wildland fire hazard consistent with Section 4291 of the Public Resources Code unless a tree is determined to have significant wildlife habitat value by a qualified biologist.

Source: Tuolumne County, 2018, Tuolumne County General Plan.

Tuolumne County Code of Ordinances

The Tuolumne County Code of Ordinances includes various directives to minimize adverse impacts associated with wildfires in Tuolumne County. The Code of Ordinance is organized by Title, Chapter, and Section. Most provisions relating to wildfire prevention are included in Title 15, Buildings & Construction, and Title 11, Road Standards, as follows:

- Chapter 15.20, Fire Safety Standards: This chapter adopts sections of the California Fire Code in its entirety, with amendments to Section 505.2, Street or Road Signs, and Section 505.1, address identification for commercial, industrial, and residential developments. This chapter provides regulations for fire hydrant installation, off-street signing, gate entrances, setbacks, defensible space, and fuel modification.
- Chapter 11.12, Basic Road Design and Construction Standards: This chapter provides construction standards for all roadways within the County, including requirements for geometrics and roadbed design, structural design standards, cul-de-sacs, driveways, and street signing.

4.17.1.2 EXISTING CONDITIONS

This section describes the existing conditions relevant to wildfire hazards on and around the project site. Please also see Chapter 4.14, Public Services, Parks, and Recreation, for additional information pertaining to fire protection services in the county.

Wildfire Background

Types of Wildfire

There are three basic types of wildland fires:

- **Crown fires** burn trees to their tops; these are the most intense and dangerous wildland fires.
- **Surface fires** burn surface litter (that is, the top layer of the forest, brushland, or grassland floor, containing dead sticks, branches, twigs, leaves, and needles) and duff (that is, the layer of decomposing organic material lying above the soil and below the layer of surface litter). Surface fires are the easiest fires to extinguish and cause the least damage to the forest. Brush and small trees enable surface fires to reach treetops and are thus referred to as "ladder fuels."
- **Ground fires** occur underground in deep accumulations of dead vegetation. These fires move very slowly but can be difficult to extinguish.[7]

Wildfires burn in many types of vegetation—forest, woodland, scrub (including chaparral, sage scrub, and desert scrub), and grassland.[8] Many species of native California plants are adapted to fire. Chaparral shrubs recover from fire in either of two ways: 1) woody root crowns or burls below the soil surface that survive a fire and re-sprout; and, 2) shrubs (various species of *Manzanita* and *Ceanothus*) that are killed by fire and produce seeds requiring intense heat from a fire to germinate.[9] Many species of conifers have seed cones requiring fire to open.[10] Between 2010 and 2017, wildfires in California burned about 265,000 acres of forest land, 207,000 acres of shrub vegetation, 99,000 acres of grassland, 18,000 acres of desert vegetation, and 14,000 acres of other vegetation types.[11]

Wildfire Causes

Many factors contribute to wildfires, including:[12]

- **Fuel.** Fuel can include live and dead vegetation on the ground, surface vegetation such as brush and small trees, and above-ground vegetation in tree canopies. Moisture content affects how vegetation burns. Lighter fuels such as grasses, leaves, and needles quick expel moisture and burn rapidly, while heavier fuels such as tree branches, tree trunks, and logs retain moisture and take longer to ignite.
- **Weather.** Temperature, humidity, wind speed, wind direction, cloud cover, precipitation amount and duration, and atmospheric stability all affect wildfires. A wet spring can cause increased vegetation

[7] Natural Resources Canada, 2018, Fire Behavior, https://www.nrcan.gc.ca/forests/fire-insects-disturbances/fire/13145, accessed October 1, 2019.

[8] California Department of Forestry and Fire Prevention, 1999, Learning to Live with Fire, http://www.fire.ca.gov/communications/downloads/live_w_fire.pdf, accessed October 1, 2019.

[9] Rundel, Philip, and Gustafson, Robert, 2005, Introduction to the Plant Life of Southern California. Berkeley and Los Angeles, California: University of California Press.

[10] California Department of Forestry and Fire Prevention, 1999, Learning to Live with Fire, http://www.fire.ca.gov/communications/downloads/live_w_fire.pdf, accessed October 1, 2019.

[11] State Board of Forestry and Fire Protection and California Department of Forestry and Fire Prevention, 2018, 2018 Strategic Fire Plan for California, http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf, accessed October 1, 2019.

[12] Tuolumne County, 2018, Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, pages 68 to 69.

growth, creating more fuel susceptible to ignition during a dry summer. Strong, dry winds can produce extreme fire conditions.

- **Topography.** Site and regional topography, including slope and elevation, influence fuel and weather. Terrain affects the amount and moisture of fuel, the effect of weather (such as temperature, precipitation, and wind), potential barriers to fire spread (such as roadways and bodies of water), and landforms. In general, south facing slopes are subject to greater solar radiation, making them drier and therefore creating more intense wildfires. Fire spreads more easily uphill than downhill.

These factors interact with each other in several ways. Climate change also affects these factors, for instance by affecting fuel ecosystems and weather patterns.

Although the term "wildfire" suggests natural origins, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned.[13] Wildfires can be ignited naturally during lightning events, but are most frequently caused by human activity, such as smoking, campfires, equipment use, and arson. The three most common types of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.); arson; and equipment use.[14] Power lines can also ignite wildfires through down lines, vegetation contact, conductors that collide, and equipment failures.[15] CAL FIRE determined that 16 wildfires in northern California in October 2017 were caused by electric power and distribution lines, conductors, and the failure of power poles.[16] Lightning is the major natural cause of wildfire in the United States.[17]

An analysis of United States Forest Service wildfire data from 1986 to 1996 determined that 95 percent of human-caused wildfires, and 90 percent of all wildfires, occurred within 0.5 miles of a road; and that about 61 percent of all wildfires and 55 percent of human-caused wildfires occurred within approximately 650 feet of a road. This analysis concluded that the increase in human-caused ignition greatly outweighs the benefits of increased access for firefighters.[18]

There are three primary methods of wildfire spread, which are listed below:

[13] Balch, Jennifer; Bradley, Bethany; Abatzoglou, John, et. al. 2017, March 14. Human-Started Wildfires Expand the Fire Niche Across the United States. Proceedings of the National Academy of Sciences: Volume 114 No. 11. https://www.pnas.org/content/pnas/114/11/2946.full.pdf, accessed October 2, 2019.

[14] Pacific Biodiversity Institute, 2007, Roads and Wildfires, http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf, accessed October 2, 2019.

[15] Texas Wildfire Mitigation Project, 2018, How Do Power Lines Cause Wildfires? https://wildfiremitigation.tees.tamus.edu/faqs/how-power-lines-cause-wildfires, accessed October 2, 2019.

[16] California Department of Forestry and Fire Prevention, 2018, CAL FIRE Investigators Determine Causes of 12 Wildfires in Mendocino, Humboldt, Butte, Sonoma, Lake, and Napa Counties, https://calfire.ca.gov/communications/downloads/newsreleases/2018/2017_WildfireSiege_Cause.pdf, accessed October 2, 2019.

[17] Balch, Jennifer; Bradley, Bethany; Abatzoglou, John, et. al. 2017, March 14. Human-Started Wildfires Expand the Fire Niche Across the United States. Proceedings of the National Academy of Sciences: Volume 114 No. 11. https://www.pnas.org/content/pnas/114/11/2946.full.pdf, accessed October 2, 2019.

[18] Pacific Biodiversity Institute, 2007, Roads and Wildfires, http://www.pacificbio.org/publications/wildfire_studies/Roads_And_Wildfires_2007.pdf, accessed October 2, 2019.

- **Embers.** Embers are glowing or burning pieces of vegetation or construction debris that are lofted during the wildfire, which can move up to a mile ahead of a firestorm. They are most prolific cause of home ignition at a rate of two out of every three homes destroyed. These small embers or sparks may fall on the vegetation near a home (on dry leaves, needles, or twigs on the roof) and then subsequently ignite and burn down the home. Ember storms place all structures without fire resistant landscaping and construction within miles of the fire at potential risk.
- **Direct Flame Contact.** Direct flame impingement refers to the transfer of heat by direct flame exposure. Direct contact will heat the building materials of the home. If the time and intensity of exposure is severe enough, windows will break and materials will ignite.
- **Radiant Heat.** A house can catch on fire from the heat that is transferred to it from nearby burning objects, even in the absence of direct flames or embers. Defensible space around homes significantly reduces the risk from radiant heat. A home with 100 feet of clearance from forest or shrubs will usually have minimal impact from radiant heat or direct flame.

Wildfire season in the Western region of the United States, including California, recently has lengthened from a previous average of between five and seven months to a year-round occurrence, and the number of large wildfires (i.e., greater than 1,000 acres) has increased from 140 to 250 per year. This is occurring as average annual temperature in the Western regions of the United States has risen by nearly two degrees Fahrenheit since the 1970s and the winter snowpack has declined.[19]

Secondary Effects

The following sections describe the hazardous conditions created by wildfire effects.

Slope Instability

Post-fire conditions can pose hazards associated with unstable slopes, such as landslides, erosion, and debris flows.[20] Post-fire landslide hazards include fast-moving, highly destructive debris flows that can occur in the period immediately following wildfires in response to high-intensity rainfall events, and flows that are generated over longer time periods that are accompanied by root decay and loss of soil strength. Fires increase the potential for debris flows by increasing the imperviousness of soil so that it repels water and destroys vegetation that would slow and absorb rainfall, and whose roots would help stabilize soil.[21] The burning of vegetation and soil on slopes more than doubles the rate that water will run off into watercourses.[22] Post-fire debris flows are particularly hazardous because they can occur with little warning, can exert great impulsive loads on objects in their paths, can strip vegetation, block drainage ways, damage structures, and endanger human life. Debris flows differ from mudflows in that debris flows

[19] State Board of Forestry and Fire Protection and California Department of Forestry and Fire Prevention, 2018, 2018 Strategic Fire Plan for California, http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf, accessed October 2, 2019.

[20] Tuolumne County, 2018, Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, page 73.

[21] US Geological Survey, 2018, New post-wildfire resource guide now available to help communities cope with flood and debris flow danger, https://www.usgs.gov/center-news/post-wildfire-playbook?qt-news_science_products=1#qt-news_science_products, accessed October 2, 2019.

[22] California Geological Survey, 2018, Post-Fire Debris Flow Facts, https://www.conservation.ca.gov/index/Pages/Fact-sheets/Post-Fire-Debris-Flow-Facts.aspx, accessed October 2, 2019.

are composed of larger particles. Post-fire debris flows are most common in the two years after a fire; they are usually triggered by heavy rainfall. It takes much less rainfall to trigger debris flows from burned basins than from unburned areas.

Air Pollution

Smoke is made up of a complex mixture of gases and fine particles produced when wood and other organic materials burn. The biggest health threat from smoke is from fine particles ($PM_{2.5}$), which are microscopic particles can penetrate the lungs and cause a range of health problems, from burning eyes and a runny nose to aggravated chronic heart and lung diseases. Exposure to particulate pollution is even linked to premature death. Some populations are more sensitive than others to smoke: for instance, people with heart or lung diseases; the elderly; children; people with diabetes; and pregnant women.[23]

Vegetation Changes

Frequent wildfires reduce the recovery of shrubs and trees—especially shrubs and trees that must produce seeds to regenerate after fire—and increase the invasion of non-native vegetation, which can convert native forests to non-native scrub or grassland habitat.[24] Non-native grasses are generally more flammable than the forest vegetation that is replaced; thus, such conversion exacerbates wildfire hazards.[25] Loss of vegetation can also lead to downstream flooding.

Wildfire History in the Project Area

According to the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, Tuolumne Cunty historically experiences wildfires every two to five years. In more recent years with drought conditions, wildfires have occurred every other year. From 2001 to 2016, twelve fires have occurred in or near Tuolumne County that have each destroyed at least 750 acres.[26] The 2013 Rim Fire burned a total of 257,314 acres, and burned through the project site. Figure 4.17-1 maps wildfires in the vicinity of the project site that occurred between 1950 and 2017.

Wildfire Hazards in the Project Area

According to the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, geography, weather patterns, and vegetation provide ideal conditions for wildfires, which routinely occur in county. Fire season in the county typically starts in spring, as fuels dry out, and extends until the first rains fall in the winter season. Due to the high elevation and longer winter seasons, the higher elevations of the county have greater and heavier fuels, such as timber. Fires in these vegetation areas can easily become crown fires (that is, a fire that burns the entire length of a tree and spreads from treetop to treetop).

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[23] Airnow, 2018, How Smoke from Fires Can Affect Your Health, https://airnow.gov/index.cfm?action=smoke.index, accessed October 2, 2018.

[24] US Geological Survey, 2012, Fire-Driven Alien Plant Invasion in a Fire-Prone Community, http://www.californiachaparral.com/images/Fire_driven_alien_plants_Brief.pdf, accessed April 30, 2019.

[25] See University of California Division of Agriculture and Natural Resources, 2009, Invasive Plants and Wildfires in Southern California, https://anrcatalog.ucanr.edu/pdf/8397.pdf, accessed April 30, 2019.

[26] Tuolumne County, 2018, Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, pages 67 to 68.

The project site's location and existing conditions make the site susceptible to wildfire hazards, as described below.

Hazard Zone Mapping

Various entities evaluate potential wildfire risks and publish data and maps showing wildfire risks for locations within California.

CAL FIRE

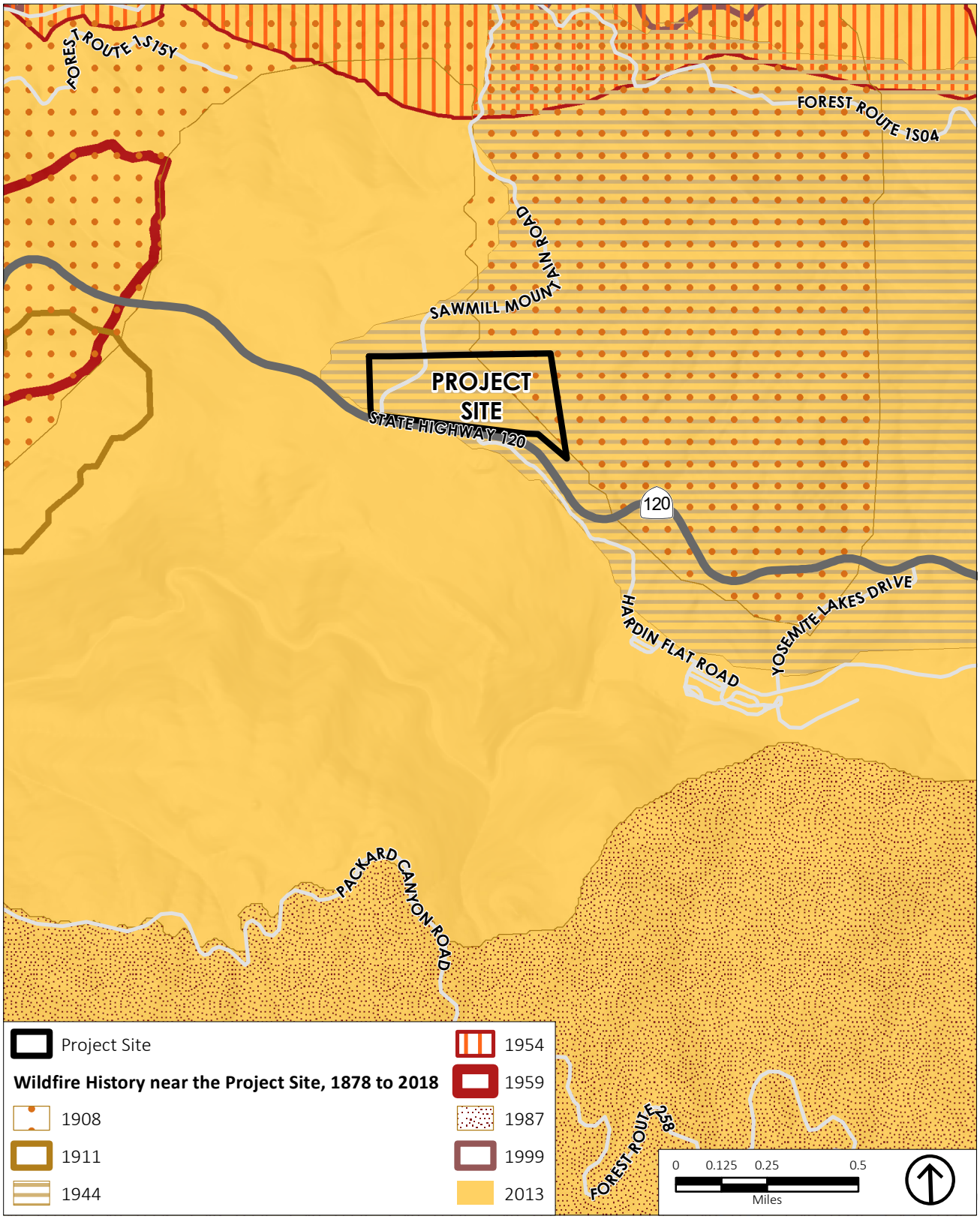
CAL FIRE publishes maps recommending fire hazard severity zones for every California county. The maps identify lands in California as falling within one of the following management areas: Local Responsibility Area (LRA), State Responsibility Area (SRA), and Federal Responsibility Area (FRA). Within each of these areas, a single agency has direct responsibility: in LRAs, local fire departments or fire protection districts are responsible; in SRAs, CAL FIRE is responsible; in FRAs, federal agencies such as the United States Forest Service, National Park Service, Bureau of Land Management, United States Department of Defense, United States Fish and Wildlife Service, and Department of the Interior are responsible.

Within the LRA, CAL FIRE designates lands as being within a Very High Fire Hazard Severity Zone (VHFHSZ) or non-VHFHSZ. The LRA maps also show the VHFHSZ and non-VHFHSZ areas within the SRA and FRA but do not differentiate lands within the SRA and FRA from each other (that is, SRA and FRA areas are mapped together).

Within the SRA, CAL FIRE designates Moderate Fire Hazard Severity Zones, High Fire Hazard Severity Zones, and VHFHSZs. The SRA maps also indicate which lands area within the LRA and which are within the FRA, but do not show the hazard zones within the LRA and FRA.

The project site is within a CAL FIRE designated SRA, and is surrounded by land designated in a FRA. As shown in Figure 4.17-2, the CAL FIRE map for the SRA in Tuolumne County identifies the project site as within a VHFHSZ.

