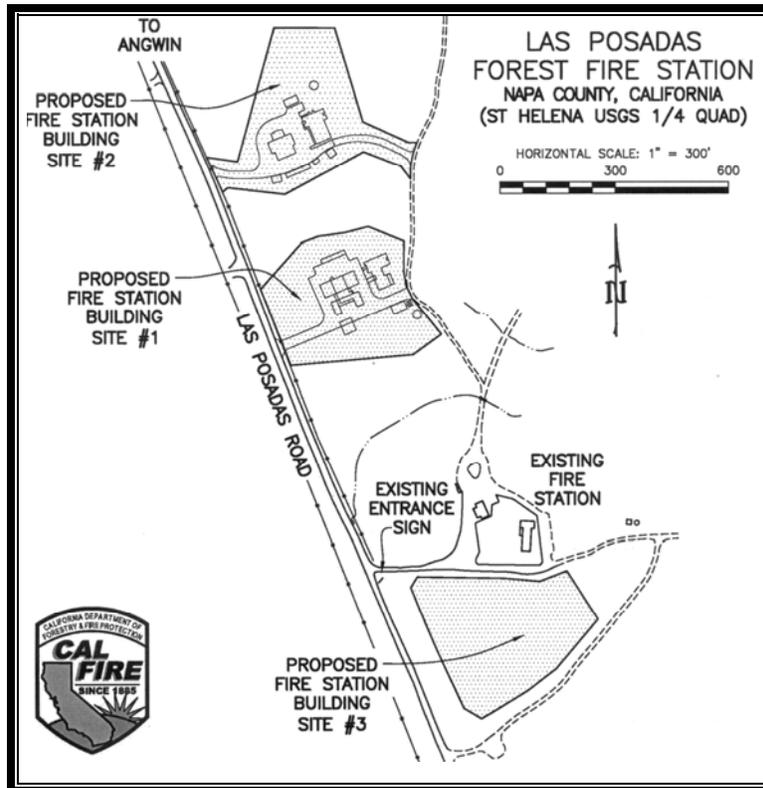


Final Initial Study/Mitigated Negative Declaration
for the proposed
Las Posadas Forest Fire Station Replacement Project
Napa County, California
State Clearinghouse Number 2010112039



prepared by:

The California Department of Forestry and Fire Protection
The Lead Agency Pursuant to Section 21082.1 of the
California Environmental Quality Act

CAL FIRE's Resource Management Program – Room #1516-37
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November 15, 2010
December 22, 2010

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MITIGATED NEGATIVE DECLARATION

Introduction and Regulatory Context

Stage of CEQA Document Development

- Administrative Draft.** This CEQA document is in preparation by California Department of Forestry and Fire Protection (CAL FIRE) staff.
- Public Document.** This completed CEQA document has been filed by CAL FIRE at the State Clearinghouse on November 16, 2010 and is being circulated for a 30-day agency and public review period. The public review period ends on December 15, 2010. Instructions for submitting written comments are provided on Pages 5-6 of this document.
- Final CEQA Document.** This Final CEQA document contains the changes made by the Department following consideration of comments received during the public and agency review period. The changes are displayed in strike-out text for deletions and underlined text for insertions. The CEQA administrative record supporting this document is on file, and available for review, at CAL FIRE's Sacramento Headquarters which is located in the Natural Resources Building, 1416 Ninth Street, Room #1516-37 on the 15th Floor, Sacramento, California.

Background

This is the second CEQA document prepared for the proposed Las Posadas Forest Fire Station Replacement Project. The discussion which follows is intended to explain to the reader why a previously-completed CEQA document exists. The Department of Finance approved funding for the Las Posadas Forest Fire Station Replacement Project in July 2007 which initiated efforts by the California Department of Forestry and Fire Protection (CAL FIRE) to plan the project, consider environmental effects, and comply with the California Environmental Quality Act (CEQA). During the planning process, two previously proposed locations were initially considered but rejected due to environmental issues which emerged. In these discussions, readers will encounter the terms Location #1, Location #2, and Location #3. These refer to the three proposed locations which were considered for construction of the new fire station.

Location #1 was abandoned fairly early in the CEQA review process when CAL FIRE became aware of the presence of environmentally sensitive wetlands and associated plant and animal resources which would be directly affected by the project. An alternative site (Location #2) was selected approximately 300 feet north of the area originally considered. This area occupies a slight rise in elevation, and was selected as a preferred alternative in order to protect fragile wetland areas that occur nearby. A CEQA document was prepared, circulated for public and agency review, comments were considered, and the project was approved. A Notice of Determination (NOD) was filed at the State Clearinghouse on June 9, 2009. The State Clearinghouse Number for this original CEQA document is 2009042017. Shortly after the NOD was filed, CAL FIRE received additional comments concerning the proposed project. The public expressed concern that Location #2, although outside the wetlands, was so close to the wetland areas that indirect impacts might occur. After further review, CAL FIRE decided to abandon this location as well, and selected an alternative location (Location #3) approximately 700 feet south of Location #1 as the new proposed site.

CAL FIRE also initiated a new CEQA study and new CEQA document rather than amend the previously approved document. Figures 3-4 display the locations of all three proposed project locations. For the

remainder of this document, the proposed project location refers to Location #3, the area chosen by CAL FIRE to be the site of the new station. The change to the currently proposed site location was made in response to public and agency information which included biological and botanical information, after the public comment period, with the disclosure of a potential wetland (possible vernal pool) and its associated listed plants near the Sites #1 and #2. The Department believes that the currently proposed project location (Site #3) is an environmentally superior location for mitigating the impacts of the project to the newly disclosed wetland species.

Introduction

This Initial Study/Mitigated Negative Declaration (IS/MND¹) describes the environmental impact analysis conducted for the proposed Las Posadas Forest Fire Station (FFS) Replacement project. This document was prepared by California Department of Forestry and Fire Protection (CAL FIRE) staff utilizing information gathered from a number of sources including research and field review of the proposed project area and consultation with environmental planners and other experts on staff at other public agencies. Pursuant to Section 21082.1 of the California Environmental Quality Act (CEQA), the Lead Agency, CAL FIRE, has prepared, reviewed, and analyzed the IS/MND and declares that the statements made in this document reflect CAL FIRE's independent judgment as Lead Agency pursuant to CEQA. CAL FIRE further finds that the proposed project, which includes revised activities and mitigation measures designed to minimize environmental impacts, will not result in significant adverse effects on the environment.

Regulatory Guidance

This IS/MND has been prepared by CAL FIRE to evaluate potential environmental effects which could result following approval and implementation of the proposed Las Posadas FFS Replacement project. The proposed project is located near the community of Angwin in Napa County, California. This document has been prepared in accordance with current CEQA Statutes (Public Resources Code [PRC] §21000 *et seq.*) and CEQA Guidelines (California Code of Regulations [CCR] §15000 *et seq.*).

An Initial Study (IS) is prepared by a lead agency to determine if a project may have a significant effect on the environment (14 CCR § 15063[a]), and thus, to determine the appropriate environmental disclosure document. In accordance with CEQA Guidelines §15070, a “public agency shall prepare ... a proposed negative declaration or mitigated negative declaration ... when: (a) The Initial Study shows that there is no substantial evidence ... that the project may have a significant impact upon the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions will reduce potentially significant effects to a less-than-significant level.” In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the proposed project will not have a significant effect on the environment and, therefore, does not require the preparation of an Environmental Impact Report (EIR). This IS/MND conforms to these requirements and to the content requirements of CEQA Guidelines Section 15071.

Purpose of the Initial Study

CAL FIRE has primary authority for carrying out the proposed project and is the lead agency under CEQA. The purpose of this IS/MND is to present to the public and reviewing agencies the environmental consequences of implementing the proposed project and describe the adjustments made to the project to avoid significant environmental effects or reduce them to a less-than-significant level. This disclosure document is being made available to the public, and reviewing agencies, for review and comment. The IS/MND is being circulated for public and agency review and comment for a review period of 30 days as

¹ A list and definition of the acronyms and symbols used in this CEQA document is presented on pages 79-80.

indicated on the ***Notice of Intent to Adopt a Mitigated Negative Declaration*** (NOI). The 30-day public review period for this project begins on November 16, 2010 and ends on December 15, 2010.

The requirements for providing a NOI are found in CEQA Guidelines §15072. These guidelines require CAL FIRE to notify the general public by utilizing at least one of the following three procedures:

- Publication in a newspaper of general circulation in the area affected by the proposed project,
- Posting the NOI on and off site in the area where the project is to be located, or
- Direct mailing to the owners and occupants of property contiguous to the project.

CAL FIRE has elected to utilize the second of these three notification options. The NOI was posted at three prominent on-site and off-site locations and stayed posted for the entire 30-day public review period. The NOI was posted at these three locations:

1. At the building marked “Office” within the existing Las Posadas FFS compound where it is prominently in view to any person visiting the station.
2. At a prominent location along Las Posadas Road at its junction with the entrance road to the station.
3. The NOI is also posted at the public greeting counter at CAL FIRE Sonoma-Lake-Napa Unit Headquarters in Saint Helena.

A complete copy of this CEQA document was made available for review by any member of the public requesting to see it. An electronic version of the NOI and the CEQA document were made available for review for the entire 30-day review period through their posting on CAL FIRE’s Internet Web Pages at: http://www.fire.ca.gov/resource_mgt/resource_mgt_EPRP_PublicNotice.php

If submitted prior to the close of the public comment period, views and comments are welcomed from reviewing agencies or any member of the public on how the proposed project may affect the environment. Written comments must be postmarked or submitted on or prior to the date the public review period will close (as indicated on the NOI) for CAL FIRE’s consideration. Written comments may also be submitted via email (using the email address which appears below) but comments sent via email must also be received on or prior to the close of the 30-day public comment period. Comments should be addressed to:

Dan Foster, Senior Environmental Planner
California Department of Forestry and Fire Protection
Resource Management – Environmental Protection Program
P.O. Box 944246
Sacramento, CA 94244-2460
Phone: (916) 653-0839
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After comments are received from the public and reviewing agencies, CAL FIRE will consider those comments and may (1) adopt the Mitigated Negative Declaration and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is approved and funded, CAL FIRE could design and construct all or part of the project.

Project Description and Environmental Setting

Project Location

The existing CAL FIRE Las Posadas Forest Fire Station is a one-engine station located on 2.5 acres of State of California owned property within the 796-acre Las Posadas Demonstration State Forest. This station is located approximately two miles east-southeast of the community of Angwin, in Napa County, California (See Figures 1 and 2). The proposed project area is situated within Section 9, T8N, R5W, Mount Diablo Base Meridian, on the St Helena, CA USGS 7.5 minute topographic map. Located on Howell Mountain, the access to the State Forest and the station is by way of Las Posadas Road. The project area is bounded by Las Posadas Road on the west, the existing Fire Station and State Forest access road on the north, and the 4-H road on the south (see Figures 3 and 4). The new station, which would be built approximately 200 feet south of the existing station, will reside in a triangle shaped parcel approximately 3.5 acres in size, although the actual footprint of the project area will not encompass that entire parcel but will be approximately 1.4 acres (see Figure 5).

Background and Need for the Project

The Las Posadas Forest Fire Station was first established in 1953 as a one-engine Station/Demonstration Forest headquarters. Six to eight personnel live and work at this facility for seven months of the year during fire season. A smaller staff occupies the station during the remaining five months of the year.

The fire engine crew from Las Posadas Forest Fire Station is the first CAL FIRE ground-based fire protection resource to arrive at fires within approximately 60,000 acres of its surrounding State Responsibility Area, including the critically important watershed for the Napa Valley, and would be the second engine into an additional 100,000 acres. Even though this geographical area has a history of large fires, a rapid emergency response results in the suppression of most fires before they become large and damaging. Extinguishing fires when they are small results in much less damage to property, livestock, and watershed while threatening fewer lives. Fire fuel types vary from grass and brush to timber in varying proportions. The terrain is moderate to steep with homes scattered throughout the area. Summer temperatures frequently reach into the low 100-degree range, leading to potentially eruptive fire behavior. The crew from this fire station also provides the primary security and emergency response to the Las Posadas Demonstration State Forest. This state forest is one of six Demonstration State Forests located within CAL FIRE's Northern Region. The forest is dedicated to research and demonstrates improved forest management practices, incorporating a wide range of activities from timber stand improvement and environmental care to public education. The primary objective of the recreational use at Las Posadas State Forest is to educate the public, especially youth, regarding resource management and fire protection issues, in a manner consistent with the deed restrictions which came with the property when it was gifted to the State of California from Anita and Ansen Blake in 1929 (CAL FIRE 1992: 7).

To protect the state forest and maintain CAL FIRE's goal of containing 95% of all wildland fires to ten acres or less, CAL FIRE must maintain a fire station at this strategic location and the fire crew's response effectiveness must be maintained at the highest levels. In addition to wildland fire protection, the crew also responds to house fires, vehicle fires, traffic accidents, medical emergencies, rescues and hazardous materials incidents. They also provide a wide range of fire prevention programs to the surrounding communities of Angwin, Deer Park, Pope Valley, and Aetna Springs, as well as supporting other CAL FIRE stations in the communities of St. Helena, Calistoga and Rutherford.

Most buildings on this site were constructed in 1953 (Thornton 1994: 860). There have been no major investments in improvements to the structures in the past 25 years. Due to age and wear, all of the buildings

are exhibiting symptoms of infrastructure breakdown and maintenance costs have risen sharply over the last several years. Domestic water supplies do not meet minimum health standards and may require a filtration or sanitizing system to remain potable.

The buildings do not have wall insulation or energy efficient windows, which make heating and cooling a very expensive undertaking. Frame damage and warping make it nearly impossible to maintain the windows. The single pane windows do not afford any energy conservation benefit. Winter moisture and summer heat have contributed to the deterioration and failure of the wood siding. Dry rot and termite damage are evident in several areas especially in the bathroom and kitchen area around the sink.

The electrical system is inadequate for today's energy demands and must be overhauled. Ungrounded electrical circuits are in violation of State Uniform Building and National Electrical Codes. Insulation on some of the electrical wiring is deteriorated, increasing the risk of accidental fire or electrocution. Commercial power is often interrupted by outages and so emergency power generation is required.

The station's kitchen and pantry storage spaces are significantly less than that of the present standard. In addition, the restroom facilities are inadequate, not accessible to the disabled and in violation of ADA regulations.

The barracks/mess hall heating, ventilating and air conditioning system is outdated and failing. Repair parts for this system are extremely difficult to find. In general, the living, bathing and kitchen quarters are cramped and provide neither a healthful nor a minimally accommodating living environment for the fire crews stationed at this site. The buildings do not meet current ADA standards for access or department standards for sleeping accommodations for men and women.

Project Objectives

The objective of the project is to continue to provide fire protection and emergency-response services in the Las Posadas Fire Station Initial Response Area (IRA) by constructing a new and updated facility adjacent to the existing fire station site and retain the existing building for their historical value which represents CAL FIRE's past.

In accordance with the CAL FIRE's Strategic Plan (1997), specific objectives include:

- Obtain and maintain high quality fire-fighting equipment, apparatus, and facilities to respond to California's changing fire protection needs; and
- Improve CAL FIRE's ability to meet peak demand emergency incident workload through enhancement of the statewide fire protection system.

Project Start Date

CAL FIRE is unable to accurately disclose when actual construction of this project might begin. The earliest start date would be sometime during the year 2011 after the completion of the CEQA process, followed by completion of Working Drawings which will take approximately one year to complete. Most likely construction would start in 2012 or 2013. The actual start would take place only after project funding has been secured and all construction contracts have been put in place. It is possible this project could be further delayed pending resolution of issues related to funding. CAL FIRE will carefully re-assess the CEQA document just prior to construction to determine if any additional environmental review actions may be required to ensure compliance with all environmental requirements in place at that time.

Project Description

This proposed project involves the construction of a new CAL FIRE forest fire station facility adjacent to the existing Las Posadas Forest Fire Station within Las Posadas State Forest. When the new facility is built, the old station facility would be retained. The two primary existing buildings (a barracks/messhall and an apparatus building) would be retained for their historical significance and used for general storage, work space and educational purposes by the state forest.

The only demolition of existing structures and facilities would involve a gas-house, a hose-rack, a radio antenna and possibly the entry signage.

The existing gas house built in 1953 (see Figure 14) would be demolished. A new fueling station would be built at the new facility. The existing radio antenna would be demolished and a new 30-foot antenna would be built at the new facility. The existing hose-rack would be demolished and a new one, very similar in design, would be built at the new facility. The new station would be accessed with a new driveway from Las Posadas Road.

The existing welcome sign at the junction of the paved access road and Las Posadas Road consists of an engraved wooden sign (with the old CDF logo) on a mortared brick and cement structure. The brick and concrete support structure probably dates to the original station construction in 1953-54 (see Figure 10). There would be a new welcome sign of similar design and appearance at the new entrance to the new facility. It will be the CAL FIRE Unit's choice on whether to re-use the existing wooden sign (with some modifications) or build a new one. If the second option is chosen the old sign would be retained in the Unit for its historical value. Likewise, it will be the Unit's choice on whether or not the brick and concrete support structure will be retained or demolished. At some point in the future, the old station may serve as a forest visitor center and some kind of welcome sign would be appropriate. The old brick and concrete sign support structure may be retained for that purpose.

The project description consists of the following:

- Construct a standard 8-bed dormitory/mess hall (approximately 3,383 square feet)
- Construct a 2-bay apparatus building and office (approximately 1700 square feet)
- Construct a Generator/fire pump/flammable storage building (approximately 565 square feet)
- Install a fuel facility with above ground storage tank

Site improvements will include:

- Forest Area Converted to new Fire Station compound
- New well (or possible renovation of existing water system)
- New gravity-fed septic and leach field system
- Grading and paving
- Power and phone utilities to street
- 30,000-gallon storage tank for fire suppression system
- Hose wash rack
- Radio tower
- Site fencing
- Site lighting
- Footing for a 30 foot radio tower
- Landscaping

A small parcel of currently undeveloped forest land, located approximately 200 feet south of the existing station would be converted to be the site of a new fire station. The new fire station facility would include the construction of three new buildings, paved walkways, a small parking area, a paved entrance road, and associated appurtenances and landscaping. The total area encompassed by the new facility will total approximately 1.4 acres. The project site plan is depicted on Figure 5.

The current proposal includes the drilling of a new well within the project area and the installation of a two (or possibly three) water tanks to store potable and non-potable water. This part of the project may be changed to include renovations to the existing spring box currently supplying the station with potable water. It may also include the installation of a new water treatment system.

A detailed plan for how the new station would be landscaped has not yet been developed and is typically not developed until much later in the project planning process. In this instance, CAL FIRE shall commit to certain aspects of the landscaping portion of the project in response to a number of potential environmental concerns raised by the Department of Fish and Game during informal consultations completed during the Initial Study. These concerns related to the potential for increased run-off from the impervious surfaces at the new facility (roofs and paved entrance road, parking area, and walkways). Low-Impact Development strategies will be implemented (see Mitigation Measure #15). CAL FIRE will encourage the maintenance and use of native plants for station landscaping. Invasive plants will be avoided to the extent feasible. Invasive species such as broom (various types) that are prevalent in the Angwin area are being targeted for removal throughout the state forest as part of the vegetation management on the forest.

Environmental Setting of the Project Region

The Moore's Creek Ranch on Howell Mountain in Napa County was an active ranch between 1878 and 1928 (Jablonowski et al, 1995). In 1929, the ranch property, which would later become Las Posadas State Forest, was conveyed to the State of California as a gift from Anita and Anson Blake. The site has served as a State Forest and a summer camp for the 4-H Clubs of the San Francisco Bay region since 1929. The fire station location as been used by CAL FIRE as a fire camp and later a fire station beginning in 1934 and was a winter base for the Civilian Conservation Corps (CCC) in the 1930s.

In 1933, the CCC camp that would relocate to Las Posadas was located in Pine Grove, Calaveras County California. The move was motivated by a need to find a suitable location at a lower elevation and the Las Posadas site was selected. The relocation occurred in September 1933. The initial CCC Fire Camp at Las Posadas consisted of a dry camp with tents. Water was hauled-in from the 4-H camp in 50 gallon wine barrels. Construction of the new facility began in September 1933 and by the first of November over 200 men moved in. CCC used the facility each winter until they vacated it in 1939. All the buildings except the laundry room and tool house were taken down. These building were used by CAL FIRE as a fire camp/fire station until the fire station was built in 1953-54.