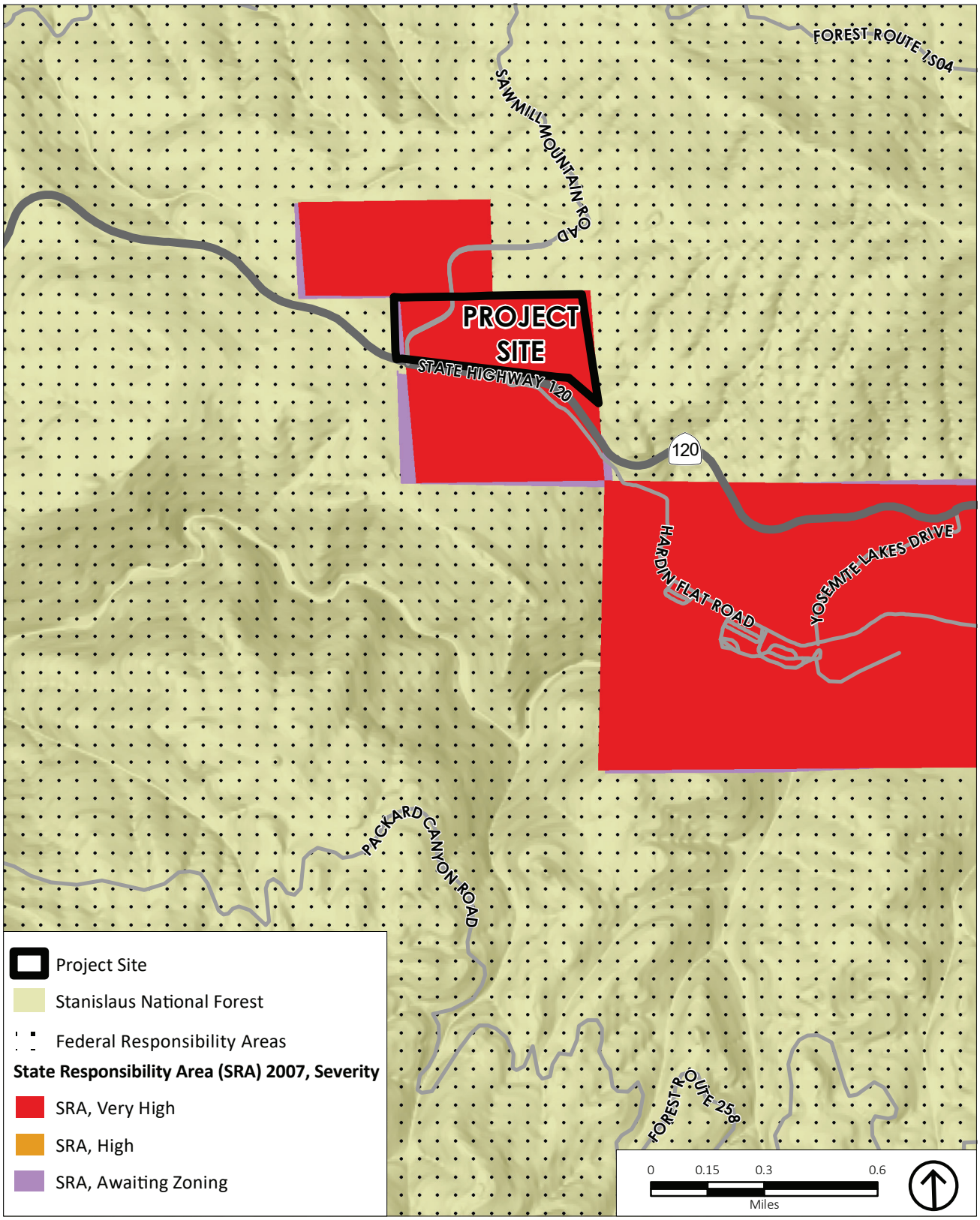
CAL FIRE also publishes mapping data for the wildland–urban interface (WUI). The WUI includes areas susceptible to wildfires where wildland vegetation and urban (or suburban) development occur together. Fires in the WUI result in direct damage to the built environment and harm to residents. The WUI area mapped by CAL FIRE represents the overlap between the following: land uses containing a housing density of one housing unit per 40 acres or denser, and areas within 2,400 meters (approximately 1.5 miles) of those land uses; areas within 2,400 meters of lands calculated to have a "high," "very high," or "extreme" fire threat, based on a combination of fuel rank and fire rotation; and areas designated as "communities at risk," which are areas with a density of one housing unit per 20 acres or denser that are within 2,400 meters of areas with high, very high, or extreme fire threat. As shown on Figure 4.17-3, the project site is not within the WUI.



Source: California Department of Forestry and Fire Protection, 2019; ESRI, 2019; Toulumne County, 2019; PlaceWorks, 2020.

Figure 4.17-1

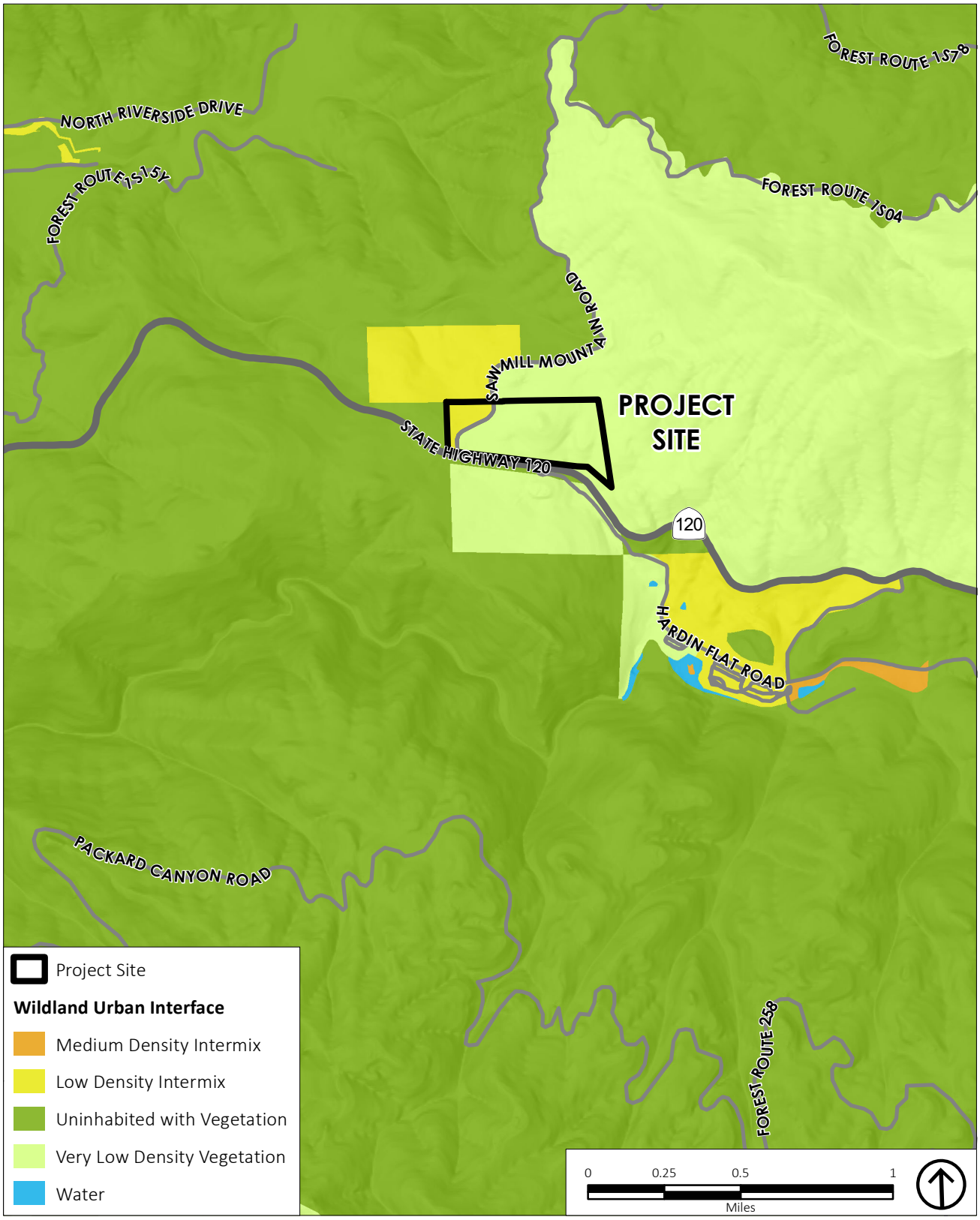
Wildfire History near the Project Site, 1950 to 2017



Source: California of Forestry and Fire Potection (CAL FIRE) 2019; ESRI, 2019; Toulumne County, 2019; PlaceWorks, 2020.

Figure 4.17-2

CAL FIRE Hazard Severity Zone and Responsibility Area Map



Source: California Department of Forestry and Fire Protection's Fire and Resource Assessment Program, 2019; ESRI, 2019; Toulumne County, 2019; PlaceWorks, 2020.

Figure 4.17-3
Wildland Urban Interface

California Public Utilities Commission

The CPUC's Fire-Threat Map identifies areas considered to be within Tier 2 (elevated fire threat) and Tier 3 (extreme fire threat) where power line fires cause an elevated risk of fires igniting and spreading rapidly. As shown in Figure 4.17-4, the project site is within Tier 2 and is therefore considered to have an elevated risk of fires caused by power lines and aerial communication facilities.

Project Site Characteristics

The project site contains woodland and heavy timber fuel, which has a high to very high fire-hazard ranking.[27] The following sections describe specific project site characteristics related to wildfire.

Vegetation

As described in more detail in Chapter 4.3, Biological Resources, of this Draft EIR, the project site is covered with small, isolated communities of conifers and oaks, which escaped destruction in the 2013 Rim Fire. Newer vegetation that has grown since the fire includes trees (mostly ponderosa pine), shrubs, and grasses. Vegetation communities consist of 65 percent burned mixed hardwood conifer forest and 33 percent unburned mixed hardwood conifer forest.

Terrain

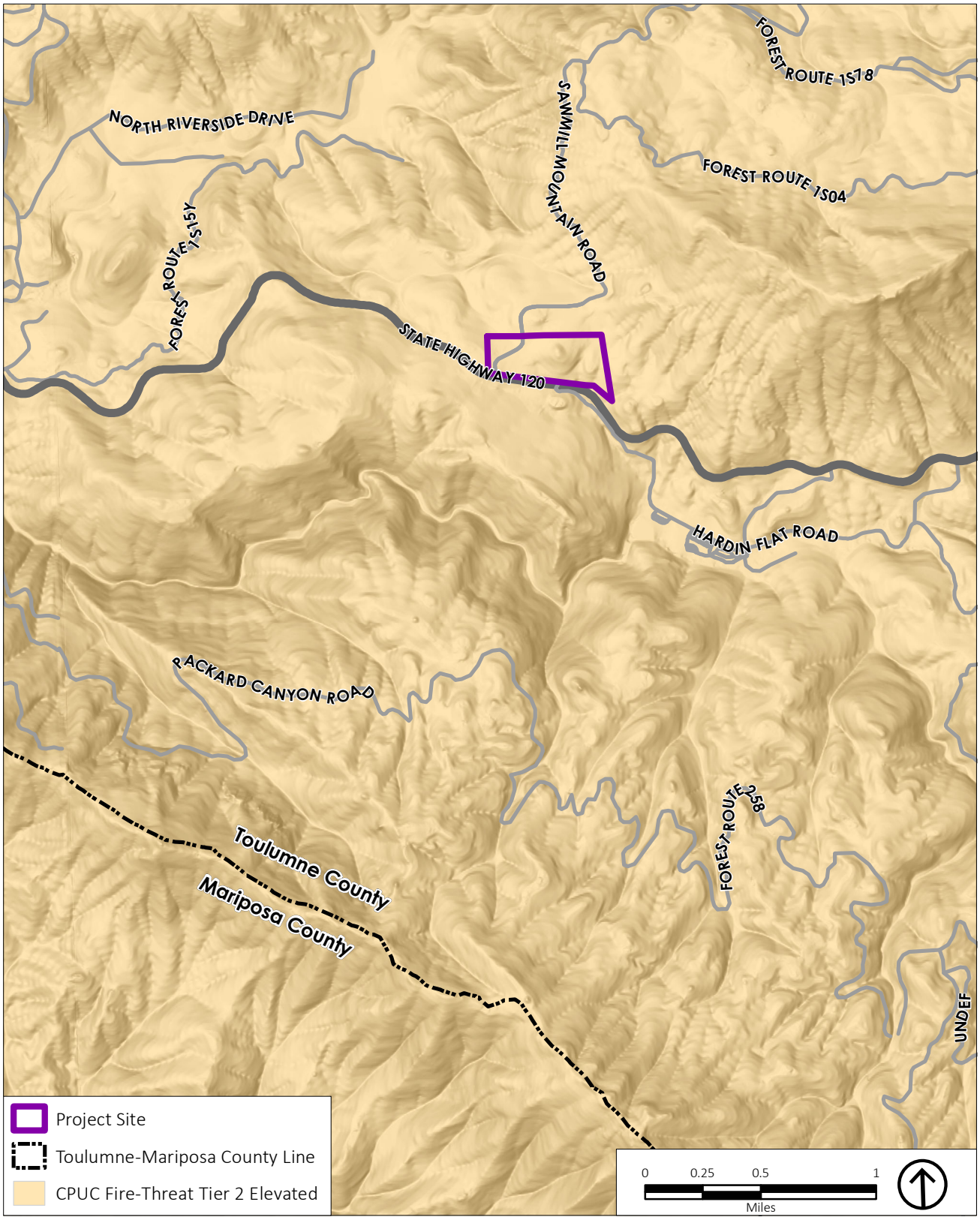
The project site is located at the base of a mountain, at an elevation of approximately 4,000 feet above mean sea level. The highest point on the project site is at 4,045 feet above mean sea level, located just south of the three proposed water tanks. The terrain slopes gently towards Sawmill Mountain Road to the west and Highway 120 to the south. The eastern portion of the site contains a second, smaller hill, with steeper slopes. As discussed in more detail in Chapter 4.7, Geology and Soils, the project site has some potential for slope failure on the steep eastern portion of the site.

Prevailing Winds

The windier part of the year is from November to March, with average wind speeds of 5.3 miles per hour.[28] During this time of year, prevailing winds are from the east until February, then shift and are from the south until March. During the calmer part of the year (March to September), the winds are from the west. Given prevailing wind patterns, the windier part of the year aligns with the months of most precipitation; during this time, prevailing winds are blowing from the east.

[27] Tuolumne County, 2018, Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, page 69.

[28] Weather Spark, 2019, https://weatherspark.com/y/1333/Average-Weather-in-Tuolumne-City-California-United-States-Year-Round, accessed October 22, 2019.



Source: California Public Utilities Commission, 2019; ESRI, 2019; Toulumne County, 2019; PlaceWorks, 2019.

Figure 4.17-4
California Public Utilities Commission Fire-Threat Map

Debris Flow Hazards

Debris flows are considered a type of landslide, which is defined as the sliding movement of masses of loosened earth, rock, and a combination of the two down a hillside or slope. Debris flows occur when dense mixtures of water-saturated debris move down-slope, with an appearance and behavior very similar to flowing concrete. Areas with steep slopes are typically within debris flow areas. The terrain of the project site is varied, ranging from gently sloped on the western portion of the site to hilly or steeply sloped on the eastern portion. As discussed in more detail in Chapter 4.7, Geology and Soils, the project site has some potential for debris flow hazards on the steeper eastern portion of the site.

Fire Protection Services

Fire protection services on and near the project site are provided by Tuolumne County Fire Department (TCFD) in coordination with CAL FIRE. Tuolumne County has eight fire districts that work cooperatively with TCFD and CAL FIRE to provide life and property emergency response. The TCFD includes the Fire Prevention Department, which provides inspections, insurance information, and public safety information throughout the county. Other programs managed by the TCFD include the Fire Explorers (a partnership with Boy Scouts of America), Resident Firefighting for college students, and Volunteer Firefighting, where community member volunteers serve the community by responding to emergencies.[29] The proposed project would be subject to review by the Fire Prevention Department of the TCFD for compliance with adopted Fire Safety Standards, the California Fire Code, and Tuolumne County Emergency Operations Plan. A more detailed description of fire protection resources in Tuolumne County is provided in Chapter 4.14, Public Services, Parks, and Recreation, of this Draft EIR.

4.17.2 STANDARDS OF SIGNIFICANCE

If located in or near State Responsibility Areas or lands classified as very high fire hazard severity zones, the proposed project would result in significant wildfire impacts if it would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

[29] Tuolumne County, 2018, Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, page 69.

4.17.3 IMPACT DISCUSSION

The standards of significance listed in Section 4.17.2 above apply to projects that are within or near lands within the SRA or lands that are within a VHFHSZ. As shown in Figure 4.17-2, the project site is within an SRA and a VHFHSZ. Therefore, the standards of significance in Section 4.17.2 apply to the proposed project.

Table 4.17-2 provides a list of project features that would be implemented to reduce the risk of wildfire ignition, damage from wildfires, and harm to residents and visitors. Table 4.17-2 compares the proposed project features to the existing wildfire regulatory framework.

TABLE 4.17-2 PROJECT WILDFIRE RISK REDUCTION FEATURES

Project Feature	Regulatory Requirements Met	Optional Design Feature
Construction		
Wide separations between buildings to prevent structure to structure ignitions.	PRC Section 4290; General Plan Implementation Program 9.E.g	
Wide separations between buildings to provide easy access by emergency responders.	PRC Section 4290; General Plan Implementation Program 9.E.b	
All exterior building materials are proposed to be constructed to comply with the most recent wildland-urban interface building code. ▪ Ignition-resistant ▪ Non-combustible materials ▪ Non-impregnatable vents ▪ Double-paned windows with one pane of tempered glass	CBC Chapter 7A; General Plan Policy 17.A.6, Policy 17.E.3	
An underground basement designed and constructed to be a refuge place for guests and employees to stay for a short period of time during wildfires or other disasters, when early evacuation is not possible. Enough space, an air filtering system, and positive ventilation to support the people harbored in the project, reducing traffic on possible evacuation routes.	General Plan Goal 9G, Policy 9.G.3, Goal 9H, Policy 9.H.2, Goal 17A	Yes
Vegetation Management		
Incorporation of a Vegetation Management Plan into landscaping documents that integrates the needs for wildland fire safety.	CFC; PRC Section 4290, PRC Section 4291; CCR Title 14 Section 1254; General Plan Policy 9.E.3, Implementation Program 17.A.e, Implementation Program 17.E.c, Policy 17.E.8	
The landscape would be designed and maintained in compliance with the Vegetation Management Plan.	CFC; PCR Section 4290, PRC Section 4291; CCR Title 14 Section 1254; General Plan Policy 9.E.3, Policy 17.E.2, Policy 17.E.3, Policy 17.E.8, Implementation Program 17.E.t	

TABLE 4.17-2 PROJECT WILDFIRE RISK REDUCTION FEATURES

Project Feature	Regulatory Requirements Met	Optional Design Feature
The Vegetation Management Plan would be reviewed and approved by the Tuolumne County Fire Prevention Bureau.	General Plan Implementation Program 9.E.f, Implementation Program 17.E.d, Implementation Program 17.E.f	
Landscaping would be irrigated using the greywater system.	General Plan Policy 17.E.3	Yes
Fire Prevention		
Smoking would be permitted only in a designated smoking area.		Yes
No smoking and no littering signs would be posted in throughout the entire project site.		Yes
Barbecues during times of high fire danger would be prohibited.		Yes
Guests and personnel would be educated on fire-safe behaviors.		Yes
Trash cans would be provided throughout the property to reduce litter, and the ground would be cleaned by staff frequently.		Yes
Fire pits would be located in public areas and would be operated and maintained by hotel staff only.		Yes
During construction a fire prevention plan would be implemented to reduce the chance of ignition. This plan would prescribe the equipment, training and behaviors of the construction team. All equipment with motors would comply with California Public Resources Code (PRC) Section 4442.	CBC; CFC; PRC Section 4442; Tuolumne County MJHMP Goal 5; General Plan Goal 17A, Policy 17.A.6	
Communication and Alerts		
A communication plan would be established to ensure receipt and notification of vital incident information. Equipment necessary to implement the communication plan would be acquired. These are likely to include radios, cell phone towers or boosters, satellite phones, and/or other equipment.	General Plan Policy 9.G.2	Yes
Weather stations would be installed and monitored.	General Plan Policy 17.E.3, Policy 9.G.2	Yes
Protocols for alerts would be established so that personnel on-site would be notified when high fire danger exists.	General Plan Policy 9.G.2	Yes
Training		
Appropriate employees would be trained as first-response emergency responders, with trained staff on duty at all times.		Yes
Key engineering staff would complete certificate programs at the California Regional Fire Academy. The courses would include technical training relating to wildland fires, fire prevention, fire department apparatus, tools and equipment, breathing apparatus, extinguishers, hazardous materials, communication and emergency medical treatment.		Yes
Periodic regular fire safety drills would be performed. These would encompass evacuation and shelter-in-place options.		Yes
The expectation is that the guests and employees would remain on-site in the event that a wildland fire nears the project.	General Plan Goal 9G, Policy 9.G.3, Goal 9H, Policy 9.H.2, Goal 17A	Yes

TABLE 4.17-2 PROJECT WILDFIRE RISK REDUCTION FEATURES

Project Feature	Regulatory Requirements Met	Optional Design Feature
Guests would be educated on the need for and use of emergency alerts in the county and on-site.		Yes
Evacuation		
Based on monitoring of both weather conditions and nearby incidents, guests would be notified to evacuate early to minimize peak traffic on Highway 120 in the event of an incident that requires evacuation.	Tuolumne County EOP; Tuolumne County MJHMP; General Plan Goal 9G	Yes
Pre-fire evacuation plans would identify triggers for evacuation in terms of proximity of wildfires, and winds. Early response is a function of awareness and communication with fire departments. This implies weather, scanners, and monitoring with agreed-upon set trigger points.	Tuolumne County EOP; Tuolumne County MJHMP	Yes
Access		
The project proposes direct access to Highway 120 for fire service.	PRC Section 4290; General Plan Implementation Program 9.E.b, Implementation Program 17.E.e	
Two driveways from Sawmill Mountain Road are proposed, each with different destinations and routes; one an ingress and egress to access the public market, and one an ingress and egress to access the reception area and lodging.	PRC Section 4290; Tuolumne County Ordinance Code Chapter 11.12; General Plan Implementation Program 9.E.b, Implementation Program 17.E.e	
One looped roadway would provide emergency access around the cabin guestroom buildings and throughout the entire site.	PRC Section 4290; General Plan Implementation Program 9.E.b, Implementation Program 17.E.e	
All roadways are designed to comply with California PRC 4290 and Tuolumne County Ordinance Code Chapter 11.12 to allow full access for emergency vehicles, with slopes flatter than 12 percent, a radius larger than 40 feet, and a width no less than 20 feet (without parking).	PRC Section 4290; Tuolumne County Ordinance Code Chapter 11.12; General Plan Implementation Program 9.E.b, Implementation Program 17.E.e	
Implementation and Maintenance		
The proponents of the project would commit implementation and maintenance of the measures in a Wildfire Protection Plan.	Tuolumne County Community Wildfire Protection Plan	Yes

TABLE 4.17-2 PROJECT WILDFIRE RISK REDUCTION FEATURES

Project Feature	Regulatory Requirements Met	Optional Design Feature
Wildfire Response and Support		
The project proposes construction in compliance with the National Fire Protection Association's fire protection system and would include fire sprinkler and standpipe systems.[30]	CBC; CFC; General Plan Policy 9.E.3, Implementation Program 9.E.g, Policy 9.G.2, Policy 9.H.2, Policy 17.E.3, Implementation Program 17.E.d; Tuolumne County Code of Ordinance Title 15	
Suppression systems and site hydrants for fire protection would be provided using a combination of reclaimed, treated greywater, and potable water storage.	CBC; CFC; PRC Section 4290; General Plan Policy 9.E.3, Implementation Program 9.E.g, Policy 9.G.2, Policy 9.H.2, Policy 17.E.3, Implementation Program 17.E.d; Tuolumne County Code of Ordinance Title 15	
Water supply would be provided by a storage system and augmented with wildland fire hoses.	CBC; CFC; PRC Section 4290; General Plan Policy 9.G.2, Policy 9.H.2, Policy 17.E.3, Implementation Program 17.E.d; Tuolumne County Code of Ordinance Title 15	
An emergency helipad would be located on the western side of Sawmill Mountain Road, within the western project site parcel. The helipad would be used for emergency services only and would be available for use to the entire community.	General Plan Policy 17.E.3, Implementation Program 17.E.d	Yes

Notes: CBC = California Building Code; CFC = California Fire Code; CCR = California Code of Regulations; EOP = Emergency Operations Plan; MJHMP = Multi-Jurisdictional Hazard Mitigation Plan; PRC = Public Resources Code
Source: PlaceWorks, 2020.

WF-1 The project would be located in a State Responsibility Area, but it would not substantially impair an adopted emergency response plan or emergency evacuation plan.

The proposed project would create a significant impact if it would substantially impair an emergency response plan or emergency evacuation plan.

[30] National Fire Prevention Association (NFPA) 13 Standard for the Installation Sprinkler Systems (2016 Edition); NFPA 22 Standard for Water Tanks for Private Fire Protection (2013 Edition); NFPA 24 Standard for the Installation of Private Service Mains (2016 Edition).

Impact discussion HAZ-6 in Chapter 4.9, Hazards and Hazardous Materials, of this Draft EIR evaluates whether the proposed project would impair implementation of or physically interfere with an emergency response plan or emergency evacuation plan. If evacuations are needed, guests would be notified early to minimize peak traffic on Highway 120 in the event of an incident that requires evacuation. The expectation is that the guests and employees would remain on-site in the event of a wildfire or other disaster when early evacuation is not possible. The proposed project would include the installation of weather stations, which would be monitored for both weather conditions and nearby wildfires.

Emergency response issues are addressed by the TCFD in coordination with Tuolumne County Office of Emergency Services and CAL FIRE, which require adequate access roads and building markings to facilitate emergency response.[31,32] The proposed project would use two driveways connected to Sawmill Mountain Road as the primary access road for guests and employees of the lodge. One looped roadway would provide emergency access around the cabins and throughout the entire site, which would be designed to comply with California Public Resource Code 4290 and Tuolumne County Ordinance Code Chapter 11.12, Basic Road Design and Construction Standards. Consistent with the California Fire Code and Tuolumne County Code of Ordinances Title 15, the internal roadway system would allow full access for emergency vehicles, with slopes flatter than 12 percent, a radius larger than 40 feet, and a width no less than 20 feet (without parking).

In addition, the proposed project would create a new access road on the southeast portion of the project site, connecting to Highway 120, specifically dedicated to fire access, as shown on Figure 3-12. Emergency responders with four-wheel drive capacity would be able to utilize the fire access road on the project site. Additionally, pursuant to Implementation Program 9.E.b of the Tuolumne County General Plan, the proposed project would be required to provide access roads that allow for safe and efficient response by emergency apparatuses and the safe evacuation of residents in the event of a fire. Furthermore, the proposed project includes an emergency helicopter landing zone on the northwestern portion of the project site, north of Sawmill Mountain Road, which would serve the project and community for emergency uses. As there are no other helipads in the immediate vicinity of the project, this feature would be beneficial as it would provide improved emergency helicopter access in comparison to existing conditions. Furthermore, construction of the project would not impair implementation of the Tuolumne County Emergency Operations Plan. Construction staging would be located on-site and would not block Highway 120 or Sawmill Mountain Road. As discussed above, and in impact discussion HAZ-6 in Chapter 4.9, Hazards and Hazardous Materials, there would be a *less-than-significant* impact to emergency response or evacuation.

Significance without Mitigation: Less than significant.

[31] Public Resources Code Section 4290.

[32] Tuolumne County, 2018, Tuolumne County General Plan: Volume 1: General Plan Policy Document. https://www.tuolumnecounty.ca.gov/DocumentCenter/View/11752/Vol-I-Goals-Policies-Policies-Final.

WF-2	**The project would be located in a State Responsibility and could, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to, pollutant concentrations from, a wildfire or the uncontrolled spread of a wildfire.**

Slope

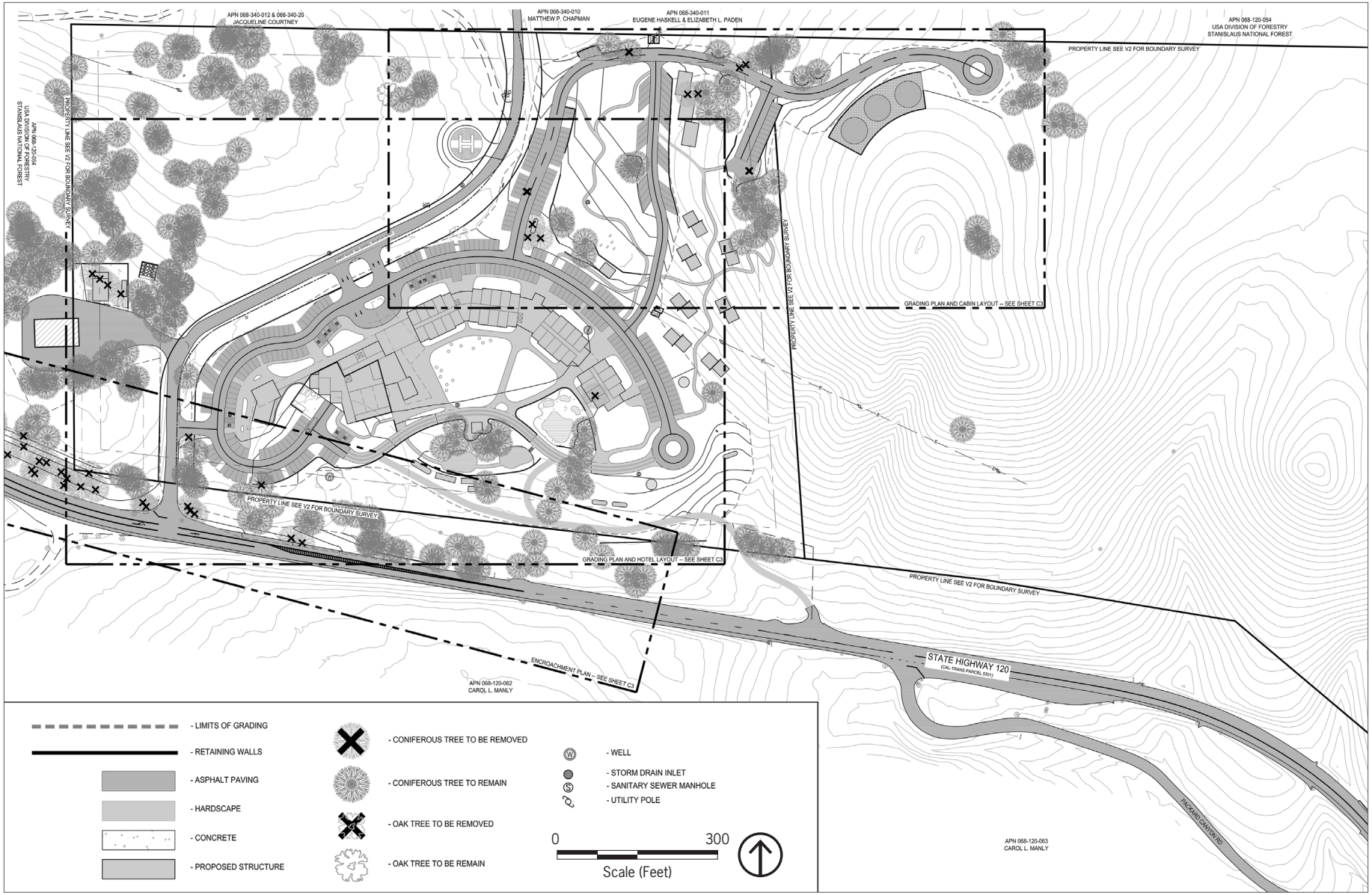
Grading activities would occur during site preparation for the development of the hotel, cabins, employee housing, outdoor recreational facilities, parking areas, and on-site roadways and pedestrian paths. On-site roadways and parking lots would require site grading and site preparation to ensure adequate drainage and compaction for access and parking. Similarly, grading and site preparation would be necessary for the emergency helicopter landing zone, maintenance facility, tank pad, and fire access road. Mass grading for the buildings, roads, and parking would include approximately 11.5 acres (18 percent) of the project site.

The project site is gently to moderately sloped, and the development of project facilities–including parking lots, the hotel, cabins and employee housing, roads, and water tanks–would require grading that would create new slopes within the project site. However, these new slopes would not create hazardous conditions on-site. Grading activities would be primarily located on the western (gently sloped) parcel, with additional grading for the water tanks along the northwestern corner of the eastern (moderately sloped) parcel, as shown in Figure 4.17-5. Additionally, the proposed project would include the installation of retaining walls adjacent to and downslope from grading, to reduce the impact of cut and fill slopes, reduce tree removal, and minimize the grading footprint of the project. As described above, the proposed hotel, cabins, and employee housing is designed and located to minimize the need for extensive grading, as building sites are primarily located on the less hilly slopes of the project site.

Prevailing Winds

As stated above, the proposed project would not change prevailing winds. However, wildfires and fire-related air pollution hazards that could be exacerbated by the proposed project could be spread by prevailing winds. Figure 4.17-2 shows that the project site is within an SRA and designated as being within the VHFHSZ. Of particular concern would be an on-site wildfire that could occur during the dry season and spread due to prevailing winds toward the surrounding forested land.

Section 4.17.1.1 describes plans, policies, regulations, and procedures that address wildfire risks. The Tuolumne County Community Wildfire Protection Plan, MJHMP, Tuolumne County General Plan policies, and Tuolumne County Code of Ordinances would reduce wildfire hazards to structures, wildlife, and/or residents and visitors. The fire regulations, in addition to the construction fire prevention plan and site design of the proposed project, would further reduce the risk of wildfire.



Source: avrp Skyport, 2019. Land & Structure, 2019.

Figure 4.17-5
Grading Plan

Furthermore, recognition of the growing threat that wildfire smoke poses to public health and safety has resulted in a response led by the United States Forest Service and enhanced through partnership with many other agencies, such as the National Park Service. The Wildland Fire Air Quality Response Program was created to directly assess, communicate, and address risks posed by wildfire smoke to the public as well as fire personnel. The program depends on four primary components: specially trained personnel called Air Resource Advisors, air quality monitoring, smoke concentration and dispersion modeling, and coordination and cooperation with agency partners. Air Resource Advisors are technical specialists that are trained to work on smoke issues from wildland fire. They are deployed nationwide during large smoke events. Air Resource Advisors are dispatched to an incident to assist with understanding and predicting smoke impacts on the public and fire personnel. They analyze, summarize, and communicate these impacts to incident teams, air quality regulators, and the public.[33]

Vegetation

The primary vegetation type on the project site is conifer forest, composed of montane hardwood-conifer, ponderosa pine, and sierra mixed conifer. Conifer forest fires are easily ignited during late summer and fall when natural vegetation is extremely flammable due to hot and dry conditions. Wildfire is a serious hazard in undeveloped areas and sites with extensive areas of unirrigated vegetation.

Although the project site is largely composed of conifer forests, the proposed project would introduce management activities on the project site that would reduce wildfire hazards from on-site vegetation characteristics. As discussed in Chapter 3, Project Description, of this Draft EIR, the proposed project would develop a Vegetation Management Plan that would, in part, address irrigated landscaping, a greywater system, and additional defenses against wildland fires. The undeveloped areas of the project site and defensible space zone would be designed and maintained in compliance with the Vegetation Management Plan.

Additionally, the proposed project would be required to comply with vegetation regulations in the California Fire Code, PRC Section 4291, CCR Title 14 Sections 1250 *et seq*., Tuolumne County General Plan policies, and Tuolumne County Code of Ordinances. Furthermore, the Tuolumne County MJHMP includes hazard mitigation strategies to initiate fuel thinning, chipping projects, and collaboration with property owners to utilize prescribed burns to reduce wildfire risks.

Prevailing regulatory requirements and policies, in addition to proposed project design features would minimize the exposure of people to a significant risk of loss, injury, or death due to slope, prevailing winds and vegetation. However, due to the location of the proposed project in a forested area, historic fires in the region, and the fact that the proposed project would bring people and vehicles to a site within a fire-prone area, the proposed project may have the potential to exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The project's proposed features (listed in Table 4.17-2) would reduce potential wildfire hazards. However, the

[33] US Forest Service, 2018, Wildland Fire Air Quality Response Program, United States Department of Agriculture, https://www.wildlandfiresmoke.net/, accessed October 22, 2019.

planting placement, density, and species on the project's landscaping plans are not consistent with these proposed wildfire hazard reduction features. Therefore, the impact would be *significant*.

Significance without Mitigation: Significant.

Impact WF-2: The project includes several project features that would address and reduce wildfire hazards. However, project landscaping plans are not consistent with these measures. Therefore, the project has the potential to, due to the increase of people and vehicles on the project site, exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of wildfire.

Mitigation Measure WF-2: Prior to issuance of building permits, the applicant shall submit a Wildland Fire Prevention Plan and Vegetation Management Plan to the Tuolumne County Fire Prevention Bureau for review and approval. The project site plan and landscaping documents shall be revised to conform to the Vegetation Management Plan. These revisions shall include, but are not limited to, the following measures:

- The perimeter of all structures shall be surrounded by a 5-foot non-combustible zone.
- Project landscaping shall be fire resistant, with a planting palette consisting of native hardwoods and other fire-resistant native vegetation.
- Landscape plantings shall be installed in a way that strategically staggers placement and planting heights to provide effective screening of the proposed project from adjacent roadways.
- Areas within 200 feet of all structures shall be managed as defensible space (in compliance with the California Fire Code and Public Resources Code Section 4291, with vegetative fuels that would produce 2-foot or shorter flames.
- The entire project site, including open all undeveloped areas, shall be managed as fire-resistant landscaping that adheres to CAL FIRE's firescaping requirements, with widely spaced trees and shrubs.
- Any new plantings in the undeveloped areas of the site shall include a greater proportion of oaks.
- Undeveloped areas of the project site shall be managed so that they do not grow back in as high a density as existed before the 2013 Rim Fire. Brush and grass in these areas shall be maintained and managed so that continuous groupings do not exceed 120 square feet in area.