The Las Posadas State Forest is located in the Mayacamas Mountain range in the southeastern portion of the California North Coast Range. The Mayacamas run through Napa, Sonoma, Lake, and Mendocino counties. The climate of the Mayacamas is typically described as Mediterranean. The Majority of the Las Posadas State Forest and the area in and around the Las Posadas fire station are oak woodland, dense chaparral, and grasslands with ridges and canyons of dense stands of conifers.

The existing CAL FIRE Forest Fire Station is located on the northwestern edge of Las Posadas State Forest on the east side of Las Posadas Road, one and a half miles southeast of the town of Angwin in Napa County. Napa County has zoned the area as Agricultural Watershed (AW) / Airport Compatibility. The garage building at the existing fire station is the last of the original buildings from the 1930s. During the 1953

station construction all of the old buildings were removed except for this garage which received an addition to the west side that included the two garage doors (see Figures 12 and 14).

Description of the Local Environment

The Jepson Manual (Hickman 1993) divides California into 24 subregions based on weather patterns, topography, and vegetative communities. The proposed project is located within the Inner North Coast Range region, which is in the Coast Ranges, west of the Sacramento Valley. The subregion is characterized by chaparral and pine/oak woodland with low rainfall and hot, dry summers (Hickman 1993). The vicinity of the study area is characterized by pine/oak woodland, agricultural fields, and vineyards. The region surrounding the study area has an average annual precipitation of 40.64 inches. The climate is relatively mild, with an average low temperature of 38.4 degrees Fahrenheit in the winter and an average high temperature of 84.5 degrees Fahrenheit in the summer (WRCC, 2009). Soil types in the study area include Boomer loam, and Boomer gravelly loam which are well drained upland soils that formed in material weathered from metavolcanic (greenstone) bedrock (USDA 2009). The study area ranges in elevation from approximately 1690 feet above mean sea level (AMSL) to approximately 1720 feet AMSL (CDFG 2009). The terrain is flat and the aspect is generally western. The west side of the project area is characterized by a gentle slope to the Las Posadas Road which then is bounded by privately owned vineyard. Precipitation in the area comes in the form of both rain and snow although snowfall is rare. The baseline environmental conditions at the Las Posadas FFS are depicted in several recent photographs taken of the facility and its immediate surroundings (see Figures 6-14).

Vegetation Communities

The project site consists entirely of the *Pseudotsuga menziesii* - *Pinus ponderosa* alliance. This vegetation community is common within Napa County, occurs between 755 and 1220 feet AMSL, and is found in dry-mesic settings, usually downslope from ponderosa pine dominated communities (Thorne et al. 2004). Overstory tree species include *Pseudotsuga menziesii* (Douglas-fir), *Pinus ponderosa* (ponderosa pine), *Quercus kelloggii* (California black oak) and *Arbutus menziesii* (madrone). Understory species include *Pseudotsuga menziesii*, *Pinus ponderosa*, *Quercus kelloggii*, *Quercus wislizenii* (interior live oak), and *Toxicodendron diversilobum* (poison oak), as well as other shrubs, perennials, grasses and forbs. The age of the stand at the project site is approximately 70 to 104 years old, which was determined by counting the rings of existing stumps nearby.

Current Land Use and Previous Impacts

The Las Posadas and Angwin area have been subject to development, mostly in the form of private residences, vineyard/winery type development including tasting rooms and winery/vineyard facilities. Such rural development is one of the more obvious effects resulting from the ever-increasing population expansion throughout California (Chow 1970). One of the most significant impacts affecting the Las Posadas area has been the development of the Pacific Union College (PUC). Historically, the college, orchards, vineyards and the lumber industry have been the most important source of employment in the area. Most of the forested country around Las Posadas is within Pacific Union College (PUC) property. In addition to the college campus, the PUC has a 2000 acre Non-Industrial Timber Management Plan (NTMP) and does yearly harvesting to actively manage the forest. Tourism, associated with the wine industry and the Napa Valley is an ever increasing economic factor for the area and visitors from all over the world go to Angwin to taste and purchase the premium wines that are produced in the area.

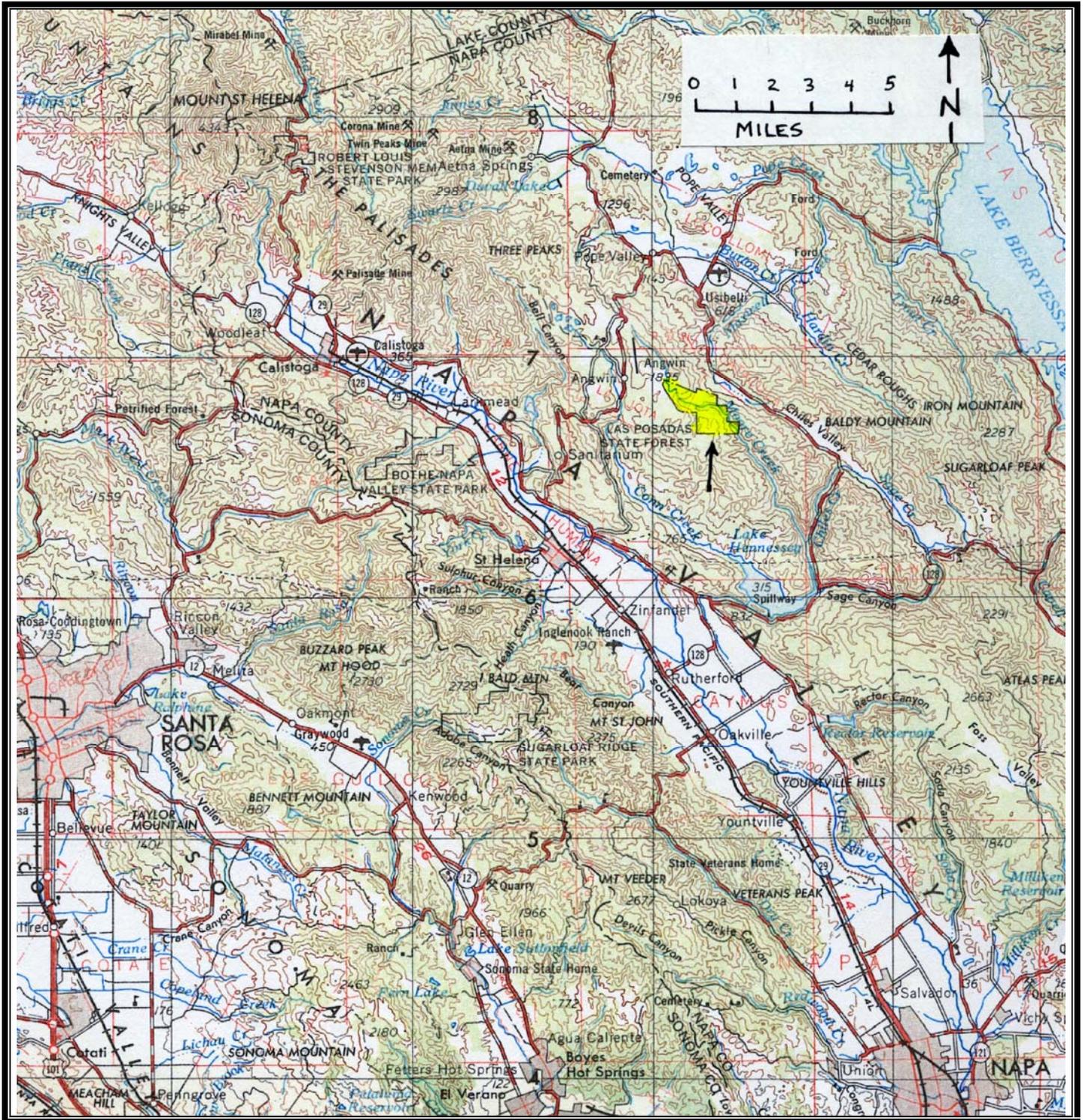


Figure 1. Project Vicinity Map #1 of 2. The arrow points to yellow highlighted area depicting Las Posadas Demonstration State Forest within the Napa County region. The proposed project is located within this State Forest, approximately two miles east-southeast of the community of Angwin.

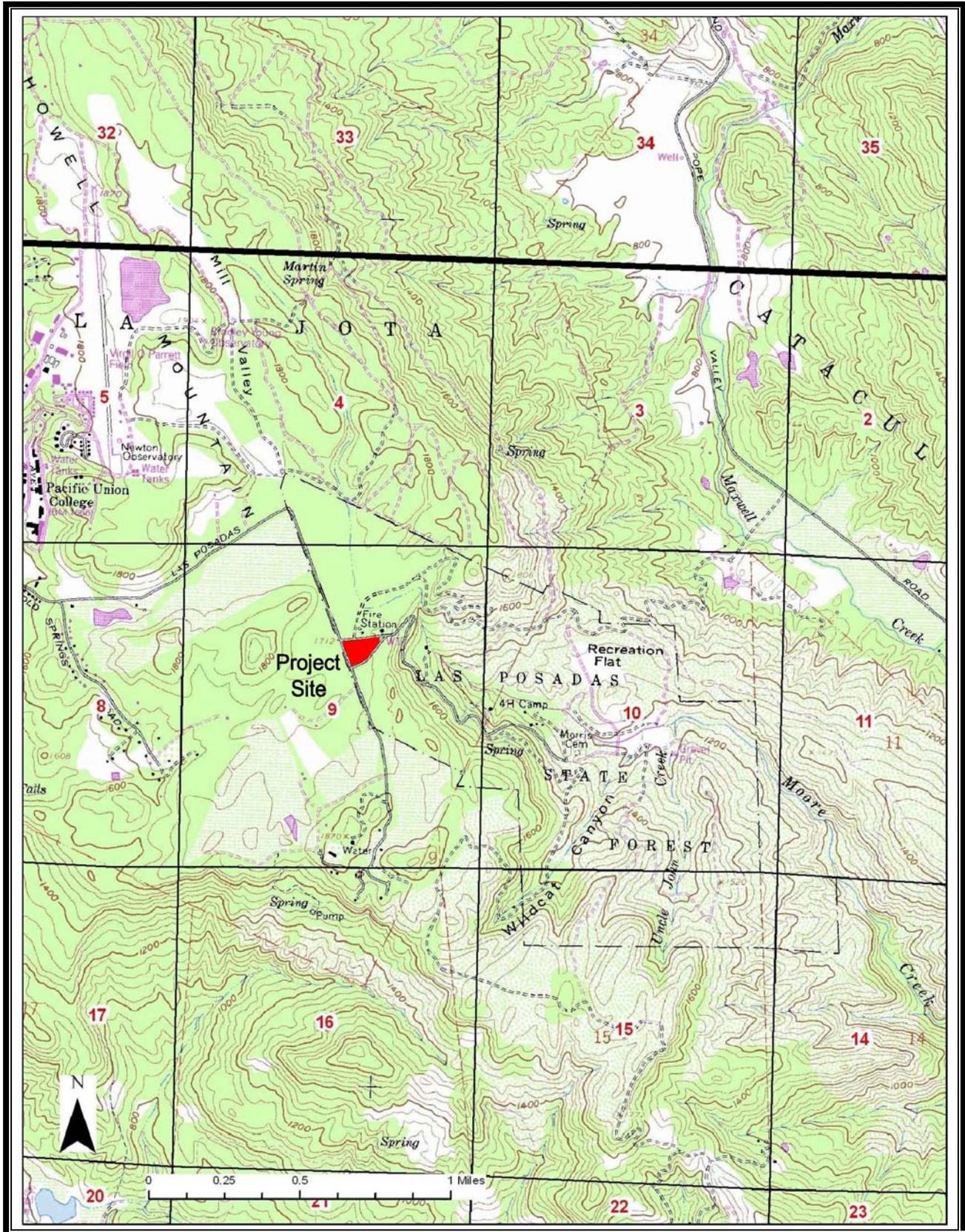


Figure 2. Project Vicinity Map #2 of 2. Portion of the Saint Helena USGS 7.5' Quadrangle depicting Las Posadas Demonstration State Forest and the location of the proposed project.

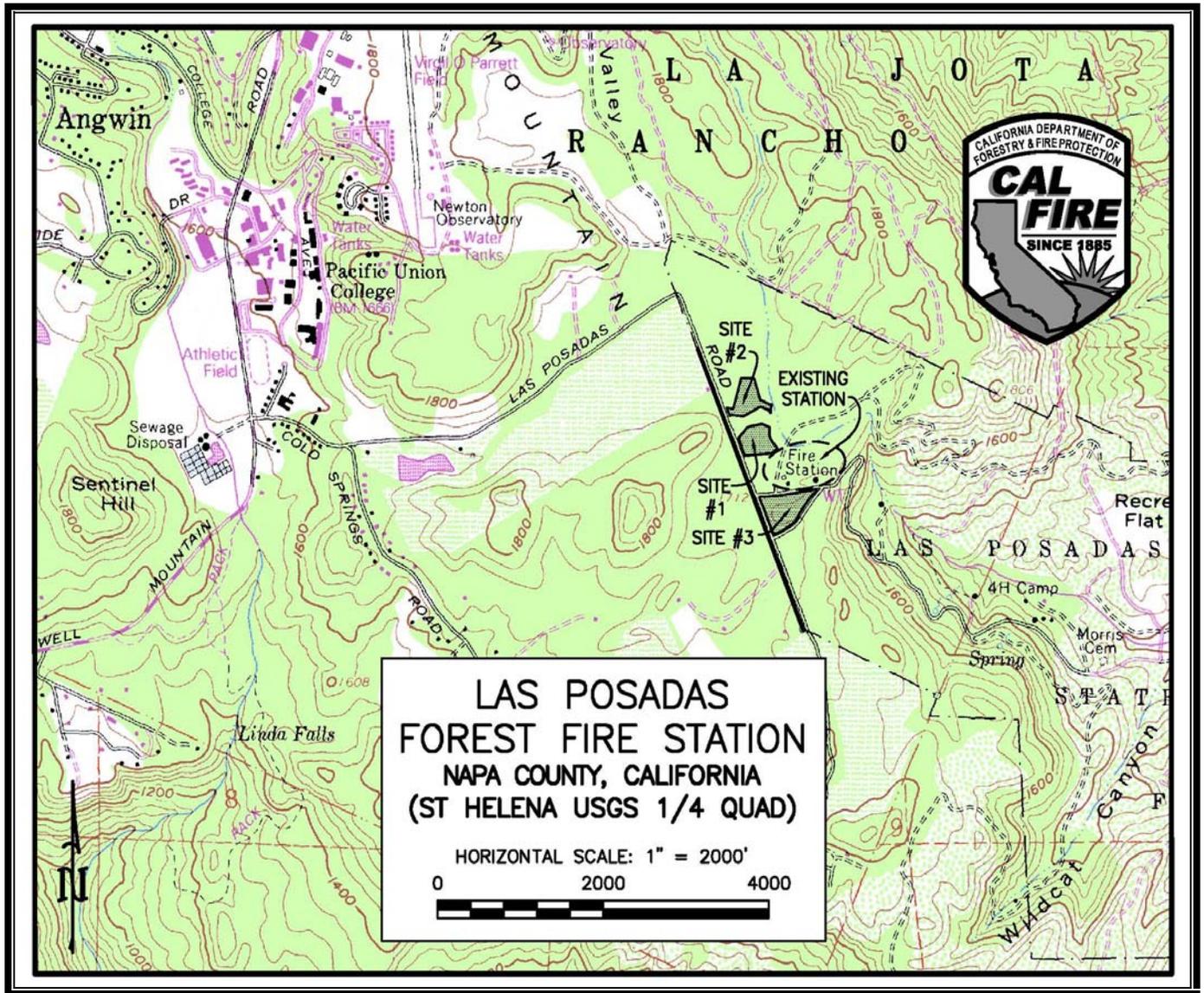


Figure 3. Project Location Map #1 of 2. This map, also prepared on a portion of the St. Helena, CA USGS 7.5' Topographic Quadrangle at the 1:24,000 scale, displays the exact location for the revised proposed building site location (Site #3), the original proposed building site locations (Site #1 and #2), and the existing fire station facility.

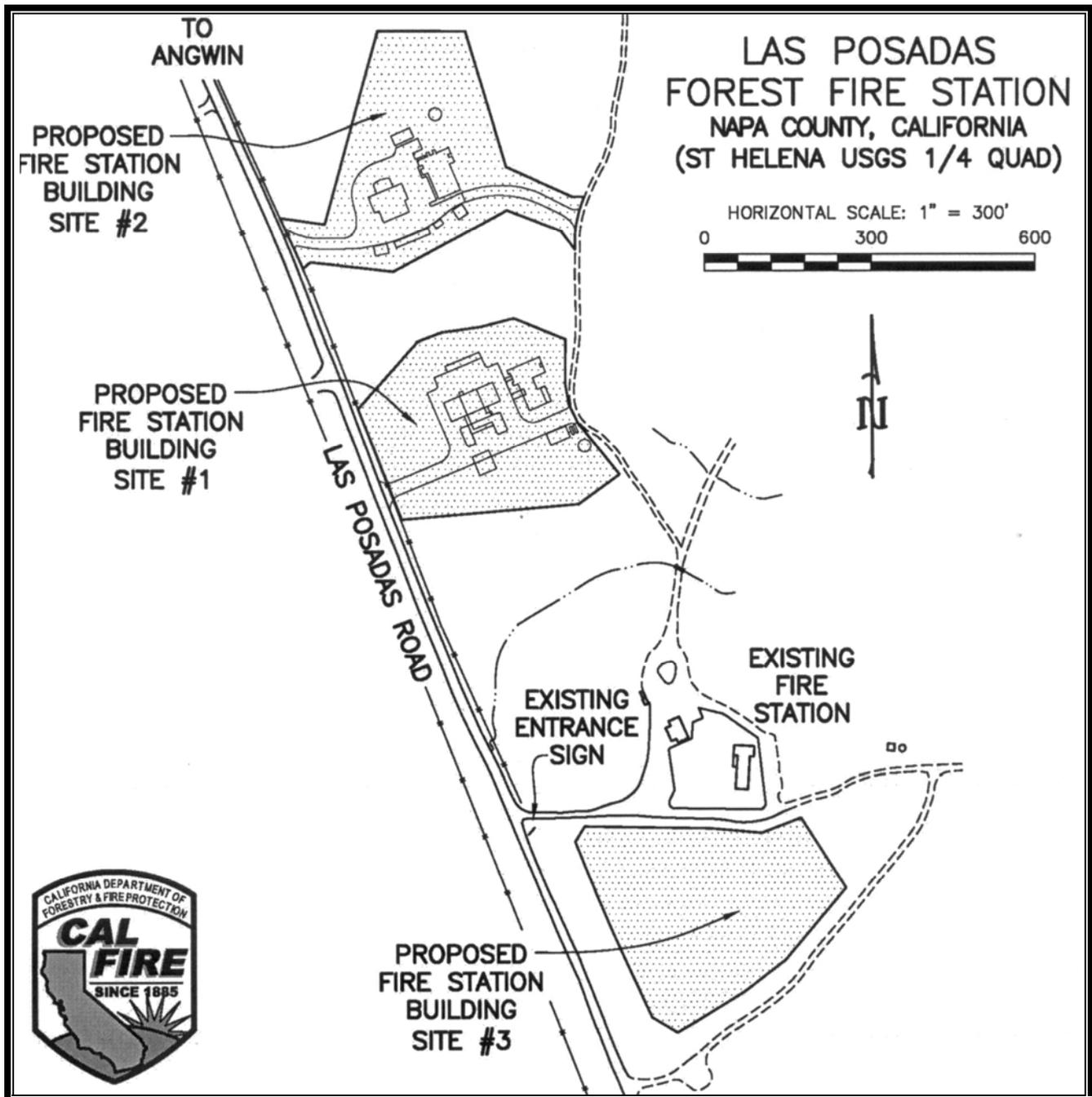


Figure 4. Project Location Map #2 of 2. This map depicts a more detailed view of the three locations which were considered for the new forest fire station in proximity to the existing fire station. Proposed Fire Station Building Site #3 is the location chosen by CAL FIRE where the new fire station facility will be constructed. This building site was selected as an environmentally-superior location and avoids impacts to wetlands from construction or drainage alterations. The maximum boundaries of the area which would be developed for the project are displayed. The size of this area is similar to the original proposed building site, encompassing approximately 1.4 acres of land.

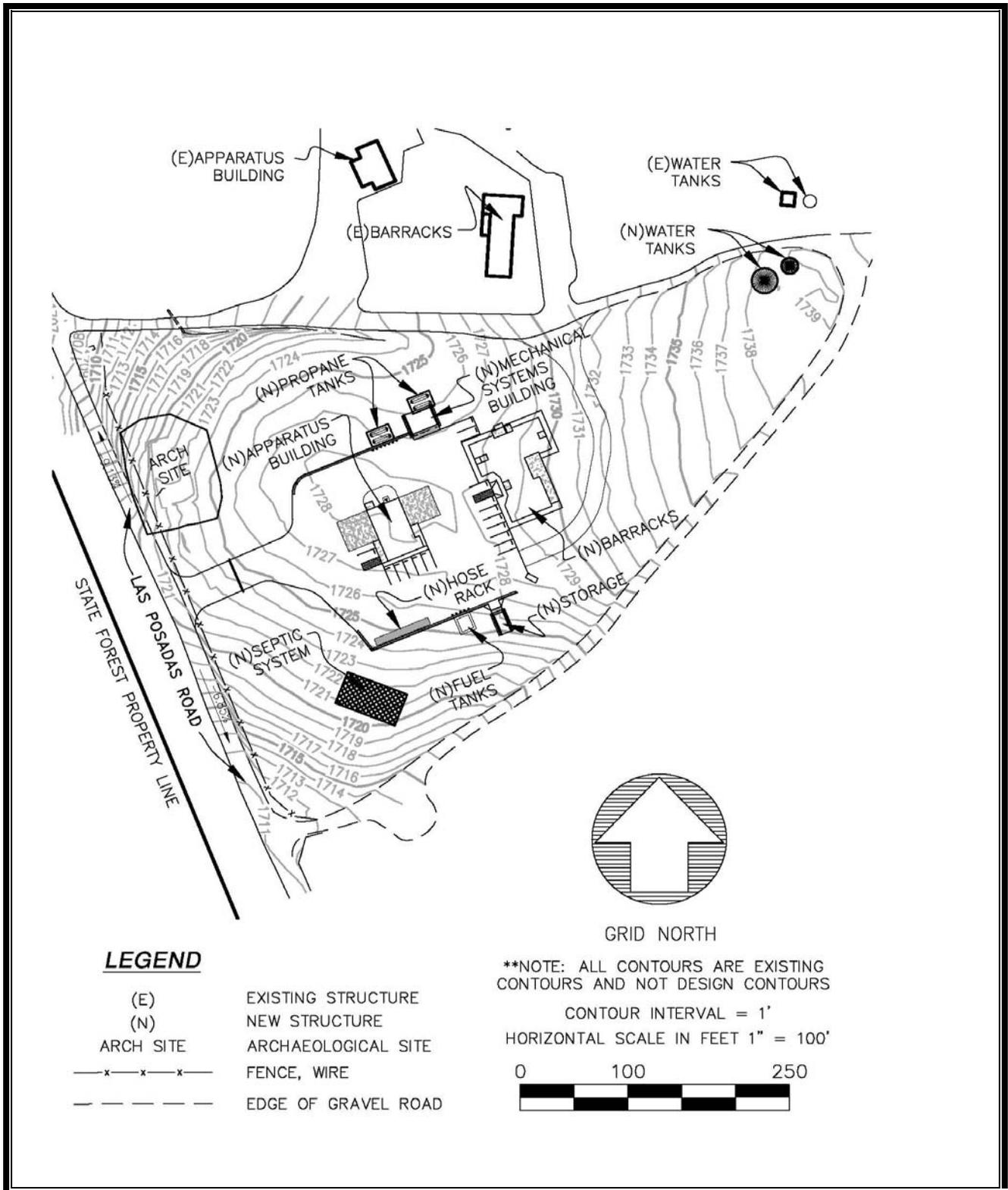


Figure 5. Project Site Plan. This Figure depicts the currently proposed building lay-out within the revised proposed fire station building site.

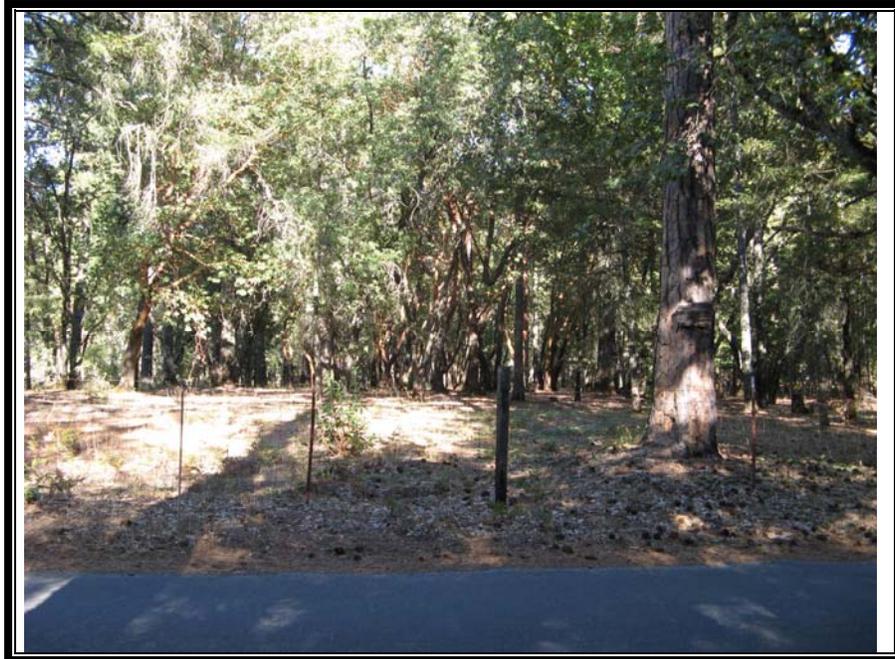


Figure 6. View of project area, along Las Posadas Road, looking east.



Figure 7. View of project area, from Las Posadas Road and the 4-H Road.



Figure 8. General view of project area.



Figure 9. General view of existing Fire Station (to be retained) from new station site.



Figure 10. View of the Barracks/Messhall building at the existing fire station to be retained.



Figure 11. Existing Garage with 1950's addition (garage doors). This structure would be retained.



Figure 12. Historic photo of the structure built by CCC's during the 1930's as it looked before it was remodeled in the 1950's for its use as a truck garage for the forest fire station. Looking southeast. Photo from Las Posadas's station collection, from Brian Streblov.

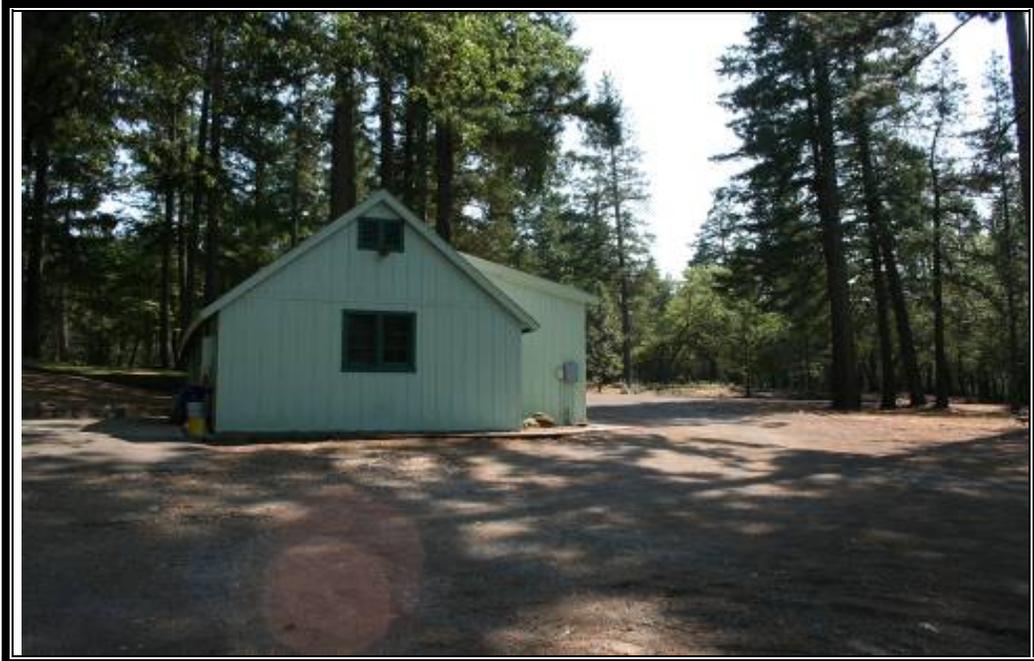


Figure 13. Same view of the truck garage building as it looks today with the 1950's addition.



Figure 14. Fueling station and fuel tank at existing station would be removed and relocated to the new facility. The concrete-block gas-and-oil house would be demolished.

Conclusion of the Mitigated Negative Declaration

Environmental Permits

The proposed project would require the following permits and CAL FIRE would be required to comply with the following State regulations:

1. Erosion and Surface Water Quality - Regional Water Quality Control Board (RWQCB) National Discharge Elimination System (NPDES) permit, storm Water Pollution Prevention Plan (SWPPP) and Best Management Practices.
2. Timber Operations – Conifer will be removed for the project. A Registered Professional Forester (RPF) on staff at CAL FIRE (Gerri Finn) has determined that timberland will be converted to a non-timber use as a result of the project. The conversion meets the criteria of Section 1104.1 of the California Forest Practice Rules. The area to be converted is less than 3 acres in size. The Department has not filed a less than three acre conversion exemption on this parcel before. The CAL FIRE Unit shall provide a staff RPF to prepare the conversion exemption documentation just prior to implementing the project², and the felling of trees will be done by a Licensed Timber Operator (LTO) in conformance with all applicable Forest Practice Rules.

² Since, under this exemption, timber operations must be completed within one year from the date of acceptance by the CAL FIRE Director, and all conversion activities must be completed within two years from the date of acceptance, this exemption will be submitted just prior to construction, as soon as the LTO is identified.

3. Road and Utilities Encroachment Permit from Napa County. This project would include a new driveway connecting to the county road (Las Posadas Road) and require new hook-ups to power and phone utilities. CAL FIRE will obtain a permit from Napa County Public Works, work closely with them, and follow all of their requirements related to encroachment.

Note: The proposed project is located on State-owned property. As such, the property is not within permitting jurisdiction of Napa County for construction activities taking place entirely upon the state property. For example a county building permit is not required for this project. Nonetheless, CAL FIRE routinely consults with the local county (and other public agencies) to seek their expertise and guidance pertaining to construction, encroachment, grading, and sewer system installation. This is done to ensure that standards utilized for this project are consistent with guidelines recommended by Napa County.

Mitigation Measures

The following fifteen (15) mitigation measures will be implemented by CAL FIRE to avoid or minimize environmental impacts. Implementation of these mitigation measures will reduce the environmental impacts of the proposed project to a less than significant level.

Mitigation Measure #1: Measures to Reduce Short-Term Construction Generated Emissions

Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to the following, when necessary³:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites, and also sweep adjacent public streets if visible soil material is carried onto such streets during construction.
- All construction equipment shall be maintained in proper tune according to manufacturers' specifications to ensure minimum emissions under normal operations.

Mitigation Measure 2: Measures to Protect Special Status Plant Species:

In addition to the onsite and vicinity surveys already conducted, a CAL FIRE wildlife biologist, botanist, forester, or other qualified person will conduct a survey at the appropriate time of year (e.g. flowering or readily identifiable vegetative state) to determine the presence or absence of special status plant species prior to the commencement of construction. Special status plant populations detected within the project area will be avoided at the time of project implementation. If protection through avoidance is not feasible, CAL FIRE shall consult with the California Department of Fish and Game and/or appropriate federal agency.

Mitigation Measure 3: Measures to Protect American Badger

Identify and avoid burrow systems that appear actively used (presence of tracks or scat) and are accessed with an opening of approximately 6 inches or greater in diameter. A CAL FIRE wildlife biologist or other qualified person will survey project area prior to ground disturbing activities. CAL FIRE shall consult with

³ The term "*when necessary*" was inserted into this mitigation measure to provide flexibility in response to current conditions. For example, on days where it is currently raining or has recently rained a lot and ground conditions are sufficiently damp to prevent dust from becoming airborne, watering the construction areas twice or three times a day might not be necessary. If sufficiently wet conditions do not exist, these watering requirements shall be carried out as written.

the California Department of Fish and Game should any active burrow system exhibiting these characteristics be identified.

Mitigation Measure 4: Measures to Protect Ringtail

Retain all trees exhibiting cavities or snags/down logs greater than 11 inches DBH that are not a hazard within the project area or require removal to facilitate construction.

Mitigation Measure 5: Measures to Protect Bat Species

~~Retain all trees exhibiting cavities or snags greater than 11 inches DBH that are not a hazard or require removal to facilitate construction within the project area. Removal of trees/snags that also exhibit cavities to facilitate construction that is consistent in timing with that identified for migratory bird species (ground disturbing operations conducted September January) will likely also protect maternal colonies and reduce roost site impact.~~

All trees suitable for use by bats within the project area shall be surveyed for signs of bats by a Department Biologist, Forester, or other qualified person no earlier than two to three days prior to tree removal or construction activities. If bats are discovered during the surveys then a buffer of 100 to 150 feet shall be established. The optimal time to remove trees is September 15 through October 15, when young would be capable of flying and February 15 to April 1 to avoid hibernating bats and prior to formation of maternity sites.

Mitigation Measure 6: Measures to Protect Northwestern pond turtle

Prior to tree or brush removal, a CAL FIRE wildlife biologist, forester, or other qualified person will conduct a visual survey for nest site scrapes or overwintering sites. Any identified nest site will be protected through avoidance. If protection by avoidance is not feasible, CAL FIRE shall consult with the CDFG to develop appropriate strategy for protection, which may include scheduling project activities after hatching or possibly relocating overwintering adults to similar habitat within the project vicinity. See Holland (1994) for examples of these sites.

Mitigation Measure 7: Measures to Protect Long-eared owl

A CAL FIRE wildlife biologist, forester, or other qualified person will conduct a three visit visual survey for occupied nest sites adjacent to the proposed project footprint and for a 500 foot radius distance. Surveys are to be equivalently spaced across the March through May period. Consultation with the CDFG is required if an occupied nest site is identified to develop site specific measures to avoid disturbance.

Mitigation Measure 8: Measures to Protect Northern spotted owl

A CAL FIRE wildlife biologist, forester, or other qualified person will conduct surveys to recognized U.S. Fish and Wildlife Service protocols to determine presence/absence of this species within and adjacent to the project area. If a NSO activity center is discovered prior to or during construction, within 1000 feet of the project area, consultation with appropriate federal or state agencies to develop site specific measures to avoid take of this federal threatened species will occur.

Mitigation Measure #9: Measures to Protect Migratory Bird Species

Nest sites of migrant bird species or raptors occupying the project site will be avoided to protect project year nest site production and achieve compliance with Migratory Bird Treaty Act and California Fish and Game Code Section 3503, 3513, and 3800 requirements. ~~If tree removal and other vegetation clearing will occur between February 1 and September 1, CAL FIRE shall ensure that a preconstruction nesting survey be conducted no sooner than two weeks in advance of the activity by an ornithologist, wildlife biologist, forester, or other qualified person. Identified nest sites will be protected with a 100 foot radius buffer until it~~

~~is determined that young have left the nest or the nesting attempt has failed.~~ a preconstruction nesting survey shall be conducted in advance of the activity by an ornithologist, wildlife biologist, forester, or other qualified person under the following conditions:

1. surveys for birds will be conducted no earlier than 14 days prior to tree removal and/or breaking ground,
2. in the event that nesting birds are found, CAL FIRE will consult with CDFG and obtain approval for nest-protection buffers prior to tree removal and/or ground-breaking activities, and
3. nest protection buffers will remain in effect until the young have fledged.

Mitigation Measure #10: Measures to Protect Oak and other Mature Trees

Trees to be retained will be protected through the use of barricades during the construction phase. The CAL FIRE Unit Forester has determined that the project site is timberland as defined in PRC 4526 and the removal of trees constitutes timber operations as defined in PRC 4527. This project would convert timberland to other uses and will require the submittal of a conversion exemption/waiver to CAL FIRE pursuant to Section 1104.1(a) of the Forest Practice Rules. Implementation of Mitigation Measure #11 would reduce the effect to less than significant.

Mitigation Measure #11: Timberland Conversion

Within three to six months prior to the commencement of the construction project, the Las Posadas State Forest Manager (or another RPF designated by CAL FIRE) will file a Conversion Exemption and waiver pursuant to Section 1104.1(a) of the Forest Practice Rules. Timber removal will be completed by a Licensed Timber Operator, and the tree removal will be carried out in conformance with all applicable Forest Practice Rules.

Mitigation Measure #12: Immediately Halt Construction if Cultural Resources are Discovered

Concentrations of prehistoric or historic artifacts or other significant cultural resources are not likely to be encountered during construction, since the known historic site will be protected by avoidance. It is possible, however, that buried cultural resources could be unearthed during construction, and without this mitigation measure, such inadvertent discovery could lead to a significant impact if the construction was not halted pending an evaluation. If cultural resources are encountered during construction, all work shall be immediately halted in that immediate area until a CAL FIRE archaeologist can be brought-in to evaluate the discovery. Examples of prehistoric artifacts to be alert for include stone flakes or flake tools made from chert or obsidian, stream cobbles, and items of shell or bone. Historic items may include bottle fragments, fragments of porcelain, nails, cans, buttons, or other items. The archaeologist shall develop appropriate management recommendations. These recommendations shall be carried-out prior to re-initiating any construction activities in the area where the discovery took place.

Mitigation Measure #13: Procedures if Human Remains are Inadvertently Discovered

In accordance with the California Health and Safety Code, if human remains are discovered during ground-disturbing activities, CAL FIRE and/or the project contractor(s) shall immediately halt potentially damaging excavation in the area of the human remains and notify the Napa County Coroner and a qualified professional archaeologist to determine the nature and significance of the remains. The coroner is required to examine all discoveries of human remains with 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050[c]). Following the coroner's findings, the archaeologist and the Most Likely Descendent (designated by the Native American Heritage Commission) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities of Napa County and CAL FIRE to act upon notification of a discovery of Native American human remains are identified in the California Public Resources Code Section 5097.

Mitigation Measure 14: Measures to Prevent Storm Water Pollution

Construction at the site would be subject to requirements of the NPDES construction storm-water Permit, which would be developed by qualified personnel in consultation with the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) and implemented prior to any construction activities. CAL FIRE and/or its representatives and contractors shall be responsible for securing the General Construction Activity Storm Water Permit and preparation and use of a Storm Water Pollution Prevention Plan (SWPPP) submitted to the regional water quality control board prior to the initiation of any ground-disturbing construction activities. CAL FIRE or its contractors would assure that all sediment and erosion control measures specified in this permit are implemented for the duration of the project. A copy of this permit would be retained on the construction site; copies would be provided to all contractors and other parties that would be responsible for implementing the permit's best management practices for water quality. Any necessary storm water quality sampling and reporting associated with the storm water permit shall be the primary responsibility of the project contractor, and shall be performed by qualified personnel in a timely fashion.

Mitigation Measure 15: Measures to Reduce Run-Off and Water Quality Impacts

CAL FIRE shall design this project using Low Impact Development strategies. At a minimum, these will include disconnected downspouts, vegetated swales, and other devices. The facility will be landscaped in a way to maximize on-site infiltration of rainwater and minimize any change to existing drainage patterns and surface runoff. Consideration shall also be given to the use of permeable surfaces for walkways and parking areas.

Summary of Findings

This IS/MND has been prepared to assess the project's potential effects on the environment and an appraisal of the significance of those effects. Based on this IS/MND, it has been determined that the proposed project will not have any significant effects on the environment after implementation of mitigation measures. This conclusion is supported by the following findings:

1. The proposed project will have no effect related to land use and planning, mineral resources, population and housing, public services, transportation and traffic, and recreation.
2. The proposed project will have a less than significant impact on aesthetics, agriculture and forest resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, and utilities and service systems.
3. Mitigation is required to reduce potentially significant impacts related to air quality, biological resources, cultural resources, and hydrology and water quality.

The Initial Study/Environmental Checklist included in this document discusses the results of resource-specific environmental impact analyses which were conducted by the Department. This Initial Study revealed that potentially significant environmental effects could result from the proposed project; however, CAL FIRE revised its project plans and has developed mitigation measures which will eliminate impact or reduce environmental impacts to a less than significant level. CAL FIRE has found, in consideration of the entire record, that there is no substantial evidence that the proposed project as currently revised and mitigated would result in a significant effect upon the environment. The IS/MND is therefore the appropriate document for CEQA compliance.