Significance with Mitigation: Less than significant.

WF-3	**The project would be located in a State Responsibility Area and would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) but would not exacerbate fire risk or result in temporary or ongoing impacts to the environment.**

WILDFIRE

The project would result in a significant impact if it would involve the installation or maintenance of infrastructure that has the potential to exacerbate wildfire risks (such as roads, power lines, and gas lines) or if it would involve the installation or maintenance of risk-reduction infrastructure (such as fuel breaks or emergency water sources), that could create an impact to the environment.

Development of the proposed project would result in new paved roads, pedestrian paths, and parking areas. Paved areas create an opportunity for vehicles to create accidental wildfires, since dragging chains, dragging vehicle parts, worn brakes, and exposed wheel rims have the potential to create sparks on the roadway. On-site roadways and pedestrian paths, whether paved or unpaved, could also lead to wildfires as they would provide people access throughout the project site. Human activities are the leading cause of wildfire, with the three most common types of human-caused wildfires being debris burning, arson, and equipment use. During construction, a fire prevention plan would be required and implemented to reduce the risk of fuel ignition. The fire prevention plan would prescribe the equipment, training, and behaviors of the construction team. All equipment with motors would comply with PRC Section 4442, which would be enforced through the implementation of the fire prevention plan during construction, as stated in Table 4.17-2. PRC Section 4442 requires internal combustion engines that use hydrocarbon fuels, like those used in construction, to be equipped with a spark arrester when used on forest-covered land, brush-covered land, and grass-covered land. Additionally, the proposed project would provide a training program for both employees and guests, to prevent wildfires and prepare for emergencies. Employees would be trained as first responders and periodic fire safety drills would be performed for both evacuations and sheltering in place.

On-site landscaping and maintenance activities would involve equipment use that could pose an accidental fire hazard. To reduce wildfire hazards, smoking would be prohibited in all rooms and public areas; smoking would be permitted only in a designated smoking area. Trash cans would be provided throughout the property to reduce litter, and the grounds would be cleaned by staff frequently. Fire pits would be located in public areas and would be operated and maintained by hotel staff only.

Development of the proposed project would also require the installation of new electrical connections. Power lines could ignite wildfires if overhead lines fall down and come into contact with vegetation. However, the proposed project would include undergrounding the existing transmission line that crosses the project site from Sawmill Mountain Road eastward to the property line between the two project parcels. Local distribution lines throughout the project would be located underground. Transformers would be located at appropriate locations based on future PG&E design requirements. Operation and maintenance of overhead powerlines would be required to comply with fire safety regulations pertaining to electric utilities including CCR Title 14 Sections 1250 *et seq*., which provide requirements for vegetation clearance around poles, towers, and wires; and CPUC fire safety regulations, which provide requirements for wire-to-wire clearances, vegetation clearances, inspections of overhead distribution facilities, and preparation of a fire prevention plan.

The proposed project would also include the installation of new propane lines and tanks on-site. The propane tanks would be installed in the vicinity of the workshop and Caltrans storage building directly to the west of the site (accessed through an on-site easement). The location is out of sight and approximately 25 feet away from storage area to the east, and approximately 130 feet away from the Forest Road 1S03, which is considered a safe distance pursuant to California Fire Code Chapter 61 Section

6107, Table 6104.3, Location of LP-Gas Containers. The storage volumes would be based on demand and refueling frequencies, but it is estimated to include multiple tanks in a storage area of approximately 900 square feet. The propane gas transmission line would be located underground and would connect from the storage area to the lodge at the event space and meeting rooms on the southeast portion of the project site. The buildings would use propane gas for heating and indoor cooking facilities. As described in Chapter 4.17, Utilities and Service Systems, of this Draft EIR, propane tanks would be managed by the property owner and refilled by a private propane gas company. The propane tanks would be located between 100 and 200 feet away from any buildings and the placement and operation of the propane tanks would be required to comply with the California Fire Code, Chapter 61, Liquefied Petroleum Gases.

The proposed project would install three potable water tanks on the northeastern portion of the project site, approximately 80 feet above the hotel. Two on-site wells would provide potable water that would be treated and stored in two of the three tanks. Water conveyance pipes would be routed under proposed roads to minimize disturbance of the ground. Fire flow for the buildings would be provided by the potable water storage tanks. The quantity of water storage, pressure of water supply, and maintenance of the storage tanks would be designed to comply with State Responsibility Areas Fire Safe Regulations, California Fire Code, Tuolumne County General Plan policies, and Tuolumne County Code of Ordinances, Chapter 15.20, Fire Safety Standards. Although activities to install water storage tanks could create short-term construction-related environmental effects (e.g., noise, dust, traffic, erosion), the work would be subject to compliance with applicable local and regional regulations and standard conditions for new construction related to water lines.

The undeveloped and landscaped areas of the project site would be designed and maintained in compliance with County-reviewed and-approved Vegetation Management Plan. The proposed project would integrate the needs for wildland fire safety, and the landscape would be irrigated using a greywater system, which would provide an additional defense against wildland fires. Additionally, the proposed project would be required to comply with Tuolumne County General Plan Policy 17.E.8 and Implementation Program 17.E.t, which require property owners to maintain wildlands in a fire resistant manner and remove dead or diseased trees pursuant to California PRC Section 4291. As shown in Figure 3-13, the Landscape Zone will include areas that will be irrigated using the greywater system, which is an additional defense against wildland fire. The potential environmental impacts associated with future construction on the project site, including roadway and trail construction, are evaluated in Chapter 4.3, Air Quality, Chapter 4.8, Greenhouse Gas Emissions, Chapter 4.12, Noise, and Chapter 4.16, Transportation and Traffic, of this Draft EIR.

However, with the implementation of the Vegetation Management Plan and Wildland Fire Protection Plan, in addition to State and local regulations pertaining to fire safety development, the proposed project would not exacerbate wildfire risks and impacts would be *less than significant.*

Significance without Mitigation: Less than significant.

WF-4	**The project would be located in a State Responsibility Area and would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.**

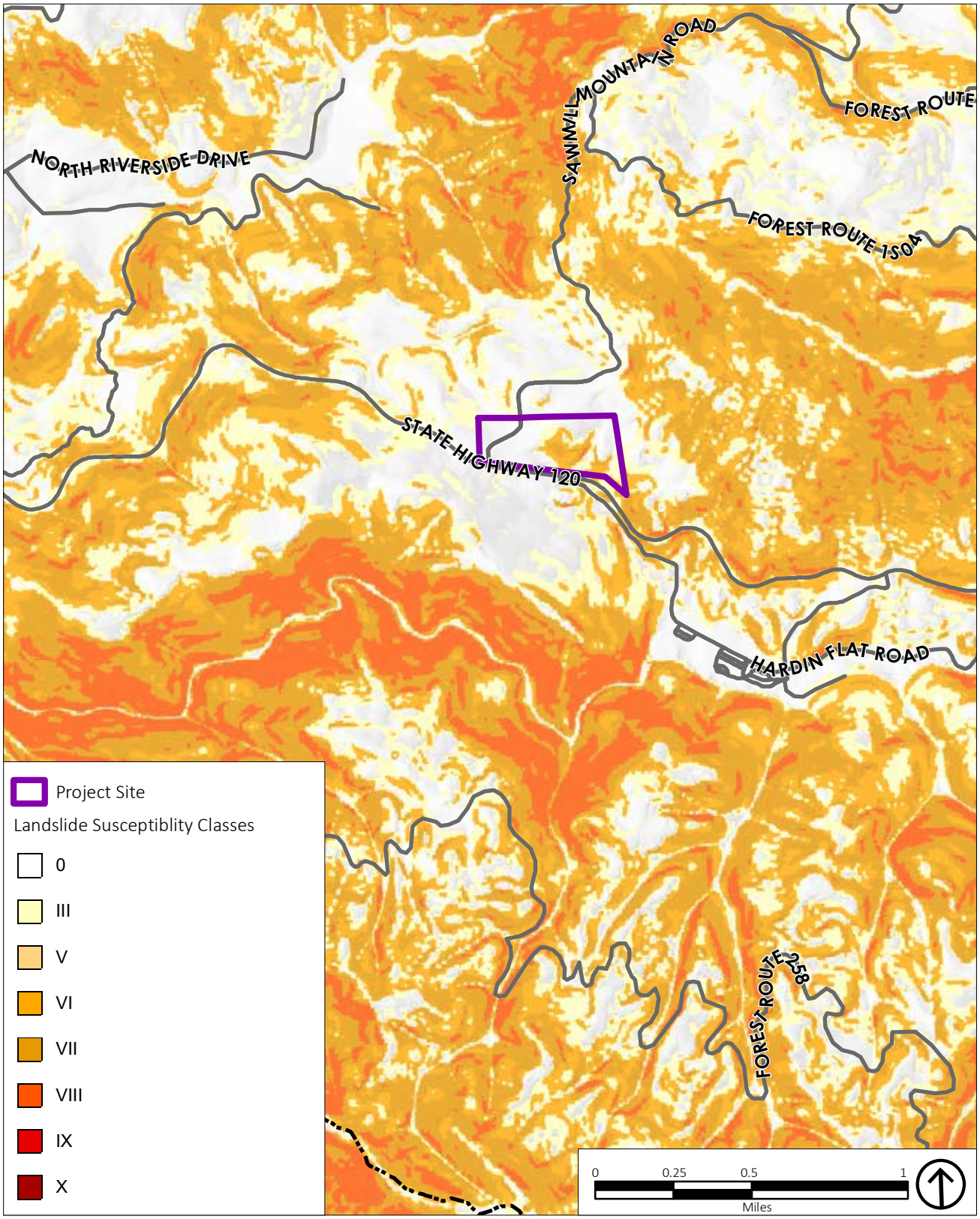
Catastrophic wildfire can create favorable conditions for other hazards, such as flooding and landslides during the rainy season. The proposed project would result in a significant impact if—due to slopes, drainage patterns, or post-fire slope instability—it would expose people or structures to significant risks from landsides, debris flows, or flooding.

As shown in Figure 4.17-6, the project site contains areas susceptible to landslides and debris flows. The project site varies from gently sloped to moderately sloped. Naturally occurring landslides are typically uncommon in Tuolumne County and there have been no significant documented incidents in the recorded past.[34] The 2013 Rim Fire did not result in an increase in landslide hazard areas near or on the project site. As discussed in Chapter 4.7, Geology and Soils, the proposed project would not disturb or develop structures on the eastern (steeper) portion of the site. Any grading permit must have a soil engineering report prepared and submitted to the County according to Section 12.20.160 of the Tuolumne County Grading Ordinance. Therefore, landslide impacts are not expected at the site and would not travel off-site.

As discussed in Chapter 4.10, Hydrology and Water Quality, the project site is not within a 100-year floodplain, is relatively flat, and there are no nearby water bodies or streams or other conditions that would result in flooding at the project site. The topography of the project site and surrounding area causes very little stormwater to run on to the project site. The areas of the project site that drain towards the southern edge of the project boundary would converge at an existing 24-inch culvert that passes under Highway 120. While the proposed project would increase impervious surfaces on-site, the proposed project would also include roof drainage and landscape areas drainage that would direct stormwater to underground detention areas. Additionally, sheet flow from roads and parking areas would be captured in surface drainage swales which would also be directed to detention areas. Drainage swales and detention areas would be landscaped and the proposed project would implement rainwater collection and storage to reduce runoff. The drainage infrastructure would be designed to detain stormwater on-site during storm events and meter the outflow in order to not exceed the capacity of the existing culvert under highway and thereby prevent flooding or slope failures downstream. As concluded in Impact Discussion HYD-3, with the implementation of stormwater control measures, the risk of downslope flooding would be less than significant.

In addition to fire hazard regulations and policies described under impact discussion WF-2, regulations and programs are in place to avoid hazardous conditions from flooding and landslides. Furthermore, the area of development on the project site, as described in impact discussion WF-2, would minimize the creation of new slopes that would exacerbate any potential post-fire slope instability.

[34] County of Tuolumne, 2018, Multi-Jurisdictional Hazard Mitigation Plan for Tuolumne County, page 62.



Source: California Geological Survey Deep Seated Susceptibility, 2019; ESRI, 2019; Toulumne County, 2019; PlaceWorks, 2019.

Figure 4.17-6
Landslide Susceptibility

The purpose of the National Resource Conservation Service's Emergency Watershed Protection program is to undertake emergency measures for runoff retardation and soil erosion prevention to safeguard lives and property from floods and the products of erosion on any watershed whenever a wildfire causes or has caused a sudden impairment of the watershed. Emergency Watershed Protection program funds address erosion-related watershed impairments by supporting activities such as removing debris from stream channels, road culverts, and bridges; reshaping and protecting eroded banks; correcting damaged drainage facilities; repairing levees and structures; and reseeding damaged areas to establish vegetative cover on critically eroding lands.[35]

Furthermore, any structure developed on the project site would be designed and constructed in accordance with the CBC in effect at the time of construction. For example, Section 1803.2 of the current 2016 CBC requires a geotechnical investigation that must assess existing landslide susceptibility on the site. Recommendations of the geotechnical investigation, as they pertain to structural design and construction recommendations for earthwork, grading, slopes, foundations, pavements, and other necessary geologic considerations, must be incorporated into the design and construction of the development.

The primary purpose the wildfire hazard policies, prevailing regulatory requirements, and the National Resource Conservation Service's Emergency Watershed Protection program, is to minimize risks from downslope or downstream flooding or landslides as a result of post-fire slope instability. As such, implementation of these policies and regulatory requirements would ensure impacts from post-fire instability would be *less than significant*.

Significance without Mitigation: Less than significant.

4.17.4 CUMULATIVE IMPACTS

WF-5	**The project would not contribute to significant cumulative wildfire impacts.**

The areas considered for cumulative impacts related to wildfires are Yosemite Under Canvas located to the south of the project site across Highway 120, Thousand Trails/Yosemite Lakes RV Expansion located approximately 1 mile to the southeast of the project site, Berkeley Tuolumne Camp Restoration project located approximately 2.8 miles to the southeast of the project site, and the Mountain Sage Conditional Use Permit project located approximately 14.5 miles to the west of the project site. These projects could subject people and structures to wildfire hazards. As discussed previously, future development under the proposed project would not interfere with implementation of emergency response plans or result in significant wildfire-related impacts, with the implementation of mitigation measures. Potential impacts from the proposed project associated with wildfires would be reduced through proposed design features stated in Table 4.17-2, through compliance with existing local, regional, State, and federal regulations, and

[35] Natural Resources Conservation Service, Disaster Recovery Assistance, https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/?cid=nrcseprd1361073, accessed October 23, 2019.

through the implementation of Mitigation Measure WF-2. Details for the Thousand Trails/Yosemite Lakes RV Expansion project have not been developed so this project's potential effects or contribution to cumulative effects cannot yet be determined with specificity. The Berkeley Tuolumne Camp Restoration project would reconstruct the camp with upgraded facilities reflecting current State code and an updated evacuation plan. The Mountain Sage Conditional Use Permit project would allow for the addition of conditional uses within the site's existing land use designations, and according to the Tuolumne County Planning Commission Agenda Report dated February 19, 2020, has been reviewed by the Tuolumne County Fire Prevention Division for consistency with applicable fire codes, plans, and regulations. As with the proposed project, the Yosemite Under Canvas project would be subject to the same federal, State, and regional regulations, as well as regional safety plans, such as the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan and Tuolumne County Community Wildfire Protection Plan. Cumulative projects would also be required to comply with the requirements of the CBC Chapter 7A, CFC Chapter 49 and Chapter 61, PRC Sections 4291 et seq and Section 4442, and the SRA Fire Safe regulations for projects in the SRA. Furthermore, overhead powerlines would be required to comply with the CCR Title 14 Sections 1250 *et seq.* and CPUC fire safety regulations.

Compliance with regulatory requirements, proactive fire suppression design features, the inclusion of project components that would reduce wildfire risks to employees and guests (see Table 4.17-2), and the implementation of Mitigation Measure WF-2 would reduce the impacts from the proposed project to less than significant. Accordingly, the proposed project would not contribute to a cumulative increase in wildland fire hazards in the immediate vicinity of the project site or throughout the region and the potential for cumulative impacts associated with wildfire hazards would be *less than significant*.

Significance without Mitigation: Less than significant.

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5. Significant and Unavoidable Impacts

Section 15126.2, Consideration and Discussion of Significant Environmental Impacts, of the CEQA Guidelines requires that "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

Chapter 1, Executive Summary, contains Table 1-1, which summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. While actions from the project and mitigation measures, where feasible, would reduce most impacts to less-than-significant levels, the following impacts would remain significant and unavoidable after mitigation measures are applied:

- Impact GHG-1.1: Construction of the proposed project would result in a net increase in GHG [Greenhouse Gas] emissions.
- Impact GHG-1.2: Operation of the proposed project would result in a net increase in GHG emissions.
- Impact NOI-3.1: Noise levels associated with use of the proposed emergency helipad could result in substantial temporary increases in ambient daytime and/or nighttime noise levels at nearby existing sensitive uses.

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6. *Alternatives*

6.1 INTRODUCTION

The following section evaluates whether there may be feasible alternatives to the project that could avoid or substantially lessen any of the significant effects identified in this Draft EIR. Section 15126.6, Consideration and Discussion of Alternatives to the Project, of the California Environmental Quality Act (CEQA) Guidelines states that:

> An EIR shall describe a range of reasonable alternatives to the project, or 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 reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which 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.

A "No Project" Alternative is required as part of a "reasonable range of alternatives."

6.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

As described above, apart from the No Project Alternative, other alternatives chosen as part of the reasonable range of alternatives should be chosen based upon their ability to feasibly attain most of the basic objectives of the project and avoid or lessen the project's significant impacts. The project would result in three significant and unavoidable impacts. No feasible mitigation measures would reduce these impacts to a less-than-significant level:

- Impact GHG-1.1: Construction of the proposed project would result in a net increase in GHG [Greenhouse Gas] emissions.
- Impact GHG-1.2: Operation of the proposed project would result in a net increase in GHG emissions.
- Impact NOI-3.1: Noise levels associated with use of the proposed emergency helipad could result in substantial temporary increases in ambient daytime and/or nighttime noise levels at nearby existing sensitive uses.

6.3 OVERVIEW OF PROJECT ALTERNATIVES

This chapter evaluates three alternatives, including the No Project Alternative.