INITIAL STUDY/ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION					
1. Project Title:	Las Posadas FFS Replacement Project				
2. Lead Agency Name and Address:	California Department of Forestry and Fire Protection P.O. 944246 Sacramento, CA 94244-2460				
3. Contact Person and Phone Number:	Dan Foster (916) 653-0839				
4. Project Location:	Las Posadas FFS, Napa County				
5. Project Sponsor's Name and Address:	N/A (CAL FIRE is project sponsor and lead agency)				
6. General Plan Designation:	R: Resource				
7. Zoning:	AW (Agricultural Watershed)/AC (Airport Compatibility)				
8. Description of Project: See Pages 9-10 of this document					
9. Surrounding Land Uses and Setting:	Refer to page 11 of this document				
10: Other public agencies whose approval may be required:	See pages 21-22 of this document				
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:					
<p>The environmental factors checked below are the ones which would potentially be affected by this proposed project and were more rigorously analyzed than the factors which were not checked. The results of this analysis are presented in the detailed Environmental Checklist which follows.</p>					
<input type="checkbox"/>	Aesthetics	<input checked="" type="checkbox"/>	Agriculture and Forestry Resources	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology / Soils
<input checked="" type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards & Hazardous Materials	<input type="checkbox"/>	Hydrology / Water Quality
<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation / Traffic	<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

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

Daniel G. Foster

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Environmental Protection Program, Room #1516-37
Department of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460
(916) 653-0839

November 10, 2010

December 22, 2010

Date Signed

ANALYSIS OF POTENTIAL ENVIRONMENTAL IMPACTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Will the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

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

Less than Significant Impact. The project site is adjacent to an existing CAL FIRE Forest Fire Station on a state forest which was first established in 1950s. The new construction will be consistent with the current station and rural ranch farm structures in the general vicinity. The new buildings are set back 300 feet from Las Posadas Road. Tree removal will be limited to those necessary for construction with the intent to maintain the forest environment. Most of the adverse impact to the quality of the current vista would be short-term – lasting only during the 12-month construction period. Completion of the project and maturation of associated landscaping would recreate a setting very similar the appearance to current conditions. The new communication tower will be approximately 30 tall but will be significantly shorter than the surrounding trees and not likely to be readily noticeable. It will be located behind the new apparatus building. The tower would not dominate the landscape and is not expected to adversely affect the aesthetic quality of the vista. The effects from the project would result in a less-than-significant impact on the scenic vistas.

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

Less than Significant Impact. The project site is adjacent to an existing CAL FIRE Forest Fire Station on a state forest which was first established in 1950s. The location is not near or visible from a state scenic highway. Tree (oak and conifers) removal will be limited to only those trees located within the foot print of the buildings. Removal will be accomplished under the supervision of CAL FIRE’s Unit Forester by a Licensed Timber Operator as required by the California Forest Practice Rules. The project would include new landscaping including planted trees, and when mature, the appearance of the new station would be very similar to current conditions. There are no rock outcroppings in the area. This new location is necessary to protect and preserve the historical building of the current station. The impact would be less than significant.

c) Will the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. See Discussion under I(a) and (b).

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

Less than Significant Impact. The proposed Forest Fire Station would include new exterior and interior lighting for the operation of the apparatus building, barracks and messhall, and appurtenant facilities. However, lighting associated with the project would be limited to the project site. The project site and existing station are not visible from the community of Angwin. There is a screen of conifers and hardwoods between the project site and Las Posadas road. Lighting sources already exist at the existing station which will be transferred to the new project site; therefore, this would be a less-than-significant impact.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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II. Agriculture and Forest Resources.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

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

No Impact. The project site is not designated as farmland by Napa County or by the Farmland Mapping and Monitoring program of the California Resources Agency.

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

Less than Significant Impact. Napa County has zoned the project site as Agricultural Watershed (AW)/ Airport Compatibility (AC). Napa County does not consider the project site as potential crop land. Forest Fire Station use is consistent with allowable uses of Agricultural Watershed lands. Airport Compatibility (AC) – the new construction will not cause any additional airport obstructions to flights that may constitute hazards to aircraft or people on the ground. There will be no change in existing density as the number of people using the new construction will be the same as those currently using the existing station.

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

No Impact. As discussed in subsection (d) below, the project would result in conversion of less than three acres of timberland but would not conflict with existing zoning nor would the area require rezoning.

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

Less than Significant Impact. The proposed project includes the removal of conifer and hardwood trees within the footprint of the project. A Registered Professional Forester on staff at CAL FIRE has determined this proposed tree removal constitutes timber operations which are subject to the California Forest Practice Rules. Specifically, less than three acres of timberland would be converted to fire station use and no longer available for growing trees. This is not considered a significant environmental effect, however, because adherence to the Forest Practice Rules would minimize impacts.

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

Less than Significant Impact. The proposed project includes the removal of conifer and hardwood trees within the footprint of the project. A Registered Professional Forester on staff at CAL FIRE has determined this proposed tree removal constitutes timber operations which are subject to the California Forest Practice Rules. Specifically, less than three acres of timberland would be converted to fire station use and no longer available for growing trees. This is not considered a significant environmental effect, however, because adherence to the Forest Practice Rules would minimize impacts.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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III. Air Quality.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Will the project:

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

- | | | | | |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

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

Less than Significant Impact. The Bay Area Air Quality Management District (BAAQMD) was informally consulted during the Initial Study conducted by CAL FIRE for this proposed project. The BAAQMD has prepared an Air Quality Plan which it implements through its rules and permitting program with the goal of achieving compliance with the state PM10 standard and the maintenance of the other air quality standards. This project would not obstruct implementation of that air quality plan. The long-term operation of this station would not require any additional employees, nor would the number of emergency response vehicle trips increase as a result of the project. Consequently, project implementation would not result in an increase in vehicle miles traveled and would not conflict with or obstruct implementation of air quality planning efforts. Furthermore, construction of the project would not result in the operation of any major stationary emission sources. This impact is considered less than significant.

b) Will the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Short-term Construction Emissions

Less than Significant with Mitigation. Construction emissions are described as short-term or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially fugitive PM10 dust emissions. Fugitive dust emissions are primarily associated with site preparation and transportation of fill. They vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area and vehicle miles traveled by construction vehicles on and off site. Organic gas and nitrogen oxide emissions are primarily associated with gas and diesel equipment exhaust and the application of architectural coatings. With respect to the proposed project, demolition of existing facilities, grading and import of engineered fill, compacting site, and construction of new facilities will result in the temporary generation of emissions. These will occur during demolition, excavation, grading, clearing, material transport, employee commute trips, laying of concrete foundations, paving, frame erection, equipment installation, finishing, cleanup, landscaping and other miscellaneous activities.

The BAAQMD has not developed quantitative significance thresholds for construction emissions. Instead the BAAQMD emphasizes implementation of best available and technically feasible control measures rather than requiring a detailed evaluation of construction emissions. Without BQAMD-recommended mitigation measures, temporary construction emissions could violate or contribute substantially to an existing or projected air quality violation. As a result, this impact is considered potentially significant. Implementation of Mitigation Measure #1 (which is consistent with the BAAQMD’s standards) will reduce short-term construction-generated emissions to a less than significant level.

Mitigation Measure #1: Measures to Reduce Short-Term Construction-Generated Emissions

Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to the following, when necessary⁴:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites, and also sweep adjacent public streets if visible soil material is carried onto such streets during construction.
- All construction equipment shall be maintained in proper tune according to manufacturers' specifications to ensure minimum emissions under normal operations.

Long-term Operational Emissions

Less than Significant Impact. Operation of the project will not result in a net increase of long-term regional organic gas, nitrogen oxide, PM10, or local carbon monoxide emissions from area or mobile sources. The long-term operation of the proposed project will not require any additional employees, and will not result in any associated employee commute trip emissions. With respect to mobile source emissions, CAL FIRE will continue to operate two engines out of this station and the average number of emergency calls will not change with project implementation. Area source emissions associated with landscaping and maintenance activities will take place at the same level as without the project. Project implementation will not result in the operation of any new major stationary emission sources.

The long-term facility operation will include a refueling facility, a source that currently exists on the project site and a backup generator, which will be a new source on this site. The backup generator will only be used during periods when there is a power outage and as such its use will be minimal. Operation of these stationary sources will be subject to BAAQMD permitting and best available control technology requirements. Long-term operational emissions will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) Will the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant with Mitigation. The station is an existing operation that will not substantially change following completion of the replacement facility. Construction of the project will generate short-term emissions of fugitive dust and mobile source emissions associated with the on-site equipment operation and off-site material and employee transport. This will only occur during a relatively short period when a variety of grading and trenching equipment will be used such as scrapers, bulldozers, excavators, compactors, front-end loaders, water trucks, back hoes, dump trucks, and other miscellaneous equipment. The numbers and types of equipment used during construction activities typically vary from day to day depending on the specific operations being conducted. The emissions produced during project construction are short-term in the sense that they will be limited to a short initial construction period and

⁴ The term "*when necessary*" was inserted into this mitigation measure to provide flexibility in response to current conditions. For example, on days where it is currently raining or has recently rained a lot and ground conditions are sufficiently damp to prevent dust from becoming airborne, watering the construction areas twice or three times a day might not be necessary. If sufficiently wet conditions do not exist, these watering requirements shall be carried out as written.

will only be experienced downwind of the project site. Open outdoor fires will not be set for any purpose without a valid permit from the BAAQMD. Implementation of Mitigation Measure #1, as described above, will reduce short-term construction-generated emissions to a less than significant level.

d) Will the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant with Mitigation. Sensitive receptors in the vicinity of the proposed project include on-site CAL FIRE personnel stationed at Las Posadas FFS. In the short-term, it also includes construction workers, and the vineyard workers and occupants of the residence located along the access road. The potential exists for significant impact from fugitive dust emissions, particularly considering the amount of engineered fill to be transported to the project site. Implementation of Mitigation Measure #1, as described above, will reduce this impact to a less than significant level.

e) Will the project create objectionable odors affecting a substantial number of people?

Less than Significant Impact. The occurrence and severity of odor impacts depend on numerous factors including the nature, frequency, and intensity of the source; wind speed and direction, and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Project implementation will not result in any major sources of odor and because the proposed facility is not one of the common types of facilities that are known to produce odors (e.g. landfill, wastewater treatment, cannery, etc.). In addition, the diesel exhaust from the use of on-site construction equipment will be intermittent and temporary, and will dissipate rapidly from the source with an increase in distance.

Project construction and operation will not involve the use of any materials that could create objectionable odors with the exception of diesel exhaust and fuel vapors that may be considered to be an objectionable odor by some individuals. However, these odors are common to fire stations and construction sites. Because of the anticipated rapid dissipation of gases in the air and the distance to the nearest potentially sensitive receptors, potential for the project to generate objectionable odors is minimal over the current baseline. As a result, this impact is considered less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Will the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

migratory wildlife corridors, or impede the use of native wildlife nursery sites?

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Information about Biological Resources

Plant Resources

Plant species considered rare, threatened, endangered or of special concern that may occur within the project area were first identified with a California Natural Diversity Data Base (CNDDB) 9-quad query adjacent to and including project quad St. Helena by Mr. Frank Kemper of the California Department of Forestry and Fire Protection on August 21, 2008. Once it became known that wetland areas and associated plant species occur in close proximity to the proposed project site #2, the Department recruited botanical expertise on staff at California Department of Fish and Game through an Interagency Agreement. CDFG staff conducted an additional records review and botanical field survey on April 30, 2009 (CDFG 2009). These researchers generated a comprehensive list of rare, threatened, endangered or plants of special concern that might exist in the project vicinity. That list is included in the CDFG report, on file at CAL FIRE. The list of potential plant species was subsequently reviewed for potential occurrence in the Location #2 project area by Ms. Cheryl Burton and Mr. Jeb Bjerke, Department of Fish and Game, Habitat Conservation Planning Branch. Species were included or excluded from further consideration based on such factors as habitat type(s) occupied, elevational distribution, and soil type or other micro site requirements. Seven plant species of concern emerged from that review (CDFG 2009). These species are:

Species/Common Name	Status	Habitat Needs
<i>Brodiaea californica</i> var. <i>leptandra</i> narrow-anthered California brodiaea	Federal- None State - None *Other- CRPR 1B.2	•Broadleafed upland forest (BUFRs) •Chaparral (Chprl) •Cismontane woodland (CmWld) •Lower montane coniferous forest (LCFRs) •Valley and foothill grassland (VFGrs)/volcanic, serpentine soils Blooming Period May-July Elevation Range 360-3000 feet
<i>Lupinus sericatus</i> Cobb Mountain lupine	Federal- None State - None *Other- CRPR 1B.2	Broadleafed upland forest (BUFRs) •Chaparral (Chprl) •Cismontane woodland (CmWld) •Lower montane coniferous forest (LCFRs) Blooming Period March-June Elevation Range 591-4921 feet
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	Federal- None	•Broadleafed upland forest (BUFRs)(openings)

	State - None *Other- CRPR 1B.2	•Chaparral (Chprl) •Cismontane woodland (CmWld) Blooming Period April-July Elevation Range 490-6560 feet
<i>Streptanthus breweri</i> var. <i>hesperidis</i> green jewel-flower green jewel-flower (cont.)	Federal- None State - None *Other- CRPR 1B.2	•Chaparral (Chprl)(openings) •Cismontane woodland (CmWld)/serpentine, rocky Blooming Period May-July Elevation Range 427 – 2496 feet
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	Federal- None State - None *Other- CRPR 1B.2	•Cismontane woodland (CmWld) •Valley and foothill grassland (VFGrs) Blooming Period March-June Elevation Range 164 – 1640 feet
<i>Arctostaphylos manzanita</i> ssp. <i>elegans</i> Konocti manzanita	Federal- None State - None *Other- CRPR 1B.3	•Chaparral (Chprl) •Cismontane woodland (CmWld) •Lower montane coniferous forest (LCFRs)/ volcanic soil Blooming Period March- May Elevation Range 1300 – 5300 feet
<i>Ceanothus divergens</i> Calistoga ceanothus	Federal- None State - None *Other- CRPR 1B.2	Chaparral (Chprl)/volcanic, serpentine soil Blooming Period February- March Elevation Range 541- 3117 feet

* The California Rare Plant Rank⁵ (CRPR) Lists:

⁵ The California Department of Fish and Game (CDFG) recently changed the name of the California Native Plant Society (CNPS) List to the California Rare Plant Rank (CRPR). This was done to reduce confusion over the fact that currently the Rare Plant Status Review groups (which include over 300 botanical experts from government, academia, and private sector) produce rank assignments for rare plants and both CDFG and CNPS jointly manage this collaborative effort. The old name gave the false impression that CNPS solely assigned the ranks and therefore had excessive influence on the regulatory process (CDFG 2010).

The plants of List 1A are presumed extinct because they have not been seen or collected in the wild in California for many years.

Rank 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere. The plants of List 1B are rare throughout their range. All but a few are endemic to California. All of them are judged to be vulnerable under present circumstances or to have a high potential for becoming so because of their limited or vulnerable habitat, their low numbers of individuals per population (even though they may be wide ranging), or their limited number of populations. Most of the plants of List 1B have declined significantly over the last century.

Rank 2: Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere. Except for being common beyond the boundaries of California, the plants of List 2 would have appeared on List 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the Endangered Species Act. Until 1979, a similar policy was followed in California. However, after the passage of the Native Plant Protection Act, plants were considered for protection without regard to their distribution outside the state.

Rank 3: Plants About Which We Need More Information - A Review list

Rank 4: Plants of Limited Distribution - A Watch list

Threat Ranks: The CRPR Threat Rank is an extension added onto the CRPL List and designates the level of endangerment by a 1 to 3 ranking, with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all List 1B's, List 2's and the majority of List 3's and List 4's. All List 1A (presumed extinct in California) plants, and some List 3 (need more information) and List 4 (limited distribution) plants, which lack threat information, do not have a Threat Rank extension.

Threat Ranks

- 0.1-Seriously threatened in California (high degree/immediacy of threat)
- 0.2-Fairly threatened in California (moderate degree/immediacy of threat)
- 0.3-Not very threatened in California (low degree/immediacy of threats or no current threats known)

In addition to the seven plant species of concern listed above, CAL FIRE became aware of the presence of Napa bluecurls (*Trichostemma ruygtii*), a plant associated with wetlands habitat which has been found in the vicinity of the project area within Las Posadas State Forest. When CDFG completed its research in June 2009 the plant was tracked by the CNPS but not listed. Subsequent to the CDFG report this plant has been elevated to Rank 1B.2 status and was therefore carefully evaluated by CAL FIRE during the Initial Study for Location #3, as were the seven species of concern previously identified. CAL FIRE determined that the botanical research completed for Site #2 produced a triaged list of plants of concern which could also occur within Site Location #3, the current proposed project area.

Botanical surveys of the current project area were made by CAL FIRE RPF Gerri Finn on several different site visits which took place between April 2010 and October 2010. None of these plants were observed. To confirm the absence of these plants, CAL FIRE shall conduct additional botanical surveys of the project site prior to construction (see Mitigation Measure 2 below).

Animal Resources

Animal species considered rare, threatened, endangered or of special concern that may occur within the project area were first identified with a CNDDDB 9-quad query adjacent to and including project quad St.

Helena by Mr. Frank Kemper of the California Department of Forestry and Fire Protection on August 21, 2008. The list of potential animal species was subsequently reviewed for potential occurrence in the project area by Mr. Stuart Itoga, Department of Fish and Game, Habitat Conservation Planning Branch. Species were included or excluded from further consideration based on such factors as habitat type(s) occupied, and distribution. A field and CNDDDB output review conducted by CAL FIRE personnel and Ms. Corrine Gray Department of Fish and Game Bay Delta Region (field review on March 3, 2009) identified three additional species to be included in the impact analysis (Northern spotted owl, California red-legged frog, and foothill yellow-legged frog). Six animal species of concern were identified as a result of the CDFG/CAL FIRE reviews. These species are:

Actinemys marmorata marmorata (northwestern pond turtle) CDFG Species of Special Concern

Aestivates during summer droughts by burying itself in soft bottom mud. In some areas it inhabits streams that dry out most years where it moves onto land to hibernate under dense brush or wood rat nests. Nests are typically dug in a substrate with a high clay or silt fraction. Inhabits permanent or nearly permanent bodies of water below 6000 feet in elevation. Most nest sites of this species occur on generally south or west facing micro slopes. Most nesting areas are characterized by sparse vegetation, usually short grasses or forbs. Egg laying and nest site scrapes occur as early as late April in southern and central California (Rathbun et al. 1993 fide Holland 1994). The relative extent of nesting areas has not been and may not be possible to determine for most regions and is likely a very small percentage of total area available (Holland 1994 p. 5-7). Distance to water was determined for 252 nest sites (distribution wide *Clemmys marmorata*) and ranged from 3 to 402 m from the watercourse and averaged 49.2m. Movements within riverine (up to 1550 m) and other habitats can be extensive over the course of a summer season (Holland 1994). Terrestrial habitats are also used for overwintering and dispersal. Holland (1994) noted that, based on preliminary evidence, all or a majority of turtles in two rivers in Oregon and California overwintered on land (up to 500m from the watercourse). Turtles may move several times when overwintering in terrestrial habitats. The frequency of overland dispersal movements, while they can be considerable (up to 5km), appears limited and variable.

Rana boylei (foothill yellow-legged frog) CDFG Species of Special Concern

Frequents shallow, slow, gravelly streams and rivers with sunny banks, in forests, chaparral, woodlands. Mating and egg-laying occur in water from mid March until June after streams have slowed from winter runoff. Clusters of eggs are attached to the downstream side of submerged rocks. Tadpoles transform in about 15 weeks, from July to September. Usually found near water and mostly active during daylight. Unlike most other ranid frogs in California, this species is rarely encountered (even on rainy nights) far from permanent water. In California, breeding and egg laying usually await the end of spring flooding and may commence any time from mid-March to May. Tadpoles require water for at least three or four months while completing their aquatic development. During periods of inactivity, especially during cold weather, individuals seek cover under rocks in the streams or on shore within a few meters of water.

Rana draytonii (California red-legged frog) federal Threatened, CDFG Species of Special Concern

Mating and egg-laying occur in permanent bodies of water from late November to April, depending on the location. Eggs hatch after about four weeks. Tadpoles metamorphose in four to five months. Found in humid forests, woodlands, grasslands, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. <http://www.californiaherps.com/frogs/frogs.html> Requires permanent or nearly permanent pools for larval development. Intermittent streams must retain surface water in pools year-round for frog survival. May require rains for dispersal. Individuals have been found considerable distances from breeding sites on rainy nights.

Antrozous pallidus (pallid bat) CDFG Species of Special Concern

Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging.

Corynorhinus townsendii (Townsend's big-eared bat) CDFG Species of Special Concern

Reported to utilize buildings, bridges, rock crevices and hollow trees as roost sites. Maternal colonies form between March and June.

Strix occidentalis caurina (Northern spotted owl) federal Threatened, CDFG Species of Special Concern.

In northern California, resides in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300 m (0-7600 ft). Usually nests in tree or snag cavity, or in broken top of large tree. Less frequently nests in large mistletoe clump, abandoned raptor or raven nest, in cave or crevice, on cliff or ground. Mature, multi-layered forest stands are required for breeding. Requires blocks of 40-240 ha (100-600 ac) of mature forest with permanent water and suitable nesting trees and snags. In northern California, apparently prefers narrow, steep-sided canyons with north-facing slopes.

The California Natural Diversity Database and the Spotted Owl Database are based on actual observations of rare plant and animal species and communities statewide with the goal of providing the most current information available on the state's most imperiled elements of natural diversity. Consequently the data provided does not represent an exhaustive and comprehensive inventory. In order to assess the likelihood of additional terrestrial vertebrate species of concern occupying habitats present within the project area, the California Wildlife Habitat Relationships System was queried by Mr. Robert Motroni, Senior Wildlife Biologist, California Department of Forestry and Fire Protection. Special status animals resulting from that query and not included in the original CNDDB report that may occur on the project area due to presence of potentially suitable habitat are:

Lasiurus blossevillii (Western Red Bat) CDFG Species of Special Concern

Roosts primarily in trees, less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas. Migrates in the spring (March-May) and autumn (September-October).

Asio otus (Long-eared owl) CDFG Species of Special Concern

Breeding extends from early March to late July. Frequents dense, riparian and live oak thickets near meadow edges, and nearby woodland and forest habitats. Utilizes crow, magpie, hawk, heron, and squirrel nest in a variety of trees with dense canopy for nesting.

Neo-tropical migrant passerine birds (e.g. olive-sided flycatcher, yellow warbler and others) protected under the Migratory Bird Treaty Act and California Fish and Game Code Section 3503, 3513, and 3800 requirements.

Bassariscus astutus (Ringtail) CDFG Fully Protected

Nests in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests. Usually not found more than 1 km (0.6 mi) from permanent water.

Taxidea taxus (American Badger) CDFG Species of Special Concern

Occupy a diversity of habitats. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.

Discussion

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

Less than Significant Impact with Mitigation Incorporated.

Plant Species

Onsite or vicinity plant surveys have been conducted by the Department of Fish and Game, CAL FIRE's Senior Wildlife Biologist and the project forester. Public input has been received by a local plant expert. Due to the information derived during the development of the project, the site has been relocated to avoid impacts to sensitive plant species as well as impacts (hydrological changes) caused by the construction of the new fire station.

CAL FIRE will encourage the maintenance and use of native plants for station landscaping. Invasive plants will be avoided to the extent feasible. Invasive species such as broom (various types) that are prevalent in the Angwin area are being targeted for removal throughout the state forest as part of the vegetation management on the forest.

Mitigation Measure 2: Measures to Protect Special Status Plant Species:

In addition to the onsite and vicinity surveys already conducted, a CAL FIRE wildlife biologist, botanist, forester, or other qualified person will conduct a survey at the appropriate time of year (e.g. flowering or readily identifiable vegetative state) to determine the presence or absence of special status plant species prior to the commencement of construction. Special status plant populations detected within the project area will be avoided at the time of project implementation. If protection through avoidance is not feasible, CAL FIRE shall consult with the California Department of Fish and Game and/or appropriate federal agency.

American Badger

Although unlikely, given the uncommon nature of this species and small spatial extent of the project area, burrows utilized by this species may be crushed with vehicle access or excavation equipment use.

Mitigation Measure 3: Measures to Protect American Badger

Identify and avoid burrow systems that appear actively used (presence of tracks or scat) and are accessed with an opening of approximately 6 inches or greater in diameter. A CAL FIRE wildlife biologist or other qualified person will survey project area prior to ground disturbing activities. CAL FIRE shall consult with the California Department of Fish and Game should any active burrow system exhibiting these characteristics be identified.

Ringtail Cat

Some trees will be removed during construction. In addition, conifer and hardwood trees that have died from various causes have been regularly removed from the site by Station personnel, reducing snag and down log recruitment and consequently the number of available cavities for denning and cover.

Mitigation Measure 4: Measures to Protect Ringtail

Retain all trees exhibiting cavities or snags/down logs greater than 11 inches DBH that are not a hazard within the project area or require removal to facilitate construction.

Bat Species

Some trees will be removed during construction. In addition, conifer and hardwood trees that have died from various causes have been regularly removed from the site by Station personnel reducing snag and down log recruitment and consequently the number of available cavities for roosting or maternal colonies. Bats can occupy trees year round and are particularly susceptible to disturbance during the maternity season and during hibernation. Some bats, such as pallid bats, do not migrate and stay close to their summer roosts. Pallid bats are also known to switch roosts on a daily basis and seasonally. To minimize impact to bats, the following mitigation measure will be carried out.

Mitigation Measure 5: Measures to Protect Bat Species

~~Retain all trees exhibiting cavities or snags greater than 11 inches DBH that are not a hazard or require removal to facilitate construction within the project area. Removal of trees/snags that also exhibit cavities to facilitate construction that is consistent in timing with that identified for migratory bird species (ground disturbing operations conducted September-January) will likely also protect maternal colonies and reduce roost site impact.~~

All trees suitable for use by bats within the project area shall be surveyed for signs of bats by a Department Biologist, Forester, or other qualified person no earlier than two to three days prior to tree removal or construction activities. If bats are discovered during the surveys then a buffer of 100 to 150 feet shall be established. The optimal time to remove trees is September 15 through October 15, when young would be capable of flying and February 15 to April 1 to avoid hibernating bats and prior to formation of maternity sites.

Ranid Frogs (*R. draytonii* and *R. boylii*)

Neither species is expected to occur within or immediately adjacent to the project site. The upper reaches of Moore Creek are approximately 750 feet from the project area, are intermittent, and do not provide a permanent or semi-permanent source of water of sufficient duration to support breeding by these species. Similarly, other man made and natural drainages/swales within or adjacent to the project site are temporary and transport water only as a result of rainfall events. It is very unlikely that movements of the most terrestrial of these species (*R. draytonii*) would include the project site, particularly during time periods under which construction is to take place. No impact. No mitigation measure is proposed.

Northwestern pond turtle

This species has been noted approximately ½ of a mile southeast of the project site at Moore Creek. This stream course borders the eastern edge of the project area. CAL FIRE Senior Biologist has surveyed the project vicinity with negative results for Northwestern pond turtle. Construction activities could result in loss of upland overwintering and nest sites. The distance at which pond turtles will leave the aquatic environment for nesting or overwintering is variable. The likelihood of impact to nesting habitat, adults, eggs, or young is considered low in occurrence but potentially high in terms of effect to the local population.

Mitigation Measure 6: Measures to Protect Northwestern pond turtle

Prior to tree or brush removal, a CAL FIRE wildlife biologist, forester, or other qualified person will conduct a visual survey for nest site scrapes or overwintering sites. Any identified site will be protected

through avoidance. If protection by avoidance is not feasible, CAL FIRE shall consult with the CDFG to develop appropriate strategy for protection, which may include scheduling project activities after hatching or possibly relocating overwintering adults to similar habitat within the project vicinity. See Holland (1994) for examples of these sites.

Long-eared owl

This species is not currently known from the project area although suitable nesting habitat is present. CAL FIRE's Senior Wildlife Biologist has previously surveyed the project vicinity on three occasions with negative results for Long-eared owl. Tree and brush removal and disturbance associated with construction activities could result in nest site abandonment. Seasonal restrictions on the removal of vegetation to protect breeding bird species under the Migratory Bird Treaty Act will provide nest site protection within the footprint of proposed construction. Disturbance associated with construction activities occurring from March 1 to July 30 will likely negatively affect any nesting attempt in suitable habitat adjacent to the proposed project.

Mitigation Measure 7: Measures to Protect Long-eared owl

A CAL FIRE wildlife biologist, forester, or other qualified person will conduct a three visit visual survey for occupied nest sites adjacent to the proposed project footprint and for a 500 foot radius distance. Surveys are to be equivalently spaced across the March through May period. Consultation with the CDFG is required if an occupied nest site is identified to develop site specific measures to avoid disturbance.

Northern spotted owl

The northern spotted owl (NSO; *Strix occidentalis caurina*) is listed as threatened under the federal Endangered Species Act and is a California Species of Special Concern. Conversion of NSO habitat has resulted in fragmentation of NSO habitat in the Angwin area. A CAL FIRE Wildlife Biologist assessed the potential impact to NSO habitat resulting from the permanent conversion of two acres of forest land and concluded the following:

The proposed project occurs within a 0.7 mile radius of Northern Spotted Owl Activity Center NAP0028 (UTM Coordinates 4267830 North 551340 East). A pair of owls was first noted for this Activity Center in 1992 producing 1 young. Survey visits (3 per year for 2003, 2004 and 2007) did not result in any NSO detections.

A six visit USFWS protocol survey conducted in 2009 did not detect owls. USFWS protocol surveys to determine Activity Center status will be conducted prior to commencement of ground disturbing activities. Documentation of Activity Center occupancy or nest site location will require the establishment of a 1/4 mile disturbance buffer during the breeding season of February 1 through July 30. In addition, within that period and disturbance buffer, no tree removal or construction activities other than use of existing roads shall be conducted.

Implementation of the project will result in removal of 2 acres of Northern Spotted Owl foraging habitat or conversion to a non-suitable condition. Habitat typing within a 0.7 mile radius of the historic Activity Center presently markedly exceeds recommended USFWS acreage requirements for foraging (300 acres). It is highly unlikely that conversion of 2 acres of foraging habitat approximately 0.4 mile distant of the historic AC to a non-suitable condition given current extent of that habitat type, implementation of protocol surveys, and establishment of disturbance buffer with seasonal activity restriction if necessary, would result in take of this federally listed species (Motroni 2010).

This species is not currently known in the project area although an isolated population occurs near the community of Angwin (Ms. Corrine Gray Department of Fish and Game field review on March 3, 2009). Northern Spotted Owl (NSO) surveys of the project area and surrounding 236-acre area were conducted by CAL FIRE Foresters in 2009. A one-year protocol survey was conducted with six visits to each of four calling points. One unidentified bird response was noted on April 19, 2009, however, no NSO responses were documented (Connor 2009). The U.S. Fish and Wildlife Service (USFWS) has subsequently changed its protocols to determine presence or absence of this species. Tree removal and construction-related disturbance could result in nest site abandonment if habitat on or adjacent to the project site is used by the northern spotted owl. To avoid this potential impact, CAL FIRE shall complete additional NSO surveys prior to construction, in accordance with current USFWS protocols, and shall consult with the CDFG if those surveys indicate the species may be present, as stipulated in Mitigation Measure 8.

Mitigation Measure 8: Measures to Protect Northern spotted owl

A CAL FIRE wildlife biologist, forester, or other qualified person will conduct surveys to recognized U.S. Fish and Wildlife Service protocols (two year survey- six visits per year per calling point) to determine presence/absence of this species within and adjacent to the project area. If a NSO activity center is discovered prior to or during construction, within 1000 feet of the project area, consultation with CDFG to develop site specific measures to avoid take of this federal threatened species will occur.

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

Less than Significant Impact. The project has been located to avoid riparian habitat. The project site contains no wetlands or riparian areas; however, the upper intermittent reaches of Moore Creek are approximately 750 feet north of the project site. No riparian vegetation occurs within or immediately adjacent to the project area that could potentially be affected by the proposed project. The proposed project includes the construction of new storm water drainage facilities. Short-term adverse environmental impacts would be minimized through implementation of the SWPPP and other safeguards in place to minimize the movement of sediment during construction (see discussion in Section VIII(a) above). Appropriate storm water drainage facilities would be constructed at the new station.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. No wetlands as defined by Section 404 of the Clean Water Act occur at the project site or will be affected by construction. The project was relocated to avoid impacts to wetlands. During the preparation of the project, it was discovered that Site #1 was located in a possible wetland. Due to this concern, the project was located to Site #2 which was not within a potential wetland but was within 150 feet of the wetland. A public and CDFG concern was brought to CAL FIRE's attention that, although the project was no longer in the wetland, project development may affect the drainage pattern in the vicinity of the wetland and therefore the wetland itself. To avoid this potential impact the project site was once again relocated, this time to Site #3. Site #3 is located on gently sloping terrain, approximately 500 feet south of the wetland near Site #1 and #2, and drains in a pattern that is consistent with the present Fire Station Site. The project and the drainage of the site will not impact the wetland at Site #1.

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

Less than Significant with Mitigation. Several raptor species are known to occur in the vicinity of the proposed project but have not been observed utilizing the site. No nest structures are visible in trees within or nearby the station. The proposed project is not likely to substantially interfere with raptors.

Neo-tropical migratory bird populations are declining throughout the United States. Lead agencies must consider impacts to those species potentially harmed by a proposed project. The Migratory Bird Treaty Act (MBTA) protects many species of migratory birds. Although this proposed project will not include actions intended to directly harm such birds, the removal of existing trees and other vegetation within the project site could result in harm to protected birds and/or their eggs or young. This impact will occur if migratory birds nested within the project site, nests were not identified, and construction activities were to take place during the nesting season.

Although raptors and other migratory nesting birds are known to utilize adjacent undeveloped habitat, and a mitigation measure has been developed to protect such birds, the proposed project is unlikely to disturb any native resident or migratory fish or wildlife species, migratory corridors, or impede the use of native wildlife nursery sites. Implementation of Mitigation Measure #9 would reduce this impact to a less than significant level.

Mitigation Measure #9: Measures to Protect Migratory Bird Species

Nest sites of migrant bird species or raptors occupying the project site will be avoided to protect project year nest site production and achieve compliance with Migratory Bird Treaty Act and California Fish and Game Code Section 3503, 3513, and 3800 requirements. If tree removal and other vegetation clearing will occur between February 1 and September 1, ~~CAL FIRE shall ensure that a preconstruction nesting survey be conducted no sooner than two weeks in advance of the activity by an ornithologist, wildlife biologist, forester, or other qualified person. Identified nest sites will be protected with a 100-foot radius buffer until it is determined that young have left the nest or the nesting attempt has failed.~~ a preconstruction nesting survey shall be conducted in advance of the activity by an ornithologist, wildlife biologist, forester, or other qualified person under the following conditions:

1. surveys for birds will be conducted no earlier than 14 days prior to tree removal and/or breaking ground.
2. in the event that nesting birds are found, CAL FIRE will consult with CDFG and obtain approval for nest-protection buffers prior to tree removal and/or ground-breaking activities, and
3. nest protection buffers will remain in effect until the young have fledged.

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

Less than Significant with Mitigation. Napa County General Plan includes an Oak Protection policy. The Open Space and Conservation Element requires hardwood cutting to maintain adequate stands of oaks for wildlife, slope protection, and acorn production. Natural groups of oaks should be retained and replanting will be required. The project plan is to retain all trees except those in the foot print of the building sites and paved areas. As a result, this impact is considered potentially significant. Implementation of Mitigation Measure #10 (which is consistent with the County-recommended standards) and Mitigation Measure #11 would reduce it to a less than significant level.

Mitigation Measure #10: Measures to Protect Oak and other Mature Trees

The CAL FIRE Unit Forester has determined that the project site is timberland as defined in PRC 4526 and the removal of trees constitutes timber operations as defined in PRC 4527. This project would convert timberland to other uses and will require the submittal of a conversion exemption/waiver to CAL FIRE pursuant to Section 1104.1(a) of the Forest Practice Rules. Implementation of Mitigation Measure #10 would reduce the effect to less than significant.

Mitigation Measure #11: Timberland Conversion

Within three to six months prior to the commencement of the construction project, the Las Posadas State Forest Manager (or another RPF designated by CAL FIRE) will file a Conversion Exemption and waiver pursuant to Section 1104.1(a) of the Forest Practice Rules. Timber removal will be completed by a Licensed Timber Operator, and the tree removal will be carried out in conformance with all applicable Forest Practice Rules.

Napa County also has a cover retention requirement in certain watersheds which was considered during the Initial Study in the context of the proposed tree removal. The conversion of 1.4 acres of timberland within the 796-acre state forest would not violate the county’s cover retention standard. This impact would be reduced by maintaining native conifer to the extent feasible and including native vegetation in the landscaping of the station site. Implementation of Mitigation Measure #11 would reduce the effect to less than significant.

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

No Impact. The proposed project site is not within the boundaries of a Habitat Conservation Plan, Natural Community Conservation Plan, or other habitat conservation plan. The project does not conflict with implementation of any such plan in this part of Napa County.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Will the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Information about Cultural Resources

California Executive Order W-26-92, issued in 1992, directs state agencies to complete cultural resource inventories and prepare plans for appropriate management and preservation of significant cultural resources located on state properties. From 1992 to 2000, CAL FIRE initiated inventories for cultural resources upon many of the land parcels which are either owned and managed by the Department or owned by other entities but leased to CAL FIRE for the operation of a state facility. This inventory work is on-going at the Demonstration State Forests, Forest Fire Stations, Nurseries, Air Attack Bases, Conservation Camps, training facilities, Unit, Region, and Sacramento Headquarters and other CAL FIRE facilities and properties across

the state. The survey work is intended to identify archaeological and historical sites, historic buildings, structures, and objects, traditional cultural properties, and other types of cultural resources located on CAL FIRE properties so these resources can be managed. In 2001, the Department completed a comprehensive Management Plan for its Historic Buildings and Archaeological Sites supported by a Programmatic Environmental Impact Report (Foster and Thornton 2001, Foster and Sosa 2001).

As part of this work, two comprehensive, statewide inventories for historic buildings and structures were completed by CAL FIRE's consulting historian Mark V. Thornton. The first of these was an inventory and assessment of all 77 of CAL FIRE's fire lookout stations (Thornton 1993) followed by an inventory and assessment of all FFS compounds, conservation camps, and administrative sites containing buildings or structures which were constructed prior to 1946 (Thornton 1994). A total of 189 pre-1946 buildings and structures were identified at 73 CAL FIRE facilities. Thornton did not evaluate the structures located at Las Posadas State Forest because at the time his report was prepared the structures were less than 45 years old. He did however, include information indicating the existing station buildings were constructed between 1953 and 1957, and the two-bay apparatus building was originally built in 1938 but modified with a new addition in 1956 (Thornton 1994:860).

Also in response to California Executive Order W-26-92, an intensive cultural resource investigation of the entire Las Posadas State Forest property was conducted by a team of researchers from Sonoma State University in the mid 1990's working under a contract with CAL FIRE. This study included a comprehensive review of the historic land use of what is now the State Forest which includes property that was the home, farm, and ranch of the Morris family between 1878 and 1910. The parcel was used as residence, farm, and ranch by Anita D.S. Blake between 1910 and 1929, and has been used since 1928 by the 4-H Club as a children's summer camp. In 1929 Anita D.S. Blake gave Las Posadas to the State of California. In the 1930's a Civilian Conservation Camp existed here, and in 1945 the property officially became Las Posadas State Forest. The existing Forest Fire Station was built in the 1950s on the site of the former CCC camp. The Sonoma State study also included an extensive on-the-ground survey for prehistoric and historic archaeological sites and features which resulted in the identification and recording of 18 prehistoric and historic archaeological sites (Jablonowski, Martin, and Toriello 1995). This impressive work was reviewed and utilized during the Initial Study for the proposed project and additional cultural resource studies were also completed.

During the Initial Studies for this proposed project, each of the three proposed project locations was intensively surveyed by professional archaeologists. Proposed Building Site #1 was surveyed by a professional archaeologist working for CAL FIRE through a services contract with California State University Bakersfield. No cultural resources were located within that original project area (Orfila 2007). Proposed Building Site #2 was surveyed by archaeologists L. Kyle Napton and Elizabeth Greathouse, working for CAL FIRE through a services contract with California State University Stanislaus. No cultural resources were located (Napton 2009). Finally, Proposed Building Site #3 (the current project area) was surveyed by professional archaeologists on staff and under contract at CAL FIRE (Whatford 2010). This survey resulted in the relocation of site CA-NAP-887H, a historic site consisting of a rock foundation, leveled earth pad, and remains of a mortared stone fireplace which was previously recorded during the Sonoma State study. Although located within the project area, the site is located outside of the proposed footprint of the new station and will be protected by avoidance during construction. A buffer zone of at least 20 feet on all sides of the site will be established for protection.