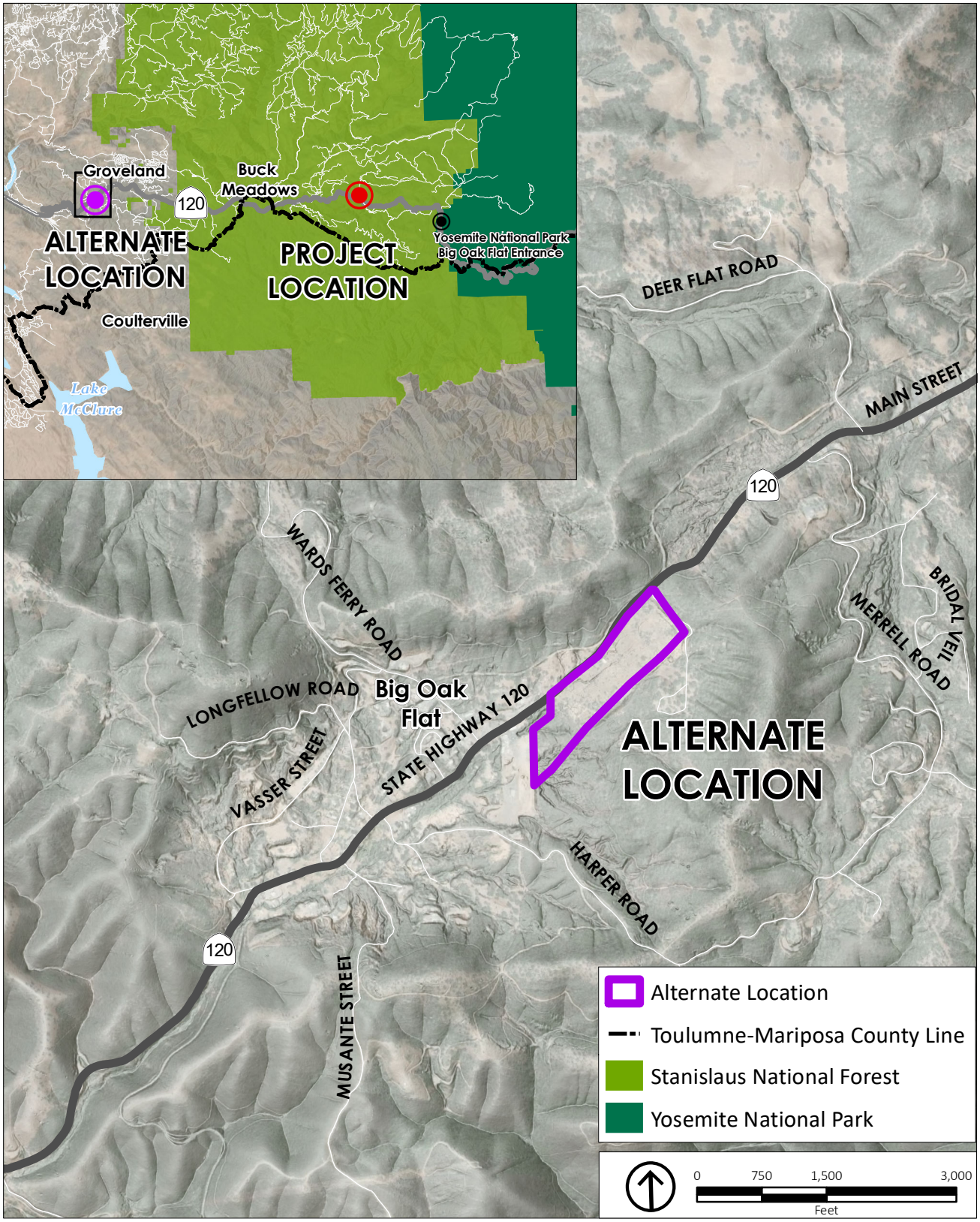
- No Project Alternative. Under the No Project Alternative, the proposed project would not be developed, and conditions on-site would remain as they are. No new development or site improvements associated with the proposed project would occur. The site would remain undeveloped.
- Alternate Location Alternative. The Alternative Location Alternative is intended to reduce impacts to public services by relocating the project closer to the nearby town of Groveland. Under the Alternate Location Alternative, the project would be located in Big Oak Flat on an area of land commonly known as "the scar" property (see Figure 6-1). The site consists of nine parcels that total roughly 30 acres, located just southwest of Groveland along the south side of Highway 120. Under this alternative, the development program would remain roughly the same as under the proposed project–that is, as a 100-room hotel with 26 cabin rooms, on-site housing for 20 employees plus two manager's suites, a small retail component, and day-use parking stalls. The project would include some on-site walking paths and outdoor amenities, but would not include as much on-site open space and undeveloped land as the proposed project, due to the reduced site acreage. In addition, this alternative would not include an emergency helipad.
- Reduced Footprint Alternative. This alternative would reduce the development footprint and overall size of the project. The size of the main lodge building would be the same as under the proposed project, but the employee apartments and guest cabins rooms located on the northeast section of the developed area would not be constructed. This would reduce the developed area by 5 acres. The main lodge would include 10 employee suites, resulting in a reduction of 10 guest rooms for a total of 90. This alternative assumes that the project would accommodate up to 360 guests, compared to 400 guests, and 35 staff, compared to 40, with 10 staff living on-site, compared to 22. The reduced footprint alternative would provide the same recreational amenities, public market, and other guest amenities as under the proposed project. It would also include the proposed YARTS stop. Access to the project would be the same as the proposed project, including the main access off Sawmill Mountain Road, the emergency fire access road from Highway 120, and the on-site cul-de-sac near the proposed water tanks. This alternative would not include the proposed emergency helipad.

Table 6-1 compares the impact of each alternative to impacts of the project. See the impact assessment in Section 6.5 for details on the conclusions summarized in Table 6-1.

TABLE 6-1 COMPARISON OF PROJECT ALTERNATIVES

Topic	No Project Alternative	Alternate Location Alternative	Reduced Footprint Alternative
Aesthetics	–	0	0
Air Quality	–	0	–
Biological Resources	–	0	–
Cultural and Tribal Cultural Resources	–	0	0
Energy	–	0	–
Forestry Resources	0	0	0
Geology and Soils	0	0	0
Greenhouse Gas Emissions	– –	0	0
Hazards and Hazardous Materials	0	0	0
Hydrology and Water Quality	–	0	–
Land Use and Planning	0	0	0
Noise	– –	– –	– –
Population and Housing	0	0	0
Public Services, Parks, and Recreation	–	–	0
Transportation	–	0	–
Utilities and Service Systems	–	–	–
Wildfire	0	0	+

Note:
++ Indicates that the alternative's impacts are substantially greater when compared to the project
\+ Indicates that the alternative's impacts are slightly greater when compared to the project
0 Indicates that the alternative's impacts are similar to the project
– Indicates that the alternative's impacts are slightly lessened when compared to the project.
– – Indicates that the alternative's impacts are substantially lessened compared to the project and would avoid a significant and unavoidable impact of the project.
Source: PlaceWorks, 2020.



Source: ESRI, 2019; National Park Service, 2019; Toulumne County, 2019; PlaceWorks, 2019.

Figure 6-1
Alternate Location

6.4 ALTERNATIVES CONSIDERED BUT REJECTED

Section 15126.6(c) of the CEQA Guidelines requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. Section 15126.6(c) provides that among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

- Reoriented Project Layout. The County considered an alternative under which the project site plan would be redesigned to position the lodge on the eastern portion of the project site, to provide a greater buffer between the proposed project and the residential properties to the north of the project site. This alternative was determined to be infeasible due to the site terrain. The eastern site area contains two knolls; in order to move the development footprint into the eastern portion of the project, substantial earthwork would be required to accommodate the lodge and guest buildings. In addition, this alternative would require a rezoning to change the Open Space Zoning. In addition, portions of this area are identified as culturally sensitive. Lastly, because the project site does not extend to Highway 120, access to the site would still need to be via Sawmill Mountain Road, or through a new easement on Caltrans property. Therefore, because this alternative was determined to have greater impacts from grading and excavation, would require a zone change, is within a culturally sensitive area, and poses site access issues, it was not selected for inclusion in the alternatives analysis.
- Alternative Site Access. The County considered an alternative under which the primary access point for the project would be located along Highway 120, rather than Sawmill Mountain Road. The environmental analysis in this Draft EIR does not identify any significant impacts associated with the location of the project's proposed access point. Therefore, such an alternative would not avoid any significant environmental impacts.
- Relocated Leach Field. The County considered an alternative under which the leach fields for the project would be relocated to the eastern portion of the project site, rather than the northwestern corner of the site. The environmental analysis in this Draft EIR does not identify any significant impacts associated with the location of the project's leach fields. Therefore, such an alternative would not avoid any significant environmental impacts.
- Alternative Water Source. The County considered an alternative under which the project would use imported water as its water source, rather than groundwater pumped from on-site wells. The environmental analysis in this Draft EIR does not identify any significant impacts associated with the project's proposed use of on-site groundwater wells. Therefore, such an alternative would not avoid any significant environmental impacts.
- Alternate Locations. Members of the public suggested several alternate sites within the county as potential locations for a relocated project. The following locations were considered but rejected for the reasons below:
  - Smith Station Road. The County considered an alternative that would relocate the proposed project to the property at the southeast corner of the intersection of Smith Station Road and

Highway 120. An active conditional use permit has been issued for this site that would allow cabins. As an active permit for a different type of project is pending on this site, this site was rejected as a suitable alternate site for the proposed project.

- Casa Loma. The County considered an alternative that would relocate the proposed project to a property near La Casa Loma River Store in Groveland. However, the site itself would be located in Buck Meadows in Mariposa County, roughly 8 miles west of the proposed project site. Because this location is outside of Tuolumne County, it is outside of its jurisdiction. Therefore, this alternative was rejected from further consideration.

6.5 IMPACT ASSESSMENT

6.5.1 NO PROJECT ALTERNATIVE

As noted above, CEQA Guidelines Section 15126.6(e) requires that an EIR analyze a "No Project" alternative. Under the No Project Alternative, the project would not be developed. Conditions on-site would remain as they are, which is currently undeveloped aside from on-site wells, utility easements, and an easement to access an adjacent Caltrans storage garage. There would be no intersection improvements, helipad, infrastructure, or other project-related developments. Since the site is zoned C-K for Commercial Recreation, it is possible the site would be developed under a different project consistent with this zoning in the future and subject to market conditions. For the purpose of this analysis, this section assumes no development on the project site.

6.5.1.1 AESTHETICS

As discussed in Chapter 4.1, Aesthetics, the proposed project would not have a substantial adverse effect on a scenic vista, substantially degrade the view from a scenic highway, or degrade the existing visual character or quality of public views of the site and its surroundings. The proposed project does include the installation of photovoltaic panels to generate solar energy, and because the location and materials for the panels is not yet known, the panels have the potential to become sources of glare resulting in a significant-but-mitigable impact.

Under the No Project Alternative, there would not be a change in the aesthetic characteristics of the site. Neither the proposed project nor the No Project Alternative would block scenic vistas, degrade views from a scenic highway, or degrade the visual quality of the project area. However, because the No Project Alternative would not introduce solar panels or other objects with the potential to create new sources of glare, this alternative would avoid the project's significant-but-mitigable impact. Therefore, this alternative would result in *slightly lessened* impacts to aesthetics when compared to the proposed project.

6.5.1.2 AIR QUALITY

As discussed in Chapter 4.2, Air Quality, the proposed project would result in less-than-significant impacts regarding air quality.

Under the No Project Alternative, the proposed project would remain undeveloped and therefore no construction or operational air emissions would be generated on-site. Therefore, there would be no impacts to air quality from the project site. While impacts for the proposed project would be less than significant, the project would still produce emissions due to project construction and operation and vehicular travel to and from the project site. Therefore, the No Project Alternative results in *slightly lessened* impacts when compared to the proposed project.

6.5.1.3 BIOLOGICAL RESOURCES

As discussed in Chapter 4-3, Biological Resources, the proposed project would result in significant-but-mitigable impacts to special-status wildlife and plant species, potential waters of the United States (U.S.), and trees. In addition, the proposed project would result in significant-but-mitigable impacts associated with wildlife movement, the spread of invasive plant species, and native mule deer.

Under the No Project Alternative, no construction activities would occur on-site that would have the potential to affect on-site special-status plant or wildlife species or spread invasive plants, and no potential waters of the U.S. would be affected by construction. In addition, no new development and activity would occur on the site that could affect mule deer and other wildlife movement. Therefore, this alternative would avoid the project's significant-but-mitigable impacts to biological resources and therefore impacts would be *slightly lessened* when compared to the proposed project.

6.5.1.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

As discussed in Chapter 4.4, Cultural and Tribal Cultural Resources, the proposed project would result in significant-but-mitigable impacts to cultural resources, since construction could affect previously unknown historical resources, archeological resources, and human remains. The proposed project would also result in significant-but-mitigable impacts to tribal cultural resources (TCRs) by disturbing previously unknown tribal cultural resources during construction and by developing a site that contains native plants and a knoll that are meaningful to local tribal representatives.

Under the No Project Alternative, no ground-disturbing activities would occur that would have the potential to uncover previously unknown cultural resources or TCRs or disturb on-site features that are meaningful to local tribal representatives. Therefore, the No Project Alternative would avoid the project's significant-but-mitigable impacts and therefore impacts to cultural resources and TCRs would be *slightly lessened* when compared to the project.

6.5.1.5 ENERGY

As discussed in Chapter 4.5, Energy, the proposed project would result in less-than-significant impacts energy impacts. The project would still use energy for construction and operation, but it would not be in a wasteful, inefficient, or unnecessary manner, and would not conflict with a State or local plan for renewable energy or energy efficiency.

The project site is currently undeveloped with the exception of on-site wells. Under the No Project Alternative, the project site would continue to result in minimal, if any, energy use related to this minor

infrastructure. Neither the proposed project nor the No Project Alternative would result in significant impacts, however, given that the proposed project would consume more energy during construction and operation, this alternative would result in *slightly lessened* energy impacts when compared to the proposed project.

6.5.1.6 FORESTRY RESOURCES

As discussed in Chapter 4.6, Forestry Resources, the proposed project would have no impact on zoning of forestland or timberland, or conversion of forestland to non-forest use. It would have less-than-significant impacts regarding the loss of forest land or conversion of forest land to non-forest land.

As under the proposed project, under the No Project Alternative the project site would remain undeveloped and would not result in changes to zoning or the loss of forest land or conversion of forest land to non-forest land. Therefore, impacts under this alternative for forestry resources would be *similar* to the proposed project.

6.5.1.7 GEOLOGY AND SOILS

As discussed in Chapter 4.7, Geology and Soils, the proposed project would not result in any significant impacts to geology and soils.

Under the No Project Alternative, the site would remain undeveloped and unchanged. It would not include any actions that would disturb geology and soils on- or off site. Thus, the No Project Alternative would result in *similar* impacts to geology and soils in comparison with the proposed project.

6.5.1.8 GREENHOUSE GAS EMISSIONS

As discussed in Chapter 4.8, Greenhouse Gas Emissions, construction and operation of the proposed project would result in a net increase in greenhouse gas (GHG) emissions. These impacts would be significant and unavoidable.

Under the No Project Alternative, the project site would not be developed, and would therefore not utilize equipment or vehicles, result in increased energy consumption, or include other activities that would result in a net increase in GHG emissions. Therefore, under this alternative, the significant and unavoidable impacts of the proposed project pertaining to GHG emissions would be avoided and impacts would be *substantially lessened* in comparison with the proposed project.

6.5.1.9 HAZARDS AND HAZARDOUS MATERIALS

As discussed in Chapter 4.9, Hazards and Hazardous Materials, the proposed project would result in a significant-but-mitigable impact associated with potential safety hazards related to the proposed helipad. The project would result in no impacts regarding handling of hazardous materials within 0.25-mile of a school and being located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. All other impacts would be less than significant.

Due to the project site's location, like the proposed project, the No Project Alternative would have no impact associated with proximity to a school or location on a hazardous materials site. Like the proposed project, the No Project Alternative would not result in significant impacts associated with the handling or use of hazardous materials, as hazardous materials would not be used on-site. This alternative would not include the helipad and would therefore not have the potential to result in associated hazards. However, as the proposed emergency helipad would provide a new emergency response and evacuation facility in this area of the county, the No Project Alternative would not include a beneficial feature of the project. Therefore, impacts under this alternative regarding hazards and hazardous materials would be *similar* when compared with those from the proposed project.

6.5.1.10 HYDROLOGY AND WATER QUALITY

As discussed in Chapter 4.10, Hydrology and Water Quality, the proposed project may increase post-project runoff, thus violating water quality standards. It would also result in an increase in impervious surfaces and post-project stormwater volumes which could exceed pre-project development volumes thus requiring construction of new facilities. These would result in significant-but-mitigable impacts. Due to the project site location, the proposed project would have no impact due to flooding. All other impacts would be less than significant.

The No Project Alternative would not result in the addition of impervious surfaces or a change in existing stormwater runoff and water quality conditions. Under this alternative, the project would remain undeveloped, and would therefore not have the potential to result in any construction-related significant impacts to hydrology and water quality. Therefore, this alternative would avoid the project's significant-but-mitigable impacts. Due to the project site's location, like the proposed project, the No Project Alternative would have no impact associated with flooding. Unlike the proposed project, this alternative would not include the use of any groundwater from the project site's on-site wells. Overall, this alternative would have *slightly lessened* impacts than the proposed project.

6.5.1.11 LAND USE AND PLANNING

As discussed in Chapter 4.11, Land Use and Planning, the proposed project would result in less-than-significant impacts to land use and planning. It would not physically divide an established community, or conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Under the No Project Alternative, the project site's existing, undeveloped land use would not change. Therefore, this alternative would not conflict with any land use plan, policy, or regulation. It would also not result in physical division of an established community. Neither the proposed project nor the No Project Alternative would result in significant land use impacts; therefore, impacts would be *similar* to those of the proposed project.

6.5.1.12 NOISE

As discussed in Chapter 4.12, Noise, the proposed project would result in significant-but-mitigable impacts associated with the project maintenance yard and combined on-site operational noise. In addition, the

project helipad would result in a substantial, but sporadic increase in aircraft noise in excess of standards established in the Tuolumne County General Plan, which would be a significant and unavoidable impact to existing sensitive uses and a significant-but-mitigable impact to proposed sensitive uses. The proposed project's traffic noise and construction noise and vibration impacts would be less than significant.

Under the No Project Alternative, the project would not change existing conditions on-site and no construction activities would occur. In addition, the proposed helipad would not be developed. Therefore, this alternative would avoid the project's significant and unavoidable impact and noise impacts would be *substantially lessened* when compared to the proposed project.

6.5.1.13 POPULATION AND HOUSING

As discussed in Chapter 4.13, Population and Housing, the proposed project would result in a less-than-significant impact associated with growth inducement. The project would not displace existing people or housing, necessitating the construction of replacement housing elsewhere.

Under the No Project Alternative, the project site would remain undeveloped, and population and housing on the project site and within the county would remain unaffected. The proposed project is expected to result in 40 full-time jobs, the potential indirect effects of which are analyzed in Chapter 4.13, Population and Housing. These jobs would not be created under the No Project Alternative. Neither the proposed project nor the No Project Alternative would significantly impact population and housing; therefore, impacts would be *similar* when compared to the proposed project.

6.5.1.14 PUBLIC SERVICES, PARKS, AND RECREATION

As discussed in Chapter 4.14, Public Services, Parks, and Recreation, the proposed project would result in significant-but-mitigable impacts associated with increased demands for fire protection and police services to the project site. The project would not have any impacts related to schools and would have less-than-significant impacts related to library, parks, and recreation services.

Under the No Project Alternative, no visitors or employees would be introduced to the project site, and no new development would be created that would require fire and police services. Therefore, this alternative would not add to the demand for fire protection and police services in the county, or generate demands for any other public services. However, the No Project Alternative would not include the proposed emergency helipad, which is a beneficial feature that would provide a new emergency response and evacuation facility in this area of the county. Nevertheless, because this alternative would entirely avoid the project's project-level and cumulative significant-but-mitigable impacts, overall impacts would be *slightly lessened* when compared to the proposed project.

6.5.1.15 TRANSPORTATION

As discussed in Chapter 4.15, Transportation, the proposed project would result in significant-but-mitigable impacts from the potential to generate YARTS transit ridership in excess of available capacity during peak usage period, from construction that would temporarily disrupt background traffic flow, and from conflict with site distance requirements in relation to Sawmill Mountain Road.

Under the No Project Alternative, the project would not generate any change or increase in traffic and transportation usage in the area as conditions on-site would not change. Therefore, this alternative would avoid the project's significant-but-mitigable impacts; and impacts to transportation under this alternative would be *slightly lessened* when compared to the proposed project.

6.5.1.16 UTILITIES AND SERVICE SYSTEMS

As discussed in Chapter 4.16, Utilities and Service Systems, the proposed project would result in a significant-but-mitigable impact associated with post-project runoff and creation of new stormwater drainage facilities. All other impacts to utilities and service systems would be less than significant.

The No Project Alternative would not require the use of utilities and service systems and would not require changes to existing utilities and service systems. Additionally, it would not increase post-project runoff or require new stormwater drainage facilities, as the site would remain unchanged. Therefore, this alternative would avoid the project's significant-but-mitigable impact and impacts to utilities and service systems under this alternative would be *slightly lessened* when compared to the proposed project.

6.5.1.17 WILDFIRE

As discussed in Chapter 4.17, Wildfire, the proposed project would result in a significant-but-mitigable impact regarding wildfire where, due to the increase of people and vehicles on the project site from construction and operation of the proposed project, the project has the potential to exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of wildfire.

Under the No Project Alternative, the project site as is would not change. There would not be an increase of people and vehicles to the project site that could exacerbate wildfire hazards in the project area. However, the No Project Alternative would not include the proposed emergency helipad, which is a beneficial feature that would aid in wildfire response in this area of the county. Therefore, although the No Project Alternative would avoid the project's significant-but-mitigable impact, overall impacts would be *similar* when compared to the proposed project.

6.5.2 ALTERNATE LOCATION ALTERNATIVE

Under the Alternate Location Alternative, the proposed project would be developed on a site in Big Oak Flat. The alternate site is commonly referred to as "the scar" and is located on the south side of Highway 120 between Big Oak Flat and Groveland. The project applicant does not own this alternate site, and the feasibility of acquiring it is unknown. This alternate location is approximately 18 driving miles west of the proposed project site. The alternate site is comprised of nine parcels under the same owner that total roughly 30 acres in size, compared to 64 acres for the proposed project (12.9 of which are proposed for development). These parcels are assessor's parcel numbers (APNs) 066-140-014, 066-140-015, 066-140-016, 066-140-017, 066-140-018, 066-140-019,066-140-022, 066-140-031, and 066-140-032. While the proposed project is within the C-K (Commercial Recreation) and O (Open Space) zoning districts and Parks and Recreation (R/P) General Plan land use designation, the alternate site is within the C-1 zoning district and General Commercial (GC) and Public (P) General Plan land use designations. Unlike the project site,

the alternate site falls within the Groveland Community Services District (GCSD), which provides water, sewer, fire, and park services.

Under this alternative, the project would be developed with roughly the same development program, including a 100-room hotel, 26 cabinrooms, on-site housing for 20 employees plus two manager's suites, and a small retail component. It is assumed a project on the alternate site would have some walking paths, outdoor amenities, and gathering areas, but due to the smaller parcel size, the project's large open space areas and corresponding trail network would not be included.

To avoid the project's significant and unavoidable noise impact, this alternative would not include a helipad.

Like the proposed project, under this alternative, a YARTS stop and day-use parking stalls would be provided on-site to allow people to park and either carpool or ride the bus to Yosemite National Park.

6.5.2.1 AESTHETICS

As described in Section 6.5.1.1, the proposed project would result in less-than-significant aesthetics impacts, with the exception of a significant-but-mitigable impact associated with potential glare effects from proposed photovoltaic panels to generate solar energy.

In comparison to the proposed project site, the alternative site is located in a more populated area of the county, in a town setting. The alternate site does not provide the same far-field mountain views that the proposed project site provides.

Under the Alternate Location Alternative, much of the project characteristics would remain the same, but the project would be relocated to a different property, which is also currently vacant but contains remnant structures from previous uses. The design and layout of the project would need to be modified to be compatible with the alternative site layout, however it is assumed that the overall design concept (e.g. building style and materials) would remain the same. Solar panels would still be incorporated introducing a potential source of glare, and therefore impacts to aesthetics under this alternative would be *similar* to the proposed project.

6.5.2.2 AIR QUALITY

As described in Section 6.5.1.2, the proposed project would result in less than significant impacts regarding air quality.

Under the Alternate Location Alternative, the project would have roughly the same components as the proposed project but would be relocated to a site closer to the communities of Big Oak Flat and Groveland. The alternate site is located closer to in-town amenities but farther from Yosemite National Park; it is assumed that overall vehicle trips would be roughly equivalent to the proposed project. Therefore, traffic-related air emissions would also be roughly equivalent to those of the proposed project. Like the proposed project, this alternative would be built on a currently undeveloped site, and would have a similar development program; therefore, construction emissions would be similar to those of the

proposed project. Overall, impacts to air quality from this alternative would be *similar* to the proposed project.

6.5.2.3 BIOLOGICAL RESOURCES

As described in Section 6.5.1.3, the proposed project would result in significant-but-mitigable impacts associated with special-status wildlife and plant species, potential waters of the U.S., trees, wildlife movement, the spread of invasive species, and native mule deer.

The alternate site is located within a more developed area of the county than the proposed project site. A detailed site-specific evaluation would be required to determine the precise biological resource impacts associated with developing the alternate site. However, it is presumed that, due to its currently vacant state and extensive on-site vegetation, development on the alternate site could result in similar significant-but-mitigable impacts as the proposed project, such as impacts to wildlife movement and potential on-site special-status plant and animal species. Therefore, it is assumed that impacts to biological resources would be *similar* to those of the proposed project.

6.5.2.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

As described in Section 6.5.1.4, the proposed project would result in significant-but-mitigable impacts to cultural resources and TCRs.

Tribal consultation would be required to determine whether this alternative would create any site-specific impacts to TCRs. However, under the Alternate Location Alternative, the project would be developed on a property that is, like the proposed project site, currently vacant and largely undeveloped. As under the proposed project, the potential exists under this alternative for previously unknown cultural resources, TCRs, or human remains to be found during construction activities. Therefore, impacts to cultural resources and TCRs are considered to be *similar* to the proposed project under the Alternate Location Alternative.

6.5.2.5 ENERGY

As described in Section 6.5.1.5, the proposed project would result in additional energy use related to construction and operation, though it would result in less-than-significant impacts regarding energy.

Under the Alternate Location Alternative, the project would be composed of roughly the same components as the proposed project. Since the project would still be located in the same region and be roughly the same building size as the proposed project, it is assumed that the project would generate a similar amount of energy from construction and operation. The alternate site is located closer to in-town amenities but farther from the Yosemite National Park destination; it is assumed that overall vehicle trips would be roughly equivalent to the proposed project, and therefore transportation-related energy would be similar. Therefore, impacts related to energy under this alternative would be *similar* to the proposed project.

6.5.2.6 FORESTRY RESOURCES

As described in Section 6.5.1.6, the proposed project would result in no impacts related to zoning of forestland or timberland, or conversion of forestland to non-forest use, and less-than-significant impacts regarding the loss of forest land or conversion of forest to non-forest land.

Like the proposed project, the Alternate Location Alternative would be located on a site that is not zoned for forestry and timber. As under the proposed project, this alternative would not result in conversion of forestland to non-forest land. Therefore, this alternative would result in *similar* impacts regarding forestry compared to the proposed project.

6.5.2.7 GEOLOGY AND SOILS

As described in Section 6.5.1.7, the proposed project would result in less-than-significant impacts to geology and soils.

The California Geological Survey has not evaluated the area under this alternative for liquefaction or landslides, and it is not in a designated earthquake zone of required investigation.[1] Further geotechnical investigation would assist in identifying site-specific soil information. Based on its location within the same region as the project, and mapped hazards from the California Department of Conservation, it is assumed that this alternative would result in *similar* impacts to the proposed project.

6.5.2.8 GREENHOUSE GAS EMISSIONS

As described in Section 6.5.1.8, construction and operation of the proposed project would result in a net increase in GHG emissions, which would be significant and unavoidable impacts.

Under the Alternative Location Alternative, most project features would be developed, and therefore GHG emissions from construction and operation would be similar as under the project. The number of anticipated employees and visitors served by the project would not be changed. The alternate site is located closer to in-town amenities but farther from Yosemite National Park; it is assumed that overall vehicle trips would be roughly equivalent to the proposed project. Therefore, traffic-related GHG emissions would be roughly equivalent to those of the proposed project. As the location of the project would not change the GHG emissions-generating features, such as energy consumption, vehicular traffic from visitors, or emissions generated from construction, this alternative would result in *similar* impacts to GHG emissions.

6.5.2.9 HAZARDS AND HAZARDOUS MATERIALS

As described in Section 6.5.1.9, the proposed project would result in a significant-but-mitigable hazards related to the helipad.

[1] California Department of Conservation. Earthquake Zones of Required Investigation. https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed March 4, 2020.

Under the Alternate Location Alternative, the project would result in construction of a similar project as the proposed project and would therefore involve the use and handling of similar materials. The alternate site is not listed as a hazardous materials site on the GeoTracker (maintained by the State Water Resources Control Board), EnviroStor (maintained by the Department of Toxic Substances Control), or EnviroMapper (maintained by the United States Environmental Protection Agency) online databases. Like the proposed project site, the alternative site is not located within an airport land use plan or within 2 miles of a public airport or public use airport. This alternative would not include the helipad and would therefore not have the potential to result in associated hazards. However, as the proposed emergency helipad would provide a new emergency response and evacuation facility in this area of the county, the Alternate Location Alternative would not include a beneficial feature of the project. Therefore, overall, impacts under this alternative regarding hazards and hazardous materials would be *similar* in comparison to those of the proposed project.

6.5.2.10 HYDROLOGY AND WATER QUALITY

As described in Section 6.5.1.10, the proposed project would result in significant-but-mitigable impacts regarding hydrology and water quality where it would increase post-project runoff and violate water quality standards and increase impervious surfaces and post-project stormwater volumes which could exceed pre-project development volumes, requiring the expansion or construction of stormwater facilities.

Under the Alternate Location Alternative, the project would result in construction on a currently vacant area of land and would be designed to accommodate the same amount of people as the proposed project. Like the proposed project, this would still result in an increase of impervious surfaces in comparison to existing conditions, and post-project stormwater volumes could exceed pre-project volumes resulting in the potential need for expanded stormwater facilities, as well as potentially violate water quality standards. Unlike the proposed project, this alternative would utilize water provided by GCSD, instead of water pumped from on-site wells. However, the proposed project would not create any impacts associated with groundwater usage. Therefore, impacts under this alternative would be *similar* to the proposed project.

6.5.2.11 LAND USE AND PLANNING

As described in Section 6.5.1.11, the proposed project would result in less-than-significant impacts to land use and planning.

Similar to the proposed project, under this alternative, the project would not construct major roadways or physical barriers off-site that would divide an established community. The alternative location contains nine parcels, which would need to be combined as a precursor to development, and it is unknown whether or how quickly this could happen. The alternative location zoned C-1; the project would comply with uses allowed under the C-1 Zoning District. Overall, the project would involve a similar development program as the proposed project, and it is therefore assumed that the alternative would not conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts under this alternative would be *similar* to those of the proposed project.

6.5.2.12 NOISE

As described in Section 6.5.1.12, the proposed project would result in significant-but-mitigable impacts associated with maintenance yard noise and combined on-site operational noise. In addition, the project helipad would result in a significant and unavoidable noise impact to existing sensitive uses and a significant-but-mitigable impact to proposed sensitive uses. The proposed project's traffic noise and construction noise and vibration impacts would be less than significant.

Under the Alternate Location Alternative, the project components would remain primarily the same, but relocated to a different location. The project would also be developed on a vacant site. Construction and operation activities would remain similar to those of the proposed project. As such, noise levels and types of noise generation would largely remain unchanged. However, noise and traffic studies specific to this project location would need to be conducted to determine if noise generation from the proposed project would be compatible with surrounding land uses. Currently, there are no homes adjacent to the site, though several nearby parcels are zoned to allow for residential uses. This alternative would not include a helipad, so impacts related to aircraft noise from this would not be created. While further evaluation would be necessary to more adequately estimate noise impacts from the project at this specific location, based on the exclusion of the helipad for which the proposed project has a significant and unavoidable impact, it is assumed that noise impacts would be *substantially lessened* in comparison with the proposed project.

6.5.2.13 POPULATION AND HOUSING

As described in Section 6.5.1.13, the proposed project would result in less-than-significant impacts to population and housing, as it would provide a relatively low amount of jobs compared to the County's expected growth projections and would not displace existing people or housing.

Under the Alternate Location Alternative, the project would result in the same amount of jobs. The alternate project location is, similar to the proposed project location, currently undeveloped. Thus, the project here would also not result in displacement of existing people or housing. Therefore, the Alternate Location Alternative would result in *similar* impacts to Population and Housing as the proposed project.

6.5.2.14 PUBLIC SERVICES, PARKS, AND RECREATION

As described in Section 6.5.1.14, the proposed project would result in significant-but-mitigable impacts to fire protection and police services.

Under the Alternate Location Alternative, while the project would be relocated, the number of visitors and employees relating to the project site would remain the same. The project would still be a lodge geared towards recreation and would be developed on currently undeveloped property. As such, there would still be no impacts to school, and impacts to library, parks, and recreation services would remain less than significant. As the project would add increased people to the area, it would still increase the need for fire protection and police services. However, at this alternative location, the project would be located within the GCSD service area, closer to existing stations. This would result in faster response times for emergency personnel to arrive on-site, as opposed to the estimated 22-minute response time for

emergency personnel to reach the project at the proposed project site, which is outside of the GCSD service area. However, the Alternate Location Alternative would not include the proposed emergency helipad, which is a beneficial feature that would provide a new emergency response and evacuation facility in this area of the county. Overall, because this alternative would avoid or reduce the project's significant-but-mitigable impacts to fire and police services; therefore, the project's impacts to public services would be *slightly lessened* when compared to the proposed project.

6.5.2.15 TRANSPORTATION

As described in Section 6.5.1.15, the proposed project would result in significant-but-mitigable impacts from the potential to generate YARTS transit ridership in excess of available capacity during peak usage period, from construction that would temporarily disrupt background traffic flow, and from conflict with site distance requirements in relation to Sawmill Mountain Road.

Under the Alternate Location Alternative, the project would serve the same number of visitors as the proposed project, relocated to a different location along Highway 120. It is possible that the alternate site's location further from Yosemite National Park would affect the site's ability to attract users of the on-site day-use parking spaces, which are intended to reduce single-use vehicle traffic to the park and increase transit ridership and carpooling. However, similar to the proposed project, this alternative would have the potential to generate transit ridership in excess of available capacity on the YARTS line during the peak usage period.

Like the proposed project, this alternative would result in construction automobile and truck traffic accessing the site from Highway 120. It is uncertain if roadway improvements or lane closures would be required, but it is a possibility that construction of the project directly accessed from Highway 120 may result in temporary traffic disruptions. Furthermore, as the project would serve and employ the same number of people as under the proposed project, it would generate a similar amount of VMT in the area. Therefore, impacts to transportation under this alternative would be *similar* to those of the proposed project.

6.5.2.16 UTILITIES AND SERVICE SYSTEMS

As described in Section 6.5.1.16, the proposed project would result in a significant-but-mitigable impact associated with post-project runoff and creation of new stormwater drainage facilities.

Site-specific study of the alternate site would need to be conducted to ensure adequate water supply and pressure, and adequate capacity for wastewater treatment, however these issues could be addressed through payment of service impact fees in addition to the ongoing property tax assessments. Unlike the proposed project, this alternative would utilize water provided by GCSD, instead of water pumped from on-site wells. The GCSD obtains all of its water from the San Francisco Public Utilities Commission's Hetch Hetchy Reservoir, which originates from snowmelt in the High Sierra.[2] It is assumed that this alternative would include rainwater collection and grey water systems for irrigation, like the proposed project.

[2] Groveland Community Services District, 2020. Water. https://www.gcsd.org/water, accessed April 1, 2020.

This alternative would utilize sewer utilities provided by GCSD, instead of an on-site septic system. The GCSD's wastewater treatment system provides collection for approximately 1,500 residents of Groveland and Big Oak Flat communities, and includes 16 sewage lift stations, 35 miles of gravity mains, seven miles of force mains, a recycled water treatment plant, two surface storage reservoirs, and approximately 15 acres of spray fields.[3]

Under this alternative, the project would incorporate the same features for solid waste disposal as the proposed project, including a recycling and composting program and efforts to minimize or eliminate waste. As the amount of people serve and employed by the project would remain the same, the solid waste generation from the project is assumed to remain the same. In addition, the electrical service demands and energy conservation efforts would also remain the same.

The proposed project would result in a significant-but-mitigable impact due to an increase post-project runoff and the need for new stormwater drainage facilities. Similarly, construction of the project at the alternate location on largely undeveloped land would increase post-project runoff and result in construction of new stormwater drainage facilities or expansion of existing facilities.

Overall, with water and sewer services provided through the GSD, as opposed to stand-alone "package" systems for the proposed project, impacts to utilities and service systems are considered *slightly lessened* under this alternative to those of the proposed project.

6.5.2.17 WILDFIRE

As described in Section 6.5.1.17, the proposed project results in a significant-but-mitigable impact regarding wildfire where, due to the increase of people and vehicles on the project site from construction and operation of the proposed project, the project has the potential to exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of wildfire.

Similar to the proposed project site, under the Alternate Location Alternative, the project would still be located in a Very High Fire Hazard Severity Zone. Unlike the proposed project, the Alternate Site Alternative would not include the proposed emergency helipad, which is a beneficial feature that would aid in wildfire response. In general, this alterative would include most of the same building features as would be used as part of the proposed project that would reduce wildfire risks to visitors. These are summarized in Table 4.17-1 in Chapter 4.17, Wildfire, and include features such as construction of exterior building materials in compliance with wildland-urban interface building code, implementation of a vegetation management plan, restrictions on activities such as barbecues and smoking, and implementation of communication and fire prevention plans. In addition, it is assumed that this alternative would be required to incorporate the design features described under Mitigation Measure WF-2 involving compliance of landscape plans with a vegetation management plan to further reduce wildfire hazards.