All of these three surveys were conducted in accordance with *Archaeological Review Procedures for CAL FIRE Projects* (Foster and Pollack 2010) and included a current archaeological records check, other pre-field research, consultation with the Native American Heritage Commission and local Native American tribal

groups listed on CAL FIRE's Native American Contact List for Napa County, and an intensive field survey of the area of potential effect.

Discussion

a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?*

Less than Significant Impact. Most of the historic buildings at the existing fire station will be retained. These include a 1953 Barracks/Messhall, 1938/56 2-Bay Apparatus Building, 1957 Gas-and-Oil House, and a 1953 Tank House (Thornton 1994: 860). All of these buildings (except for the Gas and Oil House), and the associated landscaping would be saved by this proposed project. The demolition of the Gas and Oil House would result in an impact to historical cultural resources, but as discussed below, not a significant one.

The Gas and Oil House (see Figure 14) does not meet the significance eligibility criteria listed in state law for historical resources. The Department has concluded that the demolition of the Gas and Oil House would not result in a significant impact to historical resources and no salvage of special architectural features is necessary as part of the demolition process. CAL FIRE's Historic Preservation Officer (Foster) has concurred with this finding. This analysis satisfies the requirements for historic building review specified in the Department's Management Plan for Historic Buildings and Archaeological Sites (Foster and Thornton 2001) which was developed in cooperation with the SOHP. The impact to historic buildings is considered to be less-than-significant.

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

Less than Significant with Mitigation. As mentioned above, a recorded historic site exists within the project area, but it will be protected by avoidance during construction. This site would not be adversely affected during subsequent operations of the new facility; therefore substantial adverse change will not occur. It is possible, however, that buried archaeological resources could be unearthed during construction, and without this mitigation measure, such inadvertent discovery could lead to a significant impact if the construction was not halted pending an evaluation.

Mitigation Measure 12: Immediately Halt Construction if Cultural Resources are Discovered

Concentrations of prehistoric or historic artifacts or other significant cultural resources are not likely to be encountered during construction, since the known historic site will be protected by avoidance. It is possible, however, that buried cultural resources could be unearthed during construction, and without this mitigation measure, such inadvertent discovery could lead to a significant impact if the construction was not halted pending an evaluation. If cultural resources are encountered during construction, all work shall be immediately halted in that immediate area until a CAL FIRE archaeologist can be brought-in to evaluate the discovery. Examples of prehistoric artifacts to be alert for include stone flakes or flake tools made from chert or obsidian, stream cobbles, and items of shell or bone. Historic items may include bottle fragments, fragments of porcelain, nails, cans, buttons, or other items. The archaeologist shall develop appropriate management recommendations. These recommendations shall be carried-out prior to re-initiating any construction activities in the area where the discovery took place.

c) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

No Impact. The field surveys found no evidence of any paleontological resources on this project site, therefore there would be no impact.

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

Less than Significant Impact. No human remains or associated grave goods have been identified within the project area and none are expected to occur. The apparent absence of archaeological resources within the project area makes it unlikely that human remains might be encountered during project construction. Nonetheless, the possibility does exist that buried human remains occur within the project area and if such human remains were unearthed and not protected in accordance with procedures found in state law (see below), this could be a potentially significant impact. To prevent this impact, the Department will be prepared to carry-out provisions in state law pertaining to inadvertent discovery of human remains.

Mitigation Measure 13: Procedures if Human Remains are Inadvertently Discovered

In accordance with the California Health and Safety Code, if human remains are discovered during ground-disturbing activities, CAL FIRE and/or the project contractor(s) shall immediately halt potentially damaging excavation in the area of the human remains and notify the Napa County Coroner and a qualified professional archaeologist to determine the nature and significance of the remains. The coroner is required to examine all discoveries of human remains with 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050[c]). Following the coroner’s findings, the archaeologist and the Most Likely Descendent (designated by the Native American Heritage Commission) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities of Napa County and CAL FIRE to act upon notification of a discovery of Native American human remains are identified in the California Public Resources Code Section 5097.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Discussion

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

No Impact. Although earthquakes are sometimes felt by residents of Napa County, CAL FIRE's review of the above-listed zoning map indicates the project site is not located within a high risk area for earthquake activity. The Division of the State Architect regulates construction standards of emergency services buildings pursuant to the Emergency Services Building Act of 1989 (ESBA). This act pertains to buildings at police stations, fire stations, and other types of facilities where emergency services are coordinated. The ESBA covers any emergency services building over 2000 square feet (sf) in size which houses emergency services apparatus such as engines, radios, base-stations, etc. It requires more stringent design criteria and frequent inspections. None of the buildings proposed for construction at this project would be subject to ESBA regulations. The facility structures are either under the 2,000 sf criteria or they do not house essential emergency apparatus. However, all buildings are designed and constructed using the ESBA criteria. The implementation of these criteria in the design and construction of this facility would ensure safe operations. This would be no impact.

ii) Strong seismic ground shaking?

Less than Significant Impact. As discussed in section VI(a)(i), the Angwin area is not a known location where seismic ground shaking regularly occurs. The proposed buildings and structures will be constructed in compliance with the Uniform Building Code for seismic safety. This would ensure a less than significant impact.

iii) Seismic-related ground failure, including liquefaction?

No Impact. See discussion in Section VI(a)(i)-(ii) above. Soil liquefaction occurs within relatively loose, cohesionless sands located below the water table that are subjected to ground accelerations from earthquakes. Those conditions do not exist at this site. Therefore, there would be no impact.

iv) Landslides?

No Impact. The project site has no potential to be affected by local or regional landslides or other mass-wasting characteristics. No impact will occur from landslide activity.

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

No Impact. Construction of the project will require grading and trenching, but these activities will result in only minor alterations to localized topography and disturbance of surface soils. These alterations are not expected to have significant adverse effect on preservation of soils. The project will be constructed in accordance with applicable state guidelines to minimize erosion and loss of topsoil, therefore there will be no impact.

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

No Impact. The proposed project will not cause any ground disturbance that will affect the geological stability of the area.

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

No Impact. No expansive soils issues have been identified, hence, the site is not believed to be located on expansive soils as defined in Table 18 18-1-B of the Uniform Building Code. There would be no impact.

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

No impact. Existing sewage is treated via an on-site septic system. This system has functioned well with no major problems. The site’s septic system will be upgraded and be located in similar grade and soils conditions, and built to current standards. The system should function as well as or better than the system at the existing fire station.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Information about Greenhouse Gas Emissions

CEQA Guideline § 15064.4 requires a lead agency to make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of Greenhouse Gas (GHG) emissions resulting from a project, and make a careful judgment to determine significance. The analysis presented below was conducted in accordance with the GHG analysis requirements found in the CEQA Guidelines and utilized recently published technical guidance for CEQA environmental impact studies (ICF Jones and Stokes 2007, CAPCOA 2008, and OPR 2008).

State Law (Health and Safety Code §38505g) defines greenhouse gas to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and hexafluoride. Significant changes in global climate patterns have recently been associated with global warming which has been attributed to the accumulation of GHG emissions in the atmosphere. Greenhouse gases trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally while others are created and emitted solely through human activities. The emission of GHGs from burning fossil fuels (i.e., fuels containing carbon), in conjunction with other human activities, appears to be closely associated with global warming (OPR 2008:2). The standard unit to measure GHG emissions is expressed in metric tons (or tonnes) of CO₂e.

The baseline conditions at the project site currently include the operations of an existing one-engine fire station which results in GHG emissions from activities such as running fire engines and other motorized equipment, heating and cooling buildings, heating water, burning firewood, responding to wildfires, etc. Some of the GHG emissions from current operations were calculated for this analysis in order to determine the potential increases. We determined that electrical and propane consumption would increase at the station following implementation of the project so we calculated average FFS energy consumption and estimated future consumption in order to identify the project related effect. Existing GHG emissions and other current station operations (such as fuel consumption when responding to wildfires) were not calculated for this study as these emissions wouldn't change as a result of the project. Our estimates identify the GHG emissions which would result from approval and implementation of the proposed project which are above and beyond the existing baseline conditions at the facility.

The project is within a 796 acre state forest that is managed with the maintenance of forest health as one of its goals. The project will remove 1.4 acres of forest land from timber production. Considering that the remaining 794.6 acres is sequestering carbon, the construction of the fire station and emissions that will occur as a result of the project is insignificant to the carbon that is sequestered property wide. In addition, the placement of the fire station on the state forest will ensure that wildland fire protection will be maximized and carbon emissions from wildfire will be reduced. Available wood generated from tree removal will be utilized in CAL FIRE's Conservation Camp operations and milled as lumber for camp projects. None of the material will be hauled offsite except that being utilized for lumber or firewood. As a side note, the state forest program is studying global warming and the role of forestland in carbon sequestration.

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

Less than Significant Impact. The following table presents the results of CAL FIRE's calculations of GHG emissions for each of the major project activities. A discussion of these activities and some of the reasoning that went into the calculation is further discussed below. The conversion factors were obtained from the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009). Other conversions were made using factors in the Forestry Handbook (Wenger 1984).

Total GHG Emissions by Project Activity

	Project Activity	Quantity	Conversion Factor	GHG Emissions CO ₂ e in metric tons (2204.6 lbs)
1	Tree Removal - Harvest 191 trees (see Appendix B for details)	59.22 tonnes of carbon	3.67 (Carbon to CO ₂) 59.22 times 3.67	217.34
2	Diesel Fuel Used During Tree Removal	100 gallons of diesel	10.15 KG/GAL (100 times 10.15 divided by 1000)	1.05
3	Diesel Fuel Used for Demolition	20 gallons of diesel	10.15 KG/GAL (20 times 10.15 divided by 1000)	0.20
4	Wood Hauled to Landfill	3 cubic yards of wood scrap = 972 lbs of wood, 486 lbs of carbon.	3.667 (Carbon to CO ₂) 486 times 3.67 divided by 2204.6	0.81
5	Diesel Fuel Used for Fill, Grading, and Compacting Site	1540 gallons of diesel	10.15 KG/GAL (1540 times 10.15 divided by 1000)	15.63
6	Gasoline Consumed During Construction Worker/CAL FIRE Trips to Project Site	634 gallons of gasoline	8.81 KG/GAL (634 times 8.81 divided by 1000)	5.59
7	Gasoline Consumed During Construction	30 gallons of gasoline	8.81 KG/GAL (30 times 8.81 divided by 1000)	0.27
8	Electricity Consumed During Construction	1000 kWh	.7241 lbs/kWh	0.33

		electricity	1000 times 0.7241 divided by 2204.6	
9	Increased Consumption of Electricity During Operations	921,250 kWh electricity	.7241 lbs/kWh 921,250 times 0.7241 divided by 2204.6	302.59
10	Increased Consumption of Propane During Operations.	2450 gallons of propane	5.74 kg/gallon 2450 times 5.74 divided by 1000	14.06
	TOTAL GHG Release - over the 50 year life of the facility.			557.87
	TOTAL GHG Release - average per year, for 50 years.			11.16

Discussion

1. Tree Removal

Approximately 191 trees would be felled and removed prior to demolition. The trees are located within the project site. The carbon emissions estimate for the 191 trees, and the method used to calculate those emissions is discussed in Appendix B. We estimate that 217.34 tons of CO₂e will be released from this tree removal. This is a conservative estimate. We did not calculate the off-set from wood product storage resulting in milling of the trees which will be milled into lumber at Konocti Conservation Camp. Most logs will be sent to Konocti Conservation Camp to be milled into wood products. Wood that cannot be used for lumber will be cut into fire wood to be burned at CAL FIRE facilities throughout the Unit. We included the GHG emissions from burning firewood in the tree removal study but didn't attempt to calculate the off-set from reduced heat energy consumption which would result from burning this wood.

2. Diesel Fuel Used During Tree Removal

The heavy mechanical equipment used to cut trees and haul logs to the sawmill at Konocti Conservation Camp include one loader and one dump truck, each operating for two days. Each piece of equipment burns 25 gallons of diesel per day. We estimate that 100 gallons of diesel would be burned resulting in 1.05 tons of CO₂e.

3. Diesel Fuel Used for Demolition

Equipment used to carry-out demolition will include one bulldozer for 2 hours equaling 20 gallons of diesel total, resulting in 0.20 tons of CO₂e.

4. Wood Hauled to Landfill

The demolition of out buildings will produce a small amount of old wood, roofing, piping, cement and other metal materials. These will be sorted and recycled to the maximum extent feasible. All useable wooden boards and studs will be recycled to minimize the amount of material to be hauled to a landfill. We estimate that after recycling, a total of one 5-yard dumpster of material would be hauled to the landfill, and of this material, 3 yards will contain unusable wood scraps that will be hauled to the local landfill. This material was calculated for GHG emissions.

Solid wood disposed in landfills decays very slowly (2-3% per year) due to the lack of oxygen and resistance of lignin to decay by anaerobic bacteria (Scog and Nicholson 2000). Nonetheless, over the course of the 50 year life of this project (CAL FIRE facilities are constructed to last approximately 50 years and then replaced) all of the carbon in this wood might be released so we included the total volume in our calculations using the following procedure. One five-yard dumpsters of scrap wood contain approximately 3 cubic yards of solid dried wood. The approximate weight of this type of dried wood is 36 lbs per cubic foot (Wenger 1984:584) or 324 lbs per cubic yard. 3 cubic yards of wood weighs 972 pounds. Half of this weight is carbon equaling 486 pounds. Pounds of carbon can be converted to CO₂ by multiplying the weight by 3.67. Dividing by 2204.6 will convert total pounds of CO₂ to metric tons.

5. Diesel Fuel Used for Fill, Grading, and Compacting Site

The project site will be graded and re-contoured to be at or above the required base elevation. The types of equipment needed to complete this work, the amount of days/hours the equipment is expected to run, and the amount of diesel fuel to be consumed, is estimated below:

- (1) D-6 dozer, 8-10 gallons per hour, run for 3 days = 240 gallons of diesel.
- (1) Road Grader, one week - 40 hrs = 400 gallons of diesel.
- (1) Sheep-foot Roller, 5 gallons per hour, 40 hrs = 200 gallons of diesel.
- (1) Water Truck, 5 gallons per hour, 20 hours = 100 gallons of diesel.
- (1) Smooth Drum roller, 5 gallons per hour, 80 hrs = 400 gallons of diesel.
- (1) Loader, 5 gallons per hour, 40 hrs = 200 gallons of diesel.

Total = 1,540 gallons of diesel.

6. Gasoline Consumed During Construction Worker/CAL FIRE Trips to Project Site

In the construction of similar FFS, an estimated 350 trips to the project site were made over the course of 12 to 18 month construction period by construction workers and CAL FIRE employees. The estimated commute vehicle gasoline usage is 634 gallons. Using a conversion factor of 8.881 KG/GAL, this estimates to 5.59 metric tons of CO₂e.

7. Gasoline Consumed During Construction

Some gasoline may be burned during construction such use of small mechanical trenchers (for utility undergrounding) and chainsaws for tree felling. We estimate 30 gallons of gasoline would be used. Using a conversion factor of 8.881 KG/GAL, this estimates to 0.27 metric tons of CO₂e.

8. Electricity Consumed During Construction

Small amounts of electricity would be used during construction to drive small pieces of equipment such as electric drills, circular saws, portable lights, etc. We estimate the total use to be 1000 kWh. Using a conversion factor of 0.7241 lbs/kWh, this estimates to 0.33 metric tons of CO₂e.

9. Increased Consumption of Electricity during Operations

The existing buildings will be demolished and replaced with an energy-efficient building design but electrical consumption at the new facility will be approximately double what is currently used. This substantial increase in electrical consumption resulting from the project is due to the following factors. The main driver of the increase is the doubling of the size of most of the facilities to meet the current program criteria. For example, in the 1950s, station barracks were simple, relatively small buildings where all-male crews slept in bunks organized in rows within a large open space and shared a common shower/bathroom facility. Modern designs to house male-female crews include separate bedrooms with two beds per room and separate shower/bathroom facilities. Modern barrack buildings are substantially larger than those built 50 years ago. Old facilities were cooled by opening windows or use of evaporative swamp coolers. They were heated with wood-burning stoves and fireplaces and small scale heating systems. Now they are built with central heating and air conditioning systems, dishwashers, commercial sized refrigerators, and more plumbing fixtures. Additional factors driving building design which consumes more electricity than a 1950s facility include code changes, staff increases, and larger equipment.

Based on the records of electrical use at CAL FIRE's Paynes Creek FFS in Tehama-Glenn Unit, which is a recently re-built fire station with similar weather and a nearly identical design to the new Las Posadas, we estimate the annual consumption at the rebuilt Las Posadas to be 36,548 kWh. Over the 50-year life

of this new facility, the total increase in electrical use is expected to be 921,250 kWh. Using a conversion factor of 0.7241 lbs/kWh, this estimates to 302.585 metric tons of CO₂e over the 50 year life of the facility, or 6.05 metric tons per year.

10. Increased Consumption of Propane during Operations

Propane consumption at Paynes Creek station indicates that propane use during operations of the new facility will slightly increase as well. We estimate the consumption at rebuilt the Las Posadas will be 508 gallons per year with an annual increase of 49 gallons. Over the 50-year life of this new facility, the total increase in propane use would be 2450 gallons. Using a conversion factor of 5.74 KG/GAL, this estimates to 14.06 metric tons of CO₂e released over the 50 year life of the station, or 0.28 tons per year.

Total GHG Emissions

The total amount of GHG emissions (above and beyond baseline conditions) resulting from implementation of the project, over the course of the 50 year life of the station, is estimated to be 557.87 metric tons of CO₂e. This represents an average release of approximately 11.16 metric tons of CO₂e per year for 50 years.

Significance Assessment

CAL FIRE has not established a significance threshold for GHG emissions and additional research is required before a useful threshold for these types of projects can be established. One recent study has suggested a GHG significance threshold of 900 metric tons, as a single event, for small-scale residential projects (CAPCOA 2008: 43). This would be the approximate volume of GHG emissions associated with a residential project involving 50 single-family residential units. GHG emissions of commercial projects can vary substantially. A 30,000 square-foot office complex emits about 800 metric tons of CO₂e per year while a 30,000 square-foot supermarket project emits an estimated 4,300 metric tons per year of CO₂e (CAPCOA 2008: 43).

By comparison, this project would emit approximately 11.16 metric tons of CO₂ per year for 50 years. It is CAL FIRE's determination that this level of GHG emission is a less than significant environmental impact.

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

No Impact. There are a number of State mandates which direct agencies such as CAL FIRE to design, construct, and operate all new and renovated state-owned facilities paid for with state funds to more stringent energy-efficient and reduced GHG emissions standards. These mandates include Assembly Bill 32, and California Executive Orders S-20-04, S-3-05, and S-13-08.

The United States Green Building Council's Leadership in Energy and Environmental Design (LEED) has established a green building rating system. LEED is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, minimize CO₂ emissions, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts, and provides building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. Through an evaluation checklist a number of standards have been developed including LEED Silver (33 to 38 points) and LEED Certified (26 to 32 points). CAL FIRE designs its structures to fall within the 36 point range (LEED Silver).

Pursuant to the direction contained in the Governor’s Executive Order S-20-04, CAL FIRE designs all of its buildings to meet the LEED – New Construction Silver criteria in order to assure their energy and environmental performance. However, because the buildings on a fire station project are less than 10,000 square feet, CAL FIRE is not required to have the buildings certified by the U.S. Green Building Council. To meet the Silver criteria, the design typically incorporates concrete paving vs. asphalt paving, orientation of the buildings, maximum open space, construction waste management, and many of the indoor environmental quality credits. To meet the LEED – New Construction Silver criteria, a project must have a minimum of 33 credits, and typically CAL FIRE’s fire station projects are designed for 36 credits. This proposed project does not conflict with any of these state policies.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, Would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, Would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

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

Less than significant Impact. The proposed project involves the building new fire station structures and the replacement of existing outbuildings with modern buildings which would supply the same services provided by the existing station. Based upon the age of the existing buildings and consideration for the types of construction materials typically used during that time, it is possible that hazardous wastes (such as asbestos-containing-materials and/or lead-based paint) may be generated during demolition activities. If identified, these materials will be handled in accordance with all applicable regulations.

Current standards governing these types of stations allow for use and storage of only modest amounts of sensitive materials (paint, cleaning agents, etc.). The transport and storage of these materials meets all local, state, and federal regulations, licensing, and protocols. The proposed project will include a new building for the storage of flammable materials but this building will be designed and constructed to meet all respective code and flammable materials standards. All on-site petroleum storage tanks will also be designed and installed in accordance with current requirements. There will be no increase in volume of any sensitive materials currently stored in the existing building at the site. Two new propane tanks will replace the existing propane tank system serving the station.

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

Less than Significant Impact. See discussion in Section VII(a) above. Hazardous wastes, such as asbestos-containing-materials or materials containing lead-based paint may be generated during demolition activities. These materials will be abated by a licensed contractor in full compliance with all applicable regulations. Minor amounts of waste oils and other vehicle fluids may be generated as a result of the normal operations of the FFS; however, no other hazardous wastes will be generated as part of the project.

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

No Impact. Pacific Union College Elementary School is located approximately nine tenths of a mile west of the proposed project site. The School averages 130 students in grades Kindergarten through Eighth grade. The school is adjacent to the access road to the site (see Figure 3). The school then would be in close proximity to construction vehicle traffic but the project would not result in hazardous emissions. Best Management Practices require all construction equipment be maintained in proper tune according to manufacturers' specifications to ensure minimum emissions under normal operations. This would ensure a less than significant impact.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The proposed project site is not included on any list of hazardous materials sites.

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

Less than Significant Impact. Napa County has zoned the project site as Airport Compatibility (AE) and Angwin Parrett Field Airport is located three quarters of a mile north of the project site (see Figure #3). Parrett Field is a private airport that is open to the public. It has one 3200 foot north-south runway and is home to 38 aircraft (35 single-engine and 3 multi-engine aircraft).

The project is a replacement fire station that will not add any additional people residing or working in the project area except during the construction of the project. Six to eight personnel live and work at this facility for seven months of the year during fire season. A smaller staff occupies the station during the remaining five months of the year. This impact would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Less than Significant Impact. See VII(e).

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

No Impact. The Site is not within or adjacent to any local designated evacuation routes.

h) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less than Significant Impact. The proposed project site is located within an area designated as a very high fire severity area. The firefighters that will be assigned to this station upon project completion will be responding to emergency incidents including wildland fires. Such personnel will be exposed to risk of injury or death involving wildland fires, however these personnel are highly trained firefighters that utilize a number of techniques to ensure safety. These risks occur with the existing baseline conditions at the station which will not increase as a result of the project. This would be a less than significant impact.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells will drop to a level that will not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which will result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) Would the project violate any water quality standards or waste discharge requirements?

Less than Significant Impact with Mitigation Incorporated. The project will not violate any water quality standards or waste discharge requirements. There would be no vehicle wash racks, although removal of dirt/mud from apparatus may be conducted. If any steam cleaning, degreasing, etc, is conducted it would be performed at a designated location (at the Unit Auto Shop) where any run-off or waste can be collected. During construction rainwater events could result in storm waste water discharges degrading water quality. To prevent this from occurring, a Storm Water Pollution Prevention Plan (SWPPP) will be developed in consultation with the regional water quality control board prior to the initiation of any ground-disturbing construction activities.

Mitigation Measure 14: Measures to Prevent Storm Water Pollution

Construction at the site would be subject to requirements of the NPDES construction storm-water Permit, which would be developed by qualified personnel in consultation with the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) and implemented prior to any construction activities. CAL FIRE and/or its representatives and contractors shall be responsible for securing the General Construction Activity Storm Water Permit and preparation and use of a Storm Water Pollution Prevention Plan (SWPPP) submitted to the regional water quality control board prior to the initiation of any ground-disturbing construction activities. CAL FIRE or its contractors would assure that all sediment and erosion control measures specified in this permit are implemented for the duration of the project. A copy of this permit would be retained on the construction site; copies would be provided to all contractors and other parties that would be responsible for implementing the permit's best management practices for water quality. Any necessary storm water quality sampling and reporting associated with the storm water permit shall be the primary responsibility of the project contractor, and shall be performed by qualified personnel in a timely fashion.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

No Impact. The project would not result in any substantial additional need for surface water or groundwater supplies. The proposed project would include either a new well or the rehabilitation of the existing potable water system currently supplying the station. The number of people housed at the station is not likely to be increased with no increase in consumption. During construction, water trucks will be used to control dust emissions, but this activity would not use so much water as to impact water supplies.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?

No Impact. The project will not substantially change any existing drainage patterns or create new drainage patterns.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?

No Impact. The project originally included a culvert replacement at an ephemeral stream. Due to the project being relocated to Site #3, the access road requiring the culvert upgrade will no longer be used for fire station access. If at some time, it is necessary to replace this culvert, CAL FIRE will ensure that the proper CEQA documents, permits, and consultations as required by Sections 1602 and 1603 of the Fish and Game Code will be filed. See Discussion VIII (c).

e) Would the project 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?

Less than Significant Impact with Mitigation Incorporated. During informal consultations with the CDFG conducted during the Initial Study, a concern was raised that the conversion of this undeveloped parcel of timberland has the potential to adversely affect the water quality by contributing increased volumes of rain water run-off during storms. The concern centers around the new roofs, parking areas, new access road, and paved walkways with impermeable surfaces which would reduce the volume of run-off that is absorbed on site. This change to the landscape has the potential to significantly alter the rainwater runoff patterns resulting in increased flows into the nearby drainage during peak flow events. Consideration was given to this potential impact during project design.

Mitigation Measure 15: Measures to Reduce Run-Off and Water Quality Impacts

CAL FIRE shall design this project using Low Impact Development strategies. At a minimum, these will include disconnected downspouts, vegetated swales, and other devices. The facility will be landscaped in a way to maximize on-site infiltration of rainwater and minimize any change to existing drainage patterns and surface runoff. Consideration shall also be given to the use of permeable surfaces for walkways and parking areas.

f) Would the project otherwise substantially degrade water quality?

No Impact. There are no watercourses in close proximity to Site #3. This project will utilize Best Management Practices to avoid degrading water quality.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. This project involves construction of barracks (housing) but not within a 100-year flood plain.

h) Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

No Impact. See Discussion in VII (g).

i) Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact: The proposed project is not located in a flood zone.

j) Would the project result in inundation by seiche, tsunami, or mudflow?

No Impact. The project site is not located within an area subject to seiche, tsunami, or mudflow.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Land Use and Planning. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) Would the project physically divide an established community?

No Impact. Construction and operation of the project will occur within the boundaries of the existing fire station parcel. Reconstruction of the station is not expected to affect the nearby school or the community of Angwin. Development of the project would not result in the physical division of an established community. The project will not have an effect on community boundaries or identity.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The existing fire station is an allowable use under the current General Plan designation. Since the property is owned by the State further development of the parcel is not subject to conformance with the county general plan. The replacement project is consistent with the current uses of the site.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The project site is not located within a habitat conservation plan or natural community conservation plan area. Therefore, no potential conflicts with such plans will occur and no impact will occur.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

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

No Impact. The property is already developed as the Las Posadas FFS so the area is not available for mineral withdrawal. The site is also not known to have a potential for mineral production.

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

No Impact. The site is not designated in the general plan as having locally-important mineral resources.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Noise. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

a) Would the project create exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Less than Significant Impact. The proposed project will not result in a substantial increase in ambient noise levels since the project essentially replaces an existing facility. Operational noise generated by the project will be primarily associated with the operation of onsite equipment (i.e., compressors, pumps, heating, and ventilation and air conditioning units); as well as the occasional sounding of emergency sirens and radio traffic through exterior speakers which already occurs. Construction activities, especially demolition, grading, framing, and paving, will cause a short-term increase in noise levels. These levels are not expected to be significant because they will be confined to regular weekday business hours, they will only be for short, non-reoccurring periods, and all equipment will be maintained in accordance with workplace standards.

b) Would the project create exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

No Impact. Construction activities will not involve the use of explosives, pile driving or other intensive construction techniques that could generate vibration or noise.

c) Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. The replacement fire station will not have a substantially different noise profile than that of the existing station.

d) Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. As mentioned in Section XI (a) above, there may be temporary increases in noise during construction, but this impact is less than significant.

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

Less than Significant Impact. The airport is a private airport that is open to the public for mainly single engine aircraft. The project is a replacement fire station that will not add any additional people residing or working in the project area except during the construction of the project. Six to eight personnel live and work at this facility for seven months of the year during fire season. A smaller staff occupies the station during the remaining five months of the year. This impact would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Less than Significant Impact. See (e) above.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Population and Housing. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

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

No Impact. The replacement of a FFS will not, by itself, induce growth. The project will only result in the replacement of the existing facilities at the station. Staffing should remain at or near current levels.

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

No Impact. The project will not involve the displacement of housing or necessitate construction of replacement housing. The project will provide new barracks for firefighters.

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

No Impact. The development of the project will not remove or displace people, requiring the construction of replacement housing.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

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

Fire protection?

No Impact. The site is currently served by the existing fire protective infrastructure. Operations will be in accordance with the Uniform Fire Code, with inspections conducted by the State Fire Marshall and CAL FIRE. The project will not result in any changes to the projected population of the area. Replacement of the FFS at the project site will not degrade existing levels of fire protection and emergency response.

Police protection?

No Impact. The FFS will provide its own security through the presence of personnel onsite when in operation. This project will result in a new facility being constructed on the same property where the existing facility is located.

Schools?

No Impact. The project does not include any residential uses other than housing for fire fighting personnel, nor will increase the amount of residents or need for the construction of new facilities. The new station will not affect the nearby school.

Parks?

No Impact. Parks or other recreational facilities will not be displaced by the proposed project since the project will be developed on state-owned property dedicated to fire protection. In addition, the FFS will not add residences to the project area that could result in increase demand for parks or other recreational opportunities.

Other public facilities?

No Impact. The FFS will be maintained by permanent and seasonal CAL FIRE staff located at the project site. No new public facilities (power, telephone, sewer, water) will be required, and existing facilities will not be affected. Therefore, the project will not result in the need for new public services.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The project will not generate demand or affect existing recreational facilities since the project will not generate any increase in population.

b) Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. The project site is on state land that cannot be used for recreational purposes and would not displace existing recreational land uses.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Transportation/Traffic. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

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

No Impact. The project would not conflict with any applicable plan or policy.

b) Would the project conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No Impact: The project would not conflict any congestion management program established by Napa County.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The project would not increase the population in the area, nor would it involve any changes in air traffic operation. Therefore, no impact would occur related to air traffic patterns and safety risks.

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

No Impact. The replacement of the station would not change the configuration of nearby paved roads resulting in any hazardous conditions. The station will continue to have the same or similar fire and rescue equipment already used at this facility.

e) Would the project result in inadequate emergency access?

No Impact. The project will not involve alteration of any roadways that will reduce emergency access. All construction activity will be contained on site and will not require the closure of any nearby roadways at any time during construction.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The project would not conflict with any such policies nor would it decrease traffic safety at this location.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Utilities and Service Systems. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The proposed project will not exceed wastewater treatment requirements of the RWQCB. CAL FIRE will adhere to all applicable requirements.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The proposed project includes the replacement of the site's existing septic sewer system and leach field. The new sewer system will be constructed within the project site and will essentially duplicate the existing treatment facility. The modern system is less likely to cause environmental impacts because current standards have increased dramatically since the existing sewage treatment system was first constructed. There has not been a significant environmental impact associated with the existing system and the replacement system will not cause significant impacts.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The proposed project does include the construction of new storm water drainage facilities. Short-term adverse environmental impacts will be minimized through implementation of the SWPPP and other safeguards in place to minimize the movement of sediment during construction (see discussion in Section VIIIa above). Appropriate storm water drainage facilities will be constructed at the new station.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. Considering that this project is replacing an existing fire station, water use levels post construction should be similar in volume to water use levels prior to construction.

e) Would the project result in a determination by the wastewater treatment provider that 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?

No Impact. All wastewater service will be disposed of on site. See Item (a-b) above.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

Less than Significant Impact. During the demolition and construction period, there will be a minor increase in the quantities of materials delivered to the local landfill. However, Best Management Practices for CAL FIRE construction projects include provisions for recycling and salvaging materials to minimize impacts to landfills. The demolition materials generated from this proposed project will be separated, salvaged, and recycled, as feasible. There is no change in solid waste generation or disposal since there is already an operating fire station at this site.

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

No Impact. The proposed project will comply with all applicable federal, state, and local statutes and regulations pertaining to disposal of solid waste. See Item (f) above.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Authority: Public Resources Code Sections 21083 and 21083.05. Reference: Government Code Section 65088.4, Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083.05, 21083.3, 21093, 21094, 21095, and 21151; <i>Sundstrom v. County of Mendocino</i> , (1988) 202 Cal.App.3d 296; <i>Leonoff v. Monterey Board of Supervisors</i> (1990), 222 Cal.App.3d 1337; <i>Eureka Citizens for Responsible Government v. City of Eureka</i> (2007) 147 Cal.App.4th 357; <i>Protect the Historic Amador Waterways v. Amador Water Agency</i> (2004) 116 Cal.App.4th at 1109; <i>San Franciscans Upholding the Downtown Plan v. City and County of San Francisco</i> (2002) 102 Cal.App.4th 656.				

Discussion

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

Less than Significant Impact. The proposed project consists of the construction of a new fire station adjacent to the existing station. Development of the project will not substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce or restrict the range of rare or endangered plants or animals or eliminate important examples of the major periods of California history or prehistory. A cultural resource investigation determined that no significant cultural resources exist within the project boundary. The project goal is to save the historical building of the existing station and protect part of CAL FIRE's history. Detailed analysis led to the conclusion that the impacts will not cause substantial adverse change to historical resources and the project will not eliminate important examples of the major period of California's history or prehistory.

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

No Impact. The project will not generate cumulative effects since a fire station currently exists within Las Posadas State Forest. Current use and operations are not expected to substantially change when the new station becomes ready for occupancy. No past, current or probable future projects were identified in the project vicinity that when added with project-related impacts will result in a cumulatively considerable effect(s).

- c) *Would the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?***

Less than Significant Impact. No project-related environmental effects were identified that will cause substantial adverse effects on human beings. As discussed herein, the proposed project has the potential to create impacts related to air quality, biological resources, and cultural resources during construction. However, with implementation of required mitigation measures, these impacts will be reduced to a less than significant level. The project will not have substantial adverse effect on humans. The project will, by contrast, provide a new fire station that will provide improved fire and rescue services to the community.

Appendix A

Mitigation Monitoring and Reporting Plan (MMRP) for the Las Posadas Forest Fire Station Replacement Project Initial Study/Mitigated Negative Declaration Napa County, California

In accordance with CEQA Guidelines Section 15074(d), when adopting a mitigated negative declaration, the lead agency will adopt a Mitigation Monitoring and Reporting Plan (MMRP) that ensures compliance with mitigation measures required for project approval. The California Department of Forestry and Fire Protection (CAL FIRE) is the lead agency for the above-listed project and has developed this MMRP as a part of the final Initial Study/Mitigated Negative Declaration (IS/MND) supporting the project. This MMRP lists the mitigation measures developed in the IS/MND which were designed to reduce environmental impacts to a less-than-significant level. This MMRP also identifies the party responsible for implementing the measure, defines when the mitigation measure must be implemented, and which party or public agency is responsible for ensuring compliance with the measure.

Potentially Significant Effects and Mitigation Measures

The following is a list of the resources that would be potentially affected by the project and the mitigation measures made part of the Initial Study/Mitigated Negative Declaration.

Mitigation Measure #1: Measures to Control Dust

Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to the following, when necessary⁶:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites, and also sweep adjacent public streets if visible soil material is carried onto such streets during construction.
- All construction equipment shall be maintained in proper tune according to manufacturers' specifications to ensure minimum emissions under normal operations.

Schedule: During construction and soil transport.

Responsible Party: CAL FIRE shall be responsible to carry-out this mitigation measure, and shall make sure these specific provisions are followed by any construction and soil transportation contractor working on the project. The state's contractors will be expected to carry-out the terms of these provisions.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

⁶ The term "*when necessary*" was inserted into this mitigation measure to provide flexibility in response to current conditions. For example, on days where it is currently raining or has recently rained a lot and ground conditions are sufficiently damp to prevent dust from becoming airborne, watering the construction areas twice or three times a day might not be necessary. If sufficiently wet conditions do not exist, these watering requirements shall be carried out as written.

Mitigation Measure 2: Measures to Protect Special Status Plant Species:

In addition to the onsite and vicinity surveys already conducted, a CAL FIRE wildlife biologist, botanist, forester, or other qualified person will conduct a survey at the appropriate time of year (e.g. flowering or readily identifiable vegetative state) to determine the presence or absence of special status plant species prior to the commencement of construction. Special status plant populations detected within the project area will be avoided at the time of project implementation. If protection through avoidance is not feasible, CAL FIRE shall consult with the California Department of Fish and Game and/or appropriate federal agency.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 3: Measures to Protect American Badger

Identify and avoid burrow systems that appear actively used (presence of tracks or scat) and are accessed with an opening of approximately 6 inches or greater in diameter. A CAL FIRE wildlife biologist or other qualified person will survey project area prior to ground disturbing activities. CAL FIRE shall consult with the California Department of Fish and Game should any active burrow system exhibiting these characteristics be identified.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 4: Measures to Protect Ringtail

Retain all trees exhibiting cavities or snags/down logs greater than 11 inches DBH that are not a hazard within the project area or require removal to facilitate construction.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 5: Measures to Protect Bat Species

~~Retain all trees exhibiting cavities or snags greater than 11 inches DBH that are not a hazard or require removal to facilitate construction within the project area. Removal of trees/snags that also exhibit cavities to facilitate construction that is consistent in timing with that identified for migratory bird species (ground disturbing operations conducted September-January) will likely also protect maternal colonies and reduce roost site impact.~~

All trees suitable for use by bats within the project area shall be surveyed for signs of bats by a Department Biologist, Forester, or other qualified person no earlier than two to three days prior to tree removal or

construction activities. If bats are discovered during the surveys then a buffer of 100 to 150 feet shall be established. The optimal time to remove trees is September 15 through October 15, when young would be capable of flying and February 15 to April 1 to avoid hibernating bats and prior to formation of maternity sites.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 6: Measures to Protect Northwestern pond turtle

Prior to tree or brush removal, a CAL FIRE wildlife biologist, forester, or other qualified person will conduct a visual survey for nest site scrapes or overwintering sites. Any identified nest site will be protected through avoidance. If protection by avoidance is not feasible, CAL FIRE shall consult with the CDFG to develop appropriate strategy for protection, which may include scheduling project activities after hatching or possibly relocating overwintering adults to similar habitat within the project vicinity. See Holland (1994) for examples of these sites.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 7: Measures to Protect Long-eared owl

A CAL FIRE wildlife biologist, forester, or other qualified person will conduct a three visit visual survey for occupied nest sites adjacent to the proposed project footprint and for a 500 foot radius distance. Surveys are to be equivalently spaced across the March through May period. Consultation with the CDFG is required if an occupied nest site is identified to develop site specific measures to avoid disturbance.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 8: Measures to Protect Northern spotted owl

A CAL FIRE wildlife biologist, forester, or other qualified person will conduct surveys to recognized U.S. Fish and Wildlife Service protocols to determine presence/absence of this species within and adjacent to the project area. If a NSO activity center is discovered prior to or during construction, within 1000 feet of the project area, consultation with appropriate federal or state agencies to develop site specific measures to avoid take of this federal threatened species will occur.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure #9: Measures to Protect Migratory Bird Species

Nest sites of migrant bird species or raptors occupying the project site will be avoided to protect project year nest site production and achieve compliance with Migratory Bird Treaty Act and California Fish and Game Code Section 3503, 3513, and 3800 requirements. If tree removal and other vegetation clearing will occur between February 1 and September 1, ~~CAL FIRE shall ensure that a preconstruction nesting survey be conducted no sooner than two weeks in advance of the activity by an ornithologist, wildlife biologist, forester, or other qualified person. Identified nest sites will be protected with a 100-foot radius buffer until it is determined that young have left the nest or the nesting attempt has failed.~~ a preconstruction nesting survey shall be conducted in advance of the activity by an ornithologist, wildlife biologist, forester, or other qualified person under the following conditions:

1. surveys for birds will be conducted no earlier than 14 days prior to tree removal and/or breaking ground.
2. in the event that nesting birds are found, CAL FIRE will consult with CDFG and obtain approval for nest-protection buffers prior to tree removal and/or ground-breaking activities, and
3. nest protection buffers will remain in effect until the young have fledged.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure #10: Measures to Protect Oak and other Mature Trees

Trees to be retained will be protected though the use of barricades during the construction phase. The CAL FIRE Unit Forester has determined that the project site is timberland as defined in PRC 4526 and the removal of trees constitutes timber operations as defined in PRC 4527. This project would convert timberland to other uses and will require the submittal of a conversion exemption/waiver to CAL FIRE pursuant to Section 1104.1(a) of the Forest Practice Rules. Implementation of Mitigation Measure #11 would reduce the effect to less than significant.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to and during construction.