[3] Groveland Community Services District, 2020. Wastewater. https://www.gcsd.org/wastewater, accessed April 1, 2020.

Overall, this alternative would have *similar* impacts relating to wildfire in comparison with the proposed project.

6.5.3 REDUCED FOOTPRINT ALTERNATIVE

Under this alternative, the project would be redesigned to reduce the development footprint and overall size of the project. The employee apartments and guest cabins located on the northeast section of the developed area would not be constructed and these areas would be left in their existing condition. Removing these two development areas would reduce the area of development by 5 acres. The size of the main lodge building size would be the same as under the proposed project, but the employee apartments and guest cabins rooms located on the northeast section of the developed area would not be constructed. This would reduce the developed area by 5 acres. The main lodge would include 10 employee suites, resulting in a reduction of 10 guest rooms for a total of 90. This alternative assumes that the project would accommodate up to 360 guests, compared to 400 guests, and 35 staff, compared to 40, with 10 staff living on-site, compared to 22. The main lodge would provide the same facilities as under the proposed project, including recreational facilities, a public market, and other guest amenities.

Access to the site would be provided by the same two entrances off of Sawmill Mountain Road as under the proposed project. It is estimated that the Reduced Footprint Alternative would generate approximately 170 fewer net new daily trips than the proposed project, which is an approximately 15 percent reduction in net new trips.[4] The alternative would include the YARTS stop included in the proposed project. This alternative would not include the proposed emergency helipad, but it would include the fire access road off of Highway 120 that is included in the proposed project.

Water storage tanks would be included in the same location as under the proposed project and would be accessed by the internal roadway planned along the northern portion of the project site, including the proposed cul-de-sac. This alternative would include the maintenance yard on the west side of Sawmill Mountain Road. All other areas of the project site would remain undeveloped, with the exception of the septic, well, and propane facilities included in the proposed project.

The landscaping plan would be the same as under the proposed project, with the exception that the employee housing and cabin areas would be left in their existing, undeveloped state.

6.5.3.1 AESTHETICS

As described in Sections 6.5.1.1 and 6.5.2.1, the proposed project would result in less-than-significant aesthetics impacts, with the exception of a significant-but-mitigable impact associated with potential glare effects from proposed photovoltaic panels to generate solar energy.

Under the Reduced Footprint Alternative, much of the project characteristics would remain the same but the project would not include the 5 acres of development in the northeast section of the proposed

[4] Based on trip generation estimates prepared by KD Anderson & Associates, Inc. The proposed project would generate 1,127 net new daily trips (see Table 7 in the Transportation Impact Analysis in Appendix K of this Draft EIR), whereas the Reduced Footprint Alternative is estimated to generate 958 net new daily trips.

developed area with employee apartments and guest cabins. Under this alternative, these areas of the project site would remain in their existing condition. As shown in Figures 4.1-7a through 4.1-7c in Chapter 4.1, Aesthetics, the employee apartments and guest cabins would be visible from Sawmill Mountain Road after construction, but after 5 years of growth would be largely concealed by project landscaping. Therefore, the removal of these development areas would not largely change the overall aesthetics of the project, as the main lodge would be the same size as under the proposed project. This alternative would still introduce solar panels on the roof of the hotel lodge that would present a potentially significant-but-mitigable impacts as with the proposed project. Therefore, impacts to aesthetics under this alternative would be *similar* to those of the proposed project.

6.5.3.2 AIR QUALITY

As described in Sections 6.5.1.2 and 6.5.2.2, the proposed project would result in less-than-significant impacts regarding air quality.

Under the Reduced Footprint Alternative, the project would have fewer employees and serve fewer guests. Fewer buildings would be constructed with the removal of the employee apartments and guest cabins, and with a reduced trip generation, there would be fewer vehicles traveling to and from the project site. Neither the proposed project nor the Reduced Footprint Alternative would result in significant air quality impacts, but this alternative would reduce air emissions during construction and operation. Therefore, impacts to air quality from this alternative would be *slightly lessened* than those from the proposed project.

6.5.3.3 BIOLOGICAL RESOURCES

As described in Sections 6.5.1.3 and 6.5.2.3, the proposed project would result in significant-but-mitigable impacts associated with special-status wildlife and plant species, potential waters of the U.S., trees, wildlife movement, the spread of invasive species, and native mule deer.

Under the Reduced Footprint Alternative, the developed area of the project site would be reduced by 5 acres and these acres would be left in their existing condition. However, as discussed in detail in Chapter 4.3, Biological Resources, the habitat for special-status wildlife and plant species extends a range larger than that of the project site which may still be affected by development on the rest of the project site. Therefore, this alternative would not avoid any of the project's significant biological resource impacts. Nonetheless, as the area of site disturbance would be reduced, impacts to biological resources under this alternative would be *slightly lessened* under this alternative.

6.5.3.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

As described in Sections 6.5.1.4 and 6.5.2.4, the proposed project would result in significant-but-mitigable impacts to cultural resources and TCRs. These impacts result from the potential to uncover cultural and TCRs during ground disturbing activities. While the Reduced Footprint Alternative would result in 5 fewer developed acres than under the proposed project, the same potential for significant-but-mitigable impacts regarding cultural and TCRs during project construction exists. It is assumed that this alternative would include the same mitigation measures required for the proposed project, including the

establishment of an on-site cultural open space area and other measures to reduce potential impacts to TCRs. Overall, impacts to cultural resources and TCRs under this alternative would be *similar* when compared to those under the proposed project.

6.5.3.5 ENERGY

As described in Sections 6.5.1.5 and 6.5.2.5, the proposed project would result in additional energy use related to construction and operation, though it would result in less-than-significant impacts regarding energy.

Under the Reduced Footprint Alternative, the project would include less building space than that of the proposed project. This would result in less energy required for construction and operation, as well as reduced vehicle trips from reduced numbers of employees and guests. Energy sources and efficiency measures, for example the use of green building techniques and solar panels, would remain the same as with the proposed project, but would serve a smaller building footprint. Neither the proposed project nor the Reduced Footprint Alternative would result in significant energy impacts, but this alternative would reduce energy usage during construction and operation. Therefore, impacts related to energy under this alternative would be *slightly lessened* than those under the proposed project.

6.5.3.6 FORESTRY RESOURCES

As described in Sections 6.5.1.6 and 6.5.2.6, the proposed project would result in no impacts related to zoning of forestland or timberland, or conversion of forestland to non-forest use, and less-than-significant impacts regarding the loss of forest land or conversion of forest to non-forest land.

The Reduced Footprint Alternative would be located on the same site as the proposed project, which is not zoned for forestry and timber. As under the proposed project, this alternative would not result in conversion of forestland to non-forest land. Therefore, neither the proposed project nor the Reduced Footprint Alternative would result in significant impacts and this alternative would result in *similar* impacts regarding forestry compared to the proposed project.

6.5.3.7 GEOLOGY AND SOILS

As described in Sections 6.5.1.7 and 6.5.2.7, the proposed project would result in less-than-significant impacts regarding geology and soils.

The project site location would remain the same under the Reduced Footprint Alternative. Therefore, while there would be reduction in the building footprint of the project, potential risks from development related to geology and soils that encompass the whole of the project site due to site-specific soil type and lithology that would remain the same. Therefore, neither the proposed project nor the Reduced Footprint Alternative would result in significant impacts and impacts related to geology and soils under this alternative would be *similar* to those under the proposed project.

6.5.3.8 GREENHOUSE GAS EMISSIONS

As described in Sections 6.5.1.8 and 6.5.2.8, construction and operation of the proposed project would result in a net increase in GHG emissions, resulting in significant and unavoidable impacts.

Under the Reduced Footprint Alternative, most of project features would remain the same, resulting in a net increase in GHG emissions from the development of a lodge and amenities on currently undeveloped land. However, the employee apartments, guest cabins, and emergency helipad would not be included. Therefore, GHG emissions from construction would be reduced by the reduction in the area to be developed. In addition, since the number of anticipated employees and visitors would be reduced, energy consumption from project operation and traffic-related GHG emissions would also be reduced, however the increase in GHG emissions would still exceed the no-net-increase threshold , resulting in *similar* impacts to the proposed project.

6.5.3.9 HAZARDS AND HAZARDOUS MATERIALS

As described in Sections 6.5.1.9 and 6.5.2.9, the proposed project would result in a significant-but-mitigable hazards related to the helipad.

Under the Reduced Footprint Alternative, the project would result in construction of a similar project as the proposed project and would therefore involve the use and handling of similar materials. This alternative would not include the helipad and would therefore not have the potential to result in associated hazards. However, as the proposed emergency helipad would provide a new emergency response and evacuation facility in this area of the county, the Alternate Location Alternative would not include a beneficial feature of the project. As such, overall impacts under this alternative regarding hazards and hazardous materials would be *similar* in comparison to those of the proposed project.

6.5.3.10 HYDROLOGY AND WATER QUALITY

As described in Sections 6.5.1.10 and 6.5.2.10, the proposed project would result in significant-but-mitigable impacts regarding hydrology and water quality where it would increase post-project runoff and violate water quality standards and increase impervious surfaces and post-project stormwater volumes which could exceed pre-project development volumes, requiring the expansion or construction of stormwater facilities.

Under the Reduced Footprint Alternative, the developed area of the project would be reduced by 5 acres. This would result in a decrease in the area of impervious surfaces compared to the proposed project. This could still exceed pre-project volumes resulting in the potential need for expanded stormwater facilities, as well as potentially violate water quality standards. However, this could result in less post-project stormwater volumes than the proposed project. Therefore, impacts to hydrology and water quality under this alternative would be *slightly lessened* in comparison to the proposed project.

6.5.3.11 LAND USE AND PLANNING

As described in Sections 6.5.1.11 and 6.5.2.11, the proposed project would result in less-than-significant impacts to land use and planning.

As with the proposed project, the project under this alternative would still not construct major roadways or physical barriers off-site that would divide an established community. Most of the project components would remain the same, but development would be reduced by 5 acres and the emergency helipad would not be incorporated. There would be no other changes to the project's overall land use, and therefore it would still not conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts under this alternative would be *similar* to those of the proposed project.

6.5.3.12 NOISE

As described in Sections 6.5.1.12 and 6.5.2.12, the proposed project would result in significant-but-mitigable impacts associated with maintenance yard noise and combined on-site operational noise; the project helipad would result in a significant and unavoidable noise impact to existing sensitive uses and a significant-but-mitigable impact to proposed sensitive uses; and the proposed project's traffic noise and construction noise and vibration impacts would be less than significant.

Under the Reduced Footprint Alternative, day-to-day construction and operation activities would largely remain similar to those of the proposed project, however there would not be noise generated from the construction and operation of the project on the 5 acres that would not be developed under this alternative. The 15 percent reduction in net new trips would slightly reduce traffic noise. This alternative would also not include an emergency helipad, so impacts related to aircraft noise would not be created. Based on the exclusion of the helipad for which the proposed project has a significant and unavoidable impact, it is assumed that noise impacts would be *substantially lessened* in comparison with the proposed project.

6.5.3.13 POPULATION AND HOUSING

As described in Section 6.5.1.13 and 6.5.2.13, the proposed project would result in less-than-significant impacts to population and housing, as it would provide a relatively low amount of jobs compared to the County's expected growth projections and would not displace existing people or housing.

Under the Reduced Footprint Alternative, the number of jobs generated by the project would be reduced from 40 to 35, still providing a relatively low amount of jobs compared to the County's expected growth projections. The project site location would remain the same, and it would still not result in displacement of existing people or housing. Therefore, the Reduced Footprint Alternative would result in *similar* impacts to population and housing as the proposed project.

6.5.3.14 PUBLIC SERVICES, PARKS, AND RECREATION

As described in Sections 6.5.1.14 and 6.5.2.14, the proposed project would result in significant-but-mitigable impacts to fire protection and police services.

Under the Reduced Footprint Alternative, the reduction in the building footprint of the project would not change the project's function as a lodge geared towards recreation and the project's location would remain the same. The reduced guest capacity and employee population would reduce demand for public services, and the reduced building square footage would reduce the amount of building area requiring fire protection services in the event of a structure fire. However, the project would still result in an increase of people to the area in comparison to existing conditions, resulting in an increase in the need for fire protection and police services, and would not avoid the project's significant-but-mitigable public service impacts. In addition, the Alternate Location Alternative would not include the proposed emergency helipad, which is a beneficial feature of the proposed project, as it would provide a new emergency response and evacuation facility in this area of the county. Therefore, overall this alternative would result in *similar* impacts regarding public services, parks, and recreation in comparison to the proposed project.

6.5.3.15 TRANSPORTATION

As described in Sections 6.5.1.15 and 6.5.2.15, the proposed project would result in significant-but-mitigable impacts from the potential to generate YARTS transit ridership in excess of available capacity during peak usage period, from construction that would temporarily disrupt background traffic flow, and from conflict with site distance requirements in relation to Sawmill Mountain Road.

Under the Reduced Footprint Alternative, the project would still include the on-site day-use parking spaces available for the public as well as the YARTS stop, and access to the site would be provided by the same two entrances off of Sawmill Mountain Road as under the proposed project. It is estimated that the Reduced Footprint Alternative would generate approximately 170 fewer net new daily trips than the proposed project.[5] This alternative would still generate increased VMT in the area, however with the reduced population on-site, the VMT would be slightly less than that generated by the proposed project.

Overall, impacts to transportation under this alternative would be *slightly reduced* in comparison to the proposed project.

6.5.3.16 UTILITIES AND SERVICE SYSTEMS

As described in Sections 6.5.1.16 and 6.5.2.16, the proposed project would result in a significant-but-mitigable impact associated with post-project runoff and creation of new stormwater drainage facilities.

Under the Reduced Footprint Alternative, the project would require utilities to service a smaller developed area, with reduced employee and guest numbers. Water would still be supplied by two on-site

[5] Based on trip generation estimates prepared by KD Anderson & Associates, Inc. The proposed project would generate 1,127 net new daily trips (see Table 7 in the Transportation Impact Analysis in Appendix K of this Draft EIR), whereas the Reduced Footprint Alternative is estimated to generate 958 net new daily trips.

wells, and wastewater would be treated with an on-site septic system. Construction and operational solid waste would still represent an insignificant amount compared to the daily throughput capacity of the landfill. In addition, the project would utilize the same energy supply facilities and transmission infrastructure without requiring off-site modifications to these utilities. While the Reduced Footprint Alternative would result in less impermeable surfaces than the proposed project, it would still implement the addition of impermeable surfaces on currently undeveloped land. As with the proposed project this would potentially still require further mitigation to ensure post-project stormwater volumes do not exceed pre-project development volumes. Nonetheless, the reduction in the amount of impervious surfaces and in the amount of people and space using utilities would result in *slightly lessened* impacts regarding utilities and service systems under the Reduced Footprint Alternative.

6.5.3.17 WILDFIRE

As described in Sections 6.5.1.17 and 6.5.2.17, the proposed project results in a significant-but-mitigable impact regarding wildfire where, due to the increase of people and vehicles on the project site from construction and operation of the proposed project, the project has the potential to exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or uncontrolled spread of wildfire.

As under the proposed project, under the Reduced Footprint Alternative, the project location within a Very High Fire Hazard Severity Zone would not change. While the developed area would be reduced by approximately 5 acres, this alterative would still include the same building features as would be used as part of the proposed project that would reduce wildfire risks to visitors as summarized in Table 4.17-1 in Chapter 4.17, Wildfire. In addition, it would still require design features described under Mitigation Measure WF-2 involving compliance of landscape plans with a vegetation management plan. However, unlike the proposed project, the Alternate Site Alternative would not include the proposed emergency helipad, which is a beneficial feature that would aid in wildfire response in this part of the county. Therefore, this alternative would have *slightly greater* impacts relating to wildfire in comparison with the proposed project.

6.6 OBJECTIVES ASSESSMENT

The project applicant has developed the following project objectives:

- Provide a financially viable, environmentally sensitive lodging option to address the increased demands for eco-sensitive resorts and Yosemite recreation tourism.
- Develop and operate a lodging facility at a scale sufficient to support a variety of accommodations, amenities and on-site recreation capabilities on an undeveloped property which is zoned for a commercial recreation use and is within 10 miles of the Yosemite National Park, Big Oak Flat entrance.
- Create a one-of-a-kind place where individuals, families and groups can experience one of nature's most beautiful settings. Incorporate indoor – outdoor relationships throughout the resort; design public spaces which include lobbies, dining, event and special amenity areas to have open connections to nature both visually and physically.

- Provide diverse recreational and wellness experiences to promote year-round use through education, outdoor recreation activities, wellness and well-being programs. The lodging facility will serve as a portal to the Stanislaus National Forest and U.S. Forest Service lands for hiking, trail running, biking and other outdoor activities.
- Provide a helicopter landing zone for emergency personnel to provide immediate medical treatment and transportation to regional hospitals for both the project users and the surrounding community.
- Reduce visual impacts at the project entrance by using low-rise structures that gradually increase in height as the building elements are pushed in an away from the neighboring properties. This design creates a maximum set-back for buildings, incorporates desirable height transitions, and enlarges the open space between the building structures and neighboring properties.
- Reduce noise to nearby residential properties by locating the activity recreation areas on the opposite side of the property and using the building orientation in a manner that provides substantial sound mitigation.
- Minimize light spillage by following Dark- Sky influenced design programs and following the California Title 24 Building Energy Efficiency Standards. An example of this is achieved by using downward positioned, fully shielded, high efficiency 3000K (Kelvin) LED (low-emitting diode) fixtures.
- Design and construct Type I fire resistive structures, fire prevention systems and defensible space areas by providing increased building separation, low building heights, high performance fire extinguishing and alarm systems, surplus water storage, hold-in-place refuge and complete perimeter accessibility to ensure fire-fighting and life-safety capabilities in the event of a wildland fire.
- Provide a robust parking design that is convenient but planned in such a way so not to dominate the site. Accomplish this by avoiding large expanses of asphalt and incorporating gently curving roads that follow the natural topography of the site. Use berms and landscape elements to screen and visually break up on-site roadways and parking areas.
- Incorporate a Yosemite Area Regional Transportation System (YARTS) stop area to foster and promote the use of public transportation for lodge guests, visitors and employees.
- Provide up to 30 day-use parking stalls for the public benefit to encourage the use of the public transportation or ride sharing to ease Yosemite National Park traffic.
- Develop a site which has a safe, reliable and sustainable source of water.
- Develop a site for which the geology (native physical structure and substance) is ideal for a septic system, whereby the optimal operating performance and service-life can be maintained.

6.6.1 NO PROJECT ALTERNATIVE

The No Project Alternative would not meet any of the project objectives. It would not provide a financially viable, environmental sensitive lodging option to address increased demands for eco-sensitive resorts and Yosemite recreation tourism; develop and operate a lodging facility to support diverse accommodations, amenities, and recreation capabilities on-site; or provide a variety of recreational and wellness experiences to promote year-round use through education, outdoor recreation activities, and well-being programs. It would not add a helicopter landing zone for emergency personnel that could be utilized by

the surrounding community as a public benefit. It would not provide an additional YARTS stop area, or day-use parking stalls for public benefit to encourage public transportation into Yosemite National Park.