Schedule: Prior to and during construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure #11: Timberland Conversion

Within three to six months prior to the commencement of the construction project, the Las Posadas State Forest Manager (or another RPF designated by CAL FIRE) will file a Conversion Exemption and waiver pursuant to Section 1104.1(a) of the Forest Practice Rules. Timber removal will be completed by a Licensed Timber Operator, and the tree removal will be carried out in conformance with all applicable Forest Practice Rules.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to construction.

Schedule: Prior to construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure #12: Immediately Halt Construction if Cultural Resources are Discovered

Concentrations of prehistoric or historic artifacts or other significant cultural resources are not likely to be encountered during construction, since the known historic site will be protected by avoidance. It is possible, however, that buried cultural resources could be unearthed during construction, and without this mitigation measure, such inadvertent discovery could lead to a significant impact if the construction was not halted pending an evaluation. If cultural resources are encountered during construction, all work shall be immediately halted in that immediate area until a CAL FIRE Archaeologist can be brought-in to evaluate the discovery. Examples of prehistoric artifacts to be alert for include stone flakes or flake tools made from chert or obsidian, stream cobbles, and items of shell or bone. Historic items may include bottle fragments, fragments of porcelain, nails, cans, buttons, or other items. The archaeologist shall develop appropriate management recommendations. These recommendations shall be carried-out prior to re-initiating any construction activities in the area where the discovery took place.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out during construction.

Schedule: During construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure #13: Procedures if Human Remains are Inadvertently Discovered

In accordance with the California Health and Safety Code, if human remains are discovered during ground-disturbing activities, CAL FIRE and/or the project contractor(s) shall immediately halt potentially damaging excavation in the area of the human remains and notify the Napa County Coroner and a qualified professional archaeologist to determine the nature and significance of the remains. The coroner is required to examine all discoveries of human remains with 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050[c]). Following the coroner’s findings, the archaeologist and the Most Likely Descendent (designated by the Native American Heritage Commission) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities of Napa County and CAL FIRE to act upon notification of a discovery of Native American human remains are identified in the California Public Resources Code Section 5097.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out during construction.

Schedule: During construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 14: Measures to Prevent Storm Water Pollution

Construction at the site would be subject to requirements of the NPDES Construction Storm-water Permit, which would be developed in consultation with the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) and implemented prior to any construction activities. CAL FIRE and/or its representatives and contractors shall be responsible for securing the General Construction Activity Storm Water Permit and preparation and use of a Storm Water Pollution Prevention Plan (SWPPP) submitted to the regional water quality control board prior to the initiation of any ground-disturbing construction activities. CAL FIRE or its contractors would assure that all sediment and erosion control measures specified in this permit are implemented for the duration of the project. A copy of this permit would be retained on the construction site; copies would be provided to all contractors and other parties that would be responsible for implementing the permit's best management practices for water quality. Any necessary storm water quality sampling and reporting associated with the storm water permit shall be the primary responsibility of the project contractor.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out prior to and during construction.

Schedule: Prior to and during construction.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Mitigation Measure 15: Measures to Reduce Run-Off and Water Quality Impacts

CAL FIRE shall design this project using Low Impact Development strategies. At a minimum, these will include disconnected downspouts, vegetated swales, and other devices, the facility will be landscaped in a way to maximize on-site absorption of rainwater and minimize any change to existing drainage patterns. Consideration shall also be given to the use of permeable surfaces to walkways and parking areas.

Responsible Party: CAL FIRE shall be responsible to ensure that this mitigation measure is carried-out during construction and during landscaping.

Schedule: During construction and landscaping.

Verification of Compliance:

Monitoring Party: CAL FIRE

Initials: _____

Date: _____

Appendix B

Analysis of GHG Emissions from Tree Removals at Las Posadas

October 8, 2010

The carbon emissions for the trees to be cut down on the project site was estimated using basal area per acre as described in a forest carbon table developed by Tim Robards PhD., for CAL FIRE. Dr. Robards developed a simple table for forest landowner to measure total carbon (tonnes per acre). The table and graph (below) were developed using FIA (Forest Inventory and Assessment, 2001-2007, public and private lands) plot data. (please see Table 1). The graph (Figure 1) is a decision tree based on square foot basal area per acre (BA/ac). You read the graph top to bottom, so a BA less than 178.5 follows to the left. The user then decides if the BA is less than 87.5 square feet which then leads to the total carbon (tonnes/acre). Since the basal area per acre within the project is 163 square feet, the tonnes of carbon per acre is 42.31. Multiplied by 1.4 acres, the tree removal will create an estimated of 59.22 tonnes of total Carbon. Conversion to total CO₂e was derived by multiplying the total Carbon (tonnes/acre) by 3.67. This resulted in determining the estimated project emissions to be 217 tonnes. Basal area was derived by measuring the diameter of each tree to be removed and applying the basal area conversion factor of $BA = 0.005454 * d^2$, where d = diameter at breast height. The total live tree carbon is the sum of the above and below ground estimates.

The project is within a 796 acre state forest that is managed with the maintenance of forest health as one of its goals which results in an annual increase in carbon sequestration from the growth of forest trees. The project will remove 1.4 acres of forest land from timber production. Considering that the remaining 794.6 acres is sequestering carbon, the construction of the fire station and emissions that will occur as a result of the project is insignificant to the carbon that is sequestered property wide. In addition, the placement of the fire station on the state forest will ensure that wildland fire protection will be maximized in the event that a wildfire were to occur on the forest, and carbon emissions from wildfire will be reduced. Available wood generated from tree removal will be utilized in CAL FIRE's Conservation Camp operations and milled as lumber for camp projects. None of the material will be hauled offsite except that being utilized for lumber and project wood. As a side note, the state forest program is studying global warming and the role of forestland in carbon sequestration.

The following table is an inventory of the trees to be removed within the footprint of the project as well as those adjacent to the project that will likely need to be removed for construction. Total basal area and basal area per acre were derived from the inventory.

**GREEN HOUSE GAS CALULATIONS FOR TREE
REMOVAL**
LAS POSADAS FIRE STATION REPLACEMENT SITE 3

Tree #	Species	diameter breast height (DBH)	Basal Area (BA)
1	Madrone	14	1.068984
2	Madrone	14	1.068984
3	Madrone	10	0.5454
4	oak	8	0.349056
5	oak	6	0.196344
6	Madrone	16	1.396224
7	Douglas fir	12	0.785376
8	oak	12	0.785376
9	oak	14	1.068984
10	Madrone	10	0.5454
11	Madrone	10	0.5454
12	Ponderosa pine	16	1.396224
13	Madrone	6	0.196344
14	Madrone	8	0.349056
15	Madrone	10	0.5454
16	Madrone	10	0.5454
17	Madrone	8	0.349056
18	Madrone	6	0.196344
19	oak	14	1.068984
20	Douglas fir	26	3.686904
21	oak	12	0.785376
22	Madrone	8	0.349056
23	oak	4	0.087264
24	Ponderosa pine	12	0.785376
25	oak	12	0.785376
26	oak	8	0.349056
27	Madrone	10	0.5454
28	Madrone	8	0.349056
29	Douglas fir	30	4.9086
30	oak	14	1.068984
31	Douglas fir	30	4.9086
32	oak	14	1.068984
33	Douglas fir	42	9.620856
34	oak	8	0.349056
35	Douglas fir	4	0.087264
36	oak	12	0.785376
37	Douglas fir	12	0.785376
38	Douglas fir	12	0.785376
39	Madrone	12	0.785376
40	oak	12	0.785376
41	Ponderosa pine	36	7.068384
42	Douglas fir	36	7.068384
43	Madrone	6	0.196344
44	Madrone	8	0.349056
45	Madrone	10	0.5454

46	Madrone	12	0.785376
47	Madrone	6	0.196344
48	Madrone	8	0.349056
49	Madrone	10	0.5454
50	Madrone	8	0.349056
51	Ponderosa pine	8	0.349056
52	Madrone	12	0.785376
53	Madrone	8	0.349056
54	oak	10	0.5454
55	oak	10	0.5454
56	Douglas fir	8	0.349056
57	oak	12	0.785376
58	Douglas fir	8	0.349056
59	Ponderosa pine	18	1.767096
60	Ponderosa pine	20	2.1816
61	Ponderosa pine	38	7.875576
62	Douglas fir	48	12.566016
63	Ponderosa pine	30	4.9086
64	Douglas fir	26	3.686904
65	Douglas fir	8	0.349056
66	Douglas fir	8	0.349056
67	Douglas fir	8	0.349056
68	oak	8	0.349056
69	oak	8	0.349056
70	oak	8	0.349056
71	Madrone	10	0.5454
72	oak	8	0.349056
73	Douglas fir	8	0.349056
74	oak	12	0.785376
75	Douglas fir	6	0.196344
76	oak	4	0.087264
77	Douglas fir	12	0.785376
78	Douglas fir	12	0.785376
79	Douglas fir	16	1.396224
80	Douglas fir	18	1.767096
81	Douglas fir	10	0.5454
82	Douglas fir	6	0.196344
83	oak	8	0.349056
84	Douglas fir	18	1.767096
85	Douglas fir	16	1.396224
86	Douglas fir	20	2.1816
87	Madrone	10	0.5454
88	Douglas fir	12	0.785376
89	Douglas fir	6	0.196344
90	Douglas fir	6	0.196344
91	Douglas fir	6	0.196344
92	oak	8	0.349056
93	oak	12	0.785376
94	oak	8	0.349056
95	Madrone	12	0.785376
96	Madrone	8	0.349056
97	Madrone	10	0.5454
98	Ponderosa pine	38	7.875576

99	oak	12	0.785376
100	Douglas fir	12	0.785376
101	oak	6	0.196344
102	oak	6	0.196344
103	oak	12	0.785376
104	oak	8	0.349056
105	oak	8	0.349056
106	Douglas fir	6	0.196344
107	oak	10	0.5454
108	Douglas fir	12	0.785376
109	oak	14	1.068984
110	Douglas fir	30	4.9086
111	Douglas fir	14	1.068984
112	Douglas fir	30	4.9086
113	Douglas fir	10	0.5454
114	Douglas fir	18	1.767096
115	Douglas fir	10	0.5454
116	oak	8	0.349056
117	oak	8	0.349056
118	Ponderosa pine	34	6.304824
119	Madrone	10	0.5454
120	Madrone	12	0.785376
121	oak	10	0.5454
122	Douglas fir	6	0.196344
123	Douglas fir	16	1.396224
124	oak	12	0.785376
125	Douglas fir	12	0.785376
126	oak	14	1.068984
127	Madrone	12	0.785376
128	Ponderosa pine	24	3.141504
129	Ponderosa pine	20	2.1816
130	oak	12	0.785376
131	Madrone	10	0.5454
132	oak	6	0.196344
133	Douglas fir	28	4.275936
134	Madrone	12	0.785376
135	oak	10	0.5454
136	oak	8	0.349056
137	oak	12	0.785376
138	Ponderosa pine	22	2.639736
139	Ponderosa pine	24	3.141504
140	Douglas fir	42	9.620856
141	Ponderosa pine	24	3.141504
142	oak	12	0.785376
143	oak	8	0.349056
144	Douglas fir	6	0.196344
145	Douglas fir	6	0.196344
146	Douglas fir	8	0.349056
147	Madrone	10	0.5454
148	Madrone	8	0.349056
149	oak	12	0.785376
150	oak	4	0.087264
151	Madrone	16	1.396224

152	Madrone	14	1.068984
153	oak	10	0.5454
154	oak	8	0.349056
155	Madrone	12	0.785376
156	Madrone	12	0.785376
157	Madrone	6	0.196344
158	Madrone	14	1.068984
159	Madrone	6	0.196344
160	Madrone	10	0.5454
161	Madrone	14	1.068984
162	Madrone	8	0.349056
163	Madrone	10	0.5454
164	Madrone	12	0.785376
165	Madrone	8	0.349056
166	Madrone	12	0.785376
167	Madrone	10	0.5454
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169	Madrone	8	0.349056
170	Madrone	10	0.5454
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172	Madrone	8	0.349056
173	Madrone	8	0.349056
174	Madrone	12	0.785376
175	Madrone	10	0.5454
176	Madrone	10	0.5454
177	Madrone	8	0.349056
178	Madrone	12	0.785376
179	Madrone	12	0.785376
180	Madrone	10	0.5454
181	Madrone	12	0.785376
182	oak	8	0.349056
183	oak	6	0.196344
184	oak	10	0.5454
185	oak	10	0.5454
186	oak	8	0.349056
187	oak	10	0.5454
188	oak	4	0.087264
189	Madrone	12	0.785376
190	Madrone	12	0.785376
191	Madrone	18	1.767096

Total BA of tree removal 227.780856

BA per acre = total BA (228) ÷ # of acres (1.4ac) **162.700611**

Basal Area

Basal area is a measure of stand density developed by foresters. It is the total cross-sectional area of the trees in a stand, at breast height

(4.5 feet above the ground), measured in square feet per acre.

Basal area (BA) of a given tree is calculated using the formula below:

$$BA = .005454 * d^2$$

Where: d = diameter of tree at breast height (dbh)

Total C (carbon-tonnes/acre) for BA/ac < 178sq.ft. is 42.3/ac or 59.22 for project tree removal*

*Derived from Robards Forest Carbon Table, see Figure1

Decision Tree for determining C (carbon tonnes per acre) based on Basal Area

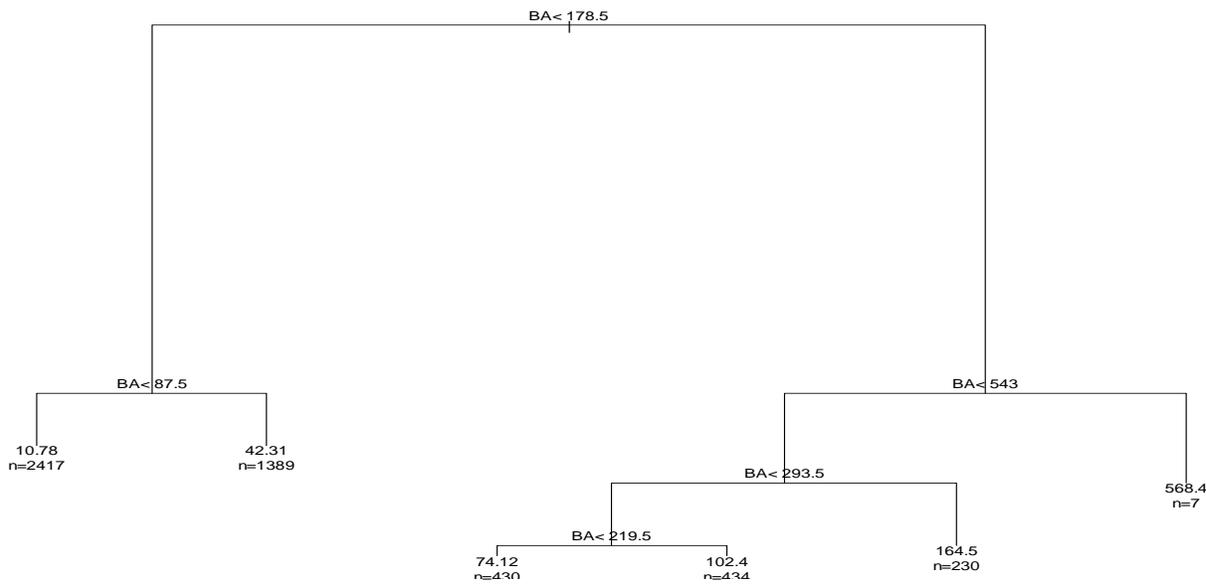


Figure 1

Note: n = number of plots in the basal area sample used for the development of the decision tree.

Greater than Basal Area (sq. ft./ac.)	Less than Basal Area (sq. ft./ac.)	Average Live Tree (above and below ground) C (tonnes/ac)	Standard Error C (tonnes/ac)	No. FIA Plots	Percent Error
0	87.5	10.8	0.19	2417	1.8%
87.5	178.5	42.3	0.48	1389	1.1%
178.5	219.5	74.1	0.98	430	1.3%
219.5	293.5	102.4	1.31	434	1.3%
293.5	543	164.5	2.84	230	1.7%
543		568.4	141.38	7	24.9%

Table 1

LIST AND DEFINITION OF ACRONYMS AND SYMBOLS USED IN THIS DOCUMENT**Acronyms**

ABD	Above-Ground Biomass Density
ac	acres
AC	Asphalt Concrete
A.D.	anno Domini (Latin) (it means “in the year of the Lord”)
ADA	American Disabilities Act
ADT	Average Daily Trips
AMSL	Above Mean Sea Level
APE	Area of Potential Effect
APP	Apparatus
AQAP	Air Quality Attainment Plan
ARB	Air Resources Board
AW	Agricultural Watershed
BA	Basal Area
BAAQMD	Bay Area Air Quality Management District
BBD	Below-Ground Biomass Density
BLM	Bureau of Land Management
BMPs	Best Management Practices
BP	Before Present
CA	California
CAA	Clean Air Act
CAL FIRE	California Department of Forestry and Fire Protection
CAPCOA	California Air Pollution Control Officers Association
CAR	Climate Action Reserve
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCC	Civilian Conservation Corps
CCR	California Code of Regulations
CDF	California Department of Forestry and Fire Protection (changed to CAL FIRE in 2007)
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFCP	California Forest Carbon Processor
CHRIS	California Historical Resources Information System
CNDDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent (a standard unit to measure global warming potential)
CSOHP	California State Office of Historic Preservation
dBA	decibel
DBH	Diameter at Breast Height
e.g.	<i>exempli gratia</i> (Latin) (it means for example)
<i>et seq.</i>	<i>et sequens</i> (Latin) (it means “and the following”)
et al.	<i>et alii</i> (Latin) (it means “and others”)
EIR	Environmental Impact Report
EPA	Environmental Protection Agency

ESBA	Emergency Services Building Act
FFS	Forest Fire Station
FIA	Forest Inventory and Assessment
GAL	Gallons
GHG	Greenhouse Gas
H	Historic (As used in CA-NAP-887H, means this is a historic site)
ha	hectares
HWY	Highway
IRA	Initial Response Area
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
KG	Kilograms
km	kilometer(s)
kWh	kilowatt hour (of electricity)
LEED	Leadership in Energy and Environmental Design
LF	Linear Feet
LPG	Liquid Propane Gas
LSAA	Lake or Streambed Alteration Agreement
LTO	Licensed Timber Operator
m	meter(s)
M.A.	Master of Arts
MBTA	Migratory Bird Treaty Act
MDBM	Mount Diablo Base Meridian
MN	Magnetic North
MND	Mitigated Negative Declaration
MMRP	Mitigation, Monitoring, and Reporting Plan
MS	Microsoft
N	North
N/A	Not Applicable
n.d.	no date
NDDB	Natural Diversity Data Base
NE	Northeast
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NOD	Notice of Determination
NTMP	Non-Industrial Timber Management Plan
NOI	Notice of Intent (to adopt a negative declaration or mitigated negative declaration)
NSO	Northern Spotted Owl
OPR	(Governor's) Office of Planning and Research
Ph.D.	Doctor of Philosophy
PM10	Particulate Matter less than 10 microns in diameter
P.O.	Post Office
PRC	Public Resources Code
PUC	Pacific Union College
PVC	Poly-Vinyl Chloride
R	Range
RPF	Registered Professional Forester
RWQCG	Regional Water Quality Control Board
SFRWCQB	San Francisco Bay Regional Water Quality Control Board

SCH	State Clearinghouse
sf	square feet
SWPPP	Storm Water Pollution Prevention Plan
T	Township
THP	Timber Harvesting Plan
THT	Total Height
TN	True North
U	Unclassified
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
W	West
WWII	World War II

Symbols

§	Section
#	Number
%	Percent

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