6.6.2 ALTERNATE LOCATION ALTERNATIVE

The Alternate Location Alternative would meet some, though not all, of the project objectives. The ability of this alternative to provide a financially viable project similar to the proposed project is not known, as the alternate site was chosen for analytical purposes in this EIR and has not undergone any detailed technical analysis or fiscal review. It is anticipated that it would still have the potential to provide an environmentally sensitive lodging option to address the increased demands for eco-sensitive resorts and Yosemite recreation tourism, and develop and operate a lodging facility at a scale sufficient to support a variety of accommodations, amenities, and on-site recreation capabilities on a vacant property zoned for a commercial recreation use. It would provide a variety of recreational and wellness experiences to promote year-round use through education, outdoor recreation activities, wellness and well-being programs. It would retain design elements to minimize light spillage and provide fire-resistive structures and defensible space. The alternative would provide parking for visitors and incorporate a YARTS stop and public day-use parking stalls for encouragement of public transportation into Yosemite National Park.

This alternative would connect to GCSD water supply for a source of water, though a precise determination of whether the alternate site provides adequate water supply and pressure would require site-specific study. This alternative would, instead of on-site treatment, connect to the GCSD wastewater system. Site-specific study would be needed to confirm adequate capacity to support the project at this location.

The alternative would not meet the project objective of being located within 10 miles of the Yosemite National Park, Big Oak Flat entrance; the alternative would instead be located approximately 28 miles away. In addition, while much of the project components would remain the same, this alternative would be located on a reduced acreage site, resulting reduced outdoor recreation space on-site. The large undeveloped areas that would be provided under the proposed project would not be included under this alternative. In addition, with the exclusion of the helipad under this alternative, this alternative would not provide the public benefit of a new emergency resource for the lodge and the surrounding community.

Overall, this alternative would create an environmentally sensitive lodging option for increased recreation demands, with a different site context and natural setting than the proposed project and the removal of some project features. This alternative would be located further from Yosemite National Park than the proposed project. While this alternative meets some of the project objectives, its feasibility is unknown as the project applicant does not own the alternate site parcels and the site has not undergone technical or fiscal analysis.

6.6.3 REDUCED FOOTPRINT ALTERNATIVE

This alternative would provide an eco-sensitive resort within 10 miles of Yosemite National Park. Without cabinrooms, this alternative would not provide the same variety of accommodations as the proposed project. The ability of this alternative to provide a financially viable project similar to the proposed project

is not known, as this alternative involves a reduced guest capacity and has not undergone any fiscal analysis.

This alternative would involve the same property site as the proposed project and would preserve an additional 5 acres as undeveloped space. Therefore, it would involve the same natural setting as the proposed project, and would include the same outdoor amenities, wellness experiences, and recreation activities. However, with the removal of the guest cabinrooms, all guests would be accommodated within the lodge and no guests would be provided the indoor – outdoor relationship provided by the proposed cabinrooms.

With the exclusion of the emergency helipad, this alternative would not provide the public benefit of a new emergency resource for the lodge and the surrounding community.

This alternative would meet the project objectives related to building materials, wildfire prevention measures, lighting design, parking supply, and provision of a YARTS stop. It would also involve the same water source and septic design.

Overall, this alternative would create an environmentally sensitive lodging option for increased recreation demands, in the same location as the proposed project but with a reduced variety and amount of accommodations. This alternative would meet some, but not all, of the project objectives, and its financial feasibility is unknown.

6.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. In addition to the discussion and comparison of impacts of the project and the alternatives, Section 15126.6, Consideration and Discussion of Alternatives to the Proposed Project, of the CEQA Guidelines requires that an “environmentally superior” alternative be selected and the reasons for such a selection be disclosed. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets the goals or needs of the project applicant or Tuolumne County.

As shown in Table 6-1, the No Project Alternative would, in comparison to the project, results in lessened impacts when compared to those of the proposed project for the topics of aesthetics, air quality, biological resources, cultural and tribal cultural resources, energy, GHG emissions, hydrology and water quality, noise, public services, transportation, and utilities.

Section 15126.6(e)(2) of the CEQA Guidelines states that, “if the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” In the case of this analysis, the Reduced Footprint Alternative would be the next environmentally superior alternative. In comparison to the proposed project, this alternative would result in lessened impacts for the topics of air quality, biological resources, energy, greenhouse gas emissions, hydrology and water quality, noise, transportation, and utilities.

7. CEQA-Mandated Sections

This chapter provides an overview of the impacts of the proposed project based on the analyses presented in Chapters 4 through 6 of this Draft Environmental Impact Report (EIR). The topics covered in this chapter include impacts found not to be significant, not to have significant irreversible changes, and not to induce growth. A more detailed analysis of the effects the proposed project would have on the environment and the proposed mitigation measures to minimize significant impacts is provided in Chapters 4.1 through 4.17.

7.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

The California Environmental Quality Act (CEQA) Guidelines Section 15128, Effects Not Found To Be Significant, allows environmental issues for which there is no likelihood of significant impact to be "scoped out" and not analyzed further in the EIR. This section explains the reasoning by which it was determined that the project would have no impact on to agricultural and mineral resources.

7.1.1 AGRICULTURAL RESOURCES

The California Department of Conservation Farmland Mapping & Monitoring Program does not note any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within Tuolumne County, where the proposed project is located. (This is primarily due to the montane topography of the county.) Furthermore, the proposed project site is neither zoned for agricultural uses nor subject to a Williamson Act Contract, per Tuolumne County's zoning map and Williamson Act mapping included in the EIR for the County's General Plan. Therefore, there would be no impact to the types of farmland addressed by CEQA or other agricultural lands/resources.

7.1.2 MINERAL RESOURCES

The California Department of Conservation, Geological Survey (CGS) has classified lands within Tuolumne County into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present in areas. Lead agencies are required to incorporate identified MRZs resource areas delineated by the State into their General Plans.[1] There are no known mineral resources in the southeastern portion of Tuolumne County; therefore, the proposed project does not include any significant known or inferred mineral resources. Given this, construction of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State or the loss of availability of a

[1] Public Resources Code Section 2762(a)(1).

locally-important mineral resource recovery site delineated on a local general plan and this issue has therefore not been analyzed further in this Draft EIR.

7.2 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(c) of the CEQA Guidelines requires an EIR to discuss the extent to which a proposed project or plan would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed below.

7.2.1 LAND USE CHANGES THAT COMMIT FUTURE GENERATIONS

As described in Chapter 3, Project Description, the proposed project would develop 11.5 acres of the project site with buildings, roads, and parking. The project site was significantly burned in the 2013 Rim Fire, which destroyed the majority of mature trees on the project site. A total of 17 trees would be removed to allow for construction of the lodge, employee housing, and parking and maintenance areas. In total, 29 trees would be removed along Highway 120. Because the site is currently undeveloped, rural land, construction of the proposed project would result in a land use change that would commit future generations to uses that are not already prevalent on the project site.

7.2.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Potential environmental accidents of concern include those that would have adverse effects on the environment or public health due to the nature or quantity of material released during an accident and the receptors exposed to that release. Demolition and construction activities associated with development of the proposed project would involve some risk for environmental accidents. However, these activities would be monitored by County, State, and federal agencies, and would follow professional industry standards for safety and construction. Additionally, the land use proposed by the proposed project would not include any uses or activities that are likely to contribute to or be the cause of a significant environmental accident. As a result, the proposed project would not pose a substantial risk of environmental accidents.

7.2.1 LARGE COMMITMENT OF NON-RENEWABLE RESOURCES

Consumption of nonrenewable resources includes issues related to increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. The proposed project would require electric service, long-term propane usage, and additional resources for construction. Additionally, the ongoing operation of the proposed project would involve the use of nonrenewable resources. Construction and ongoing maintenance of the proposed project would irreversibly commit some materials and nonrenewable energy resources. Materials and resources used would include, but are not limited to, nonrenewable and limited resources such as oil, gasoline, sand, gravel, asphalt, and steel. These materials and energy resources would be used for infrastructure development, transportation of people and goods, as well as utilities. During the operational phase of the proposed project (post-construction), electricity

would be used for lighting, heating, and cooling of the lodge, propane would be used for cooking, and gasoline would be used for the transportation of people and goods to and from the project site.

However, the proposed project would include several features that would offset or reduce the need for nonrenewable resources. The proposed project would be required to comply with all applicable building and design requirements, including those set forth in California Code of Regulations Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, the proposed project would also be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. In addition, buildings that are constructed in accordance with the 2016 Building and Energy Efficiency Standards (Title 24, Part 6) are 28 percent (residential) to 5 percent (non-residential) more energy efficient than those constructed under the prior 2013 standards. There improvements are achieved through windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption. The proposed project would also apply environmentally sustainable standards for construction, and operation. The Building and Energy Efficiency Standards (Title 24, Part 6) are required to be updated on a three-year cycle. The project would be subject to the 2019 Building and Energy Efficiency standards that became operative on January 1, 2020.

In addition to meeting applicable State building standards, the proposed project would incorporate a number of voluntary measures that would further reduce the use of non-renewable resources. A key project feature that would reduce the use of liquid fuels and generation of greenhouse gases is the inclusion of employee/manager housing on-site, which would preclude the need for daily commuting and attendant resource use. Additionally, the proposed project would prioritize durable building materials that would reduce maintenance needs and reduce the frequency of renovation/replacement. The proposed project would also incorporate advanced energy-saving and generating features such as heat-pump based climate control and rooftop solar panels. The proposed project would also incorporate operational approaches to further reduce use of non-renewable resources, including programs to reduce and/or compost food waste and encourage more sustainable practices by guests, such as reusing towels and forgoing daily cleaning services.

Although the construction and ongoing operation of the proposed project would involve the use of nonrenewable resources, through the inclusion of energy-conserving project features and compliance with applicable standards and regulations, the proposed project would not represent a large commitment of nonrenewable resources.

7.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project or plan could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth-inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development. This section evaluates the proposed project's

potential to create such growth inducements. Not all aspects of growth inducement are negative; rather, negative impacts associated with growth-inducement occur only where the projected growth would cause adverse environmental impacts.

Growth-inducing impacts fall into two categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary growth-inducing impacts consist of growth-induced in the region by additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

The proposed project would not result in direct growth-inducing impacts because it would not involve the creation of significant new off-site transportation or utility infrastructure that would allow or spur growth in the surrounding area. Although located in a rural portion of Tuolumne County, the project site is already served by roadways, including Highway 120, as well as existing electricity infrastructure. The construction of new roadways or electrical infrastructure would therefore not be required. Since the proposed project would provide its own water supply and wastewater processing through on-site well and treatment systems, it would not require extension of water or wastewater infrastructure. Given that it would not result in the creation of new infrastructure that could be used by other new development, construction of the proposed project would not directly induce growth in the surrounding area.

The proposed project would also not result in significant indirect growth inducement in the surrounding environment. Construction of the proposed project would result in approximately 85,000 square feet of hotel lodge, 15,000 square feet of cabin rooms, and 6,000 feet of employee housing, and would create 40 jobs. However, implementation of the proposed project would also create 20 permanent employee residences, offsetting the housing need for a significant proportion of the employment growth generated by the proposed project. Moreover, it is estimated that the majority of the remainder of the project-generated employment would be absorbed by the regional labor force; therefore, project employment would not attract considerable numbers of workers into the region.

Additionally, any future development in the area of the proposed project would be considered a separate project under CEQA and would undergo its own environmental review under CEQA. Overall, the proposed project would not be considered to have substantial adverse growth-inducing impacts.

8. Organizations and Persons Consulted

This Draft Environmental Impact Report was prepared by, and in consultation with, the following consultants and individuals:

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9. Abbreviations and Acronyms

A-10	General Agricultural 10-Acre Minimum
AADT	Average Annual Daily Traffic
AAQS	ambient air quality standards
AB	Assembly Bill
ACMs	asbestos-containing materials
ADOE	Archaeological Determinations of Eligibility
AFS	American Fisheries Society
ALUCP	Airport Land Use Compatibility Plan
amsl	above mean sea level
ANSI	American National Standards Institute
APN	Assessor Parcel Numbers
BAAQMD	Bay Area Air Quality Management District
BGEPA	Bald and Golden Eagle Protection Act
BLM-S	US Bureau of Land Management as Sensitive
BMPs	Best Management Practices
BSA	Biological Study Area
C-K	Commercial Recreation
C-T	California Endangered Species Act Candidate for listing as threatened
Cal BP	Calibrated Years Before The Present
Cal OES	California Governor's Office of Emergency Services
CAFE	Corporate Average Fuel Academy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CalFIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CalTrans	California Department of Transportation
CAL-IPC	California Invasive Plant Council
CAP	Climate Action Plan
CARB	California Air Resources Board
CBIA	California Building Industry Association
CBC	California Building Code
CCalc	Central California Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CE	California Endangered Species Act listed endangered

ABBREVIATIONS AND ACRONYMS

CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFIP	California Forest Improvement Program
CFC	California Fire Code
CFC	Chlorofluorocarbon
CFD	Community Facilities District
CFGC	California Fish and Game Code
CGP	Construction General Permit
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Corps	US Army Corps of Engineers
CPUC	California Public Utilities Commission
CRLF	California red-legged frog
CRPR	California Rare Plant Ranking System
CSERC	Central Sierra Environmental Resource Center
CT	California Endangered Species Act listed threatened
CTC	California Transportation Commission
CTP	California Transportation Plan
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	Decibel
dBA	Decibel “A-Weighted”
dbh	Diameter at Breast Height
DHS	Department of Health Services
DNL	Day-Night Sound Level
DOT	US Department of Transportation
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
E	Federal Endangered Species Act petitioned for listing endangered
ECC	Emergency Command Center
EHLF	emergency helicopter landing facilities
EIR	Environmental Impact Report
EMS	Emergency Medical Services
EOP	Emergency Operations Plan
EPA	US Environmental Protection Agency
ER	Estate Residential
ESA	Endangered Species Act

FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FAR	Floor Area Ratio
FATO	Final Approach and Takeoff Area
FE	Federal Endangered Species Act listed endangered
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FEW	Freshwater Emergent Wetland
FHWA	Federal Highway Administration
FMU	Forecasted Mitigation Units
FIRM	Flood Insurance Rate Maps
FPS	Fully Protected Species
FRA	Federal Responsibility Area
FT	Federal Endangered Species Act listed threatened
FYLF	Foothill yellow-legged frog
GC	General Commercial
GCSD	Groveland Community Services District
GHG	Greenhouse Gas
gpd	gallons per day
gpm	gallons per minute
HCFC	Hydrochlorofluorocarbon
HDM	Highway Design Manual
HFC	Hydrofluorocarbon
NFPA	National Fire Protection Association
HMBP	Hazardous Materials Business Plan
HMP	Hazard Mitigation Plan
HVAC	Heating Ventilation and Conditioning
ITE	Institute of Transportation Engineers
IUCN	International Union for the Conservation of Nature
IUCN-V	International Union for the Conservation of Nature - Vulnerable
K	Kelvin
kWh	kilowatt hour
KWhr/yr	kilowatt hours per year
LCFS	Low Carbon Fuel Standard
LDL	Larson Davis Laboratories
LED	low-emitting diode
L_{dn}	Day-Night Sound Level
L_{eq}	Equivalent Continuous Noise Level
L_{max}	maximum root-mean-square noise level during measurement
L_n	Statistical Sound Level

ABBREVIATIONS AND ACRONYMS

LRA	Local Responsibility Area
LTS	Less-than-significant
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
MCLs	maximum contamination levels
MEP	maximum extent practicable
MJHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLD	Most Likely Descendant
Mmax	maximum magnitude earthquake
MRZ	Mineral Resource Zone
MS4s	Small Municipal Separate Storm Sewer Systems
MT	Metric Tons
$MTCO_2e$	Metric Tons Carbon Dioxide Equivalent
MW	Megawatts
MWELO	Model Water Efficient Landscape Ordinance
N_2O	Nitrous Oxide
NAHC	Native American Heritage Commission
NF_3	Nitrogen trifluoride
NFPA	National Fire Prevention Association
NIMS	National Incident Management System
NO_2	Nitrogen Dioxide
NOA	Notice of Availability
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	Nitrogen Oxides
NPDES	National Pollution Discharge Elimination System
NWI	National Wetlands Inventory
O	Open Space
O_3	Ozone
O-1	Open Space-1
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OWTS	On-Site Water Treatment System
P	Public
Pb	Lead
PG&E	Pacific Gas and Electric Company
PFC	Perfluorocarbons
$PM_{2.5}$	Fine Inhalable Particulate Matter

PM_{10}	Coarse Inhalable Particulate Matter
PPE	Personal Protection Equipment
PPV	Peak Particle Velocity
ppm	Parts Per Million
PRC	Public Resources Code
PRD	Permit Registration Documents
R/P	Parks and Recreation
RCNM	Federal Highway Administration Roadway Construction Noise Model
RE-2	Residential Estate Two-Acre Minimum
RE-5	Residential Estate Five-Acre Minimum
REAP	Rain Event Action Plan
RHNA	Regional Housing Needs Allocation
ROG	reactive organic gases
ROWD	Report of Waste Discharge
RPS	Renewable Portfolio Standard
RR	Rural Residential
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RV	Recreation Vehicle
RWQCB	Regional Water Quality Control Board
S	Significant
SA	Special Animal
SB	Senate Bill
SEL	Sound Exposure Level
SEMS	Standardized Emergency Management System
SF_6	Sulfur Hexafluoride
SHMA	Seismic Hazard Mapping Act
SMARTS	Stormwater Multiple Application and Report Tracking System
SO_2	Sulfur dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Board
TCALUC	Tuolumne County Airport Land Use Commission
TCAPCD	Tuolumne County Air Pollution Control District
TCFD	Tuolumne County Fire Department
TCRs	Tribal Cultural Resources
TCSD	Tuolumne County Sheriff Department
TCSWD	Tuolumne County Solid Waste Division
TCTC	Tuolumne County Transportation Council

ABBREVIATIONS AND ACRONYMS

TCU	Transportation, Communication, and Utilities
TDA	California Transportation Development Act
TIA	Transportation Impact Analysis
TIMF	Traffic Impact Mitigation Fee
TLOF	Touchdown and Liftoff Area
TRU	Transport Refrigeration Units
USACE	United States Corps of Engineers
USFS	United States Forest Service
USFS-S	US Forest Service Sensitive Species
USFWS BCC	US Fish and Wildlife Service Birds of Conservation Concern
USFWS	US Fish and Wildlife Service
USGS	United States Geological Survey
USTs	Underground Storage Tanks
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
WBWG	Western Bat Working Group
WCR	Well Completion Reports
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Plan
WQP	Tuolumne County Water Quality Plan
WUI	wildland-urban interface
YARTS	Yosemite Area Regional Transportation System

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