ENVIRONMENTAL ASSESSMENT
FISH CAMP FIRE STATION
MARIPOSA COUNTY
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FEMA

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Federal Emergency Management Agency
Region IX
1111 Broadway - Suite 1200
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ENVIRONMENTAL ASSESSMENT
FISH CAMP FIRE STATION
MARIPOSA COUNTY

For submittal to:

U.S. Department of Homeland Security/Federal
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Assistance to Firefighters Program Office
800 K Street NW,
Washington, DC 20472-3620

Prepared for:

Mariposa County
4639 Ben Bur Road
Mariposa, CA 95338

Prepared by:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
916.447.3479
www.analyticalcorp.com

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SECTION 1.0

INTRODUCTION

SECTION 1.0

INTRODUCTION AND PURPOSE AND NEED

1.1 INTRODUCTION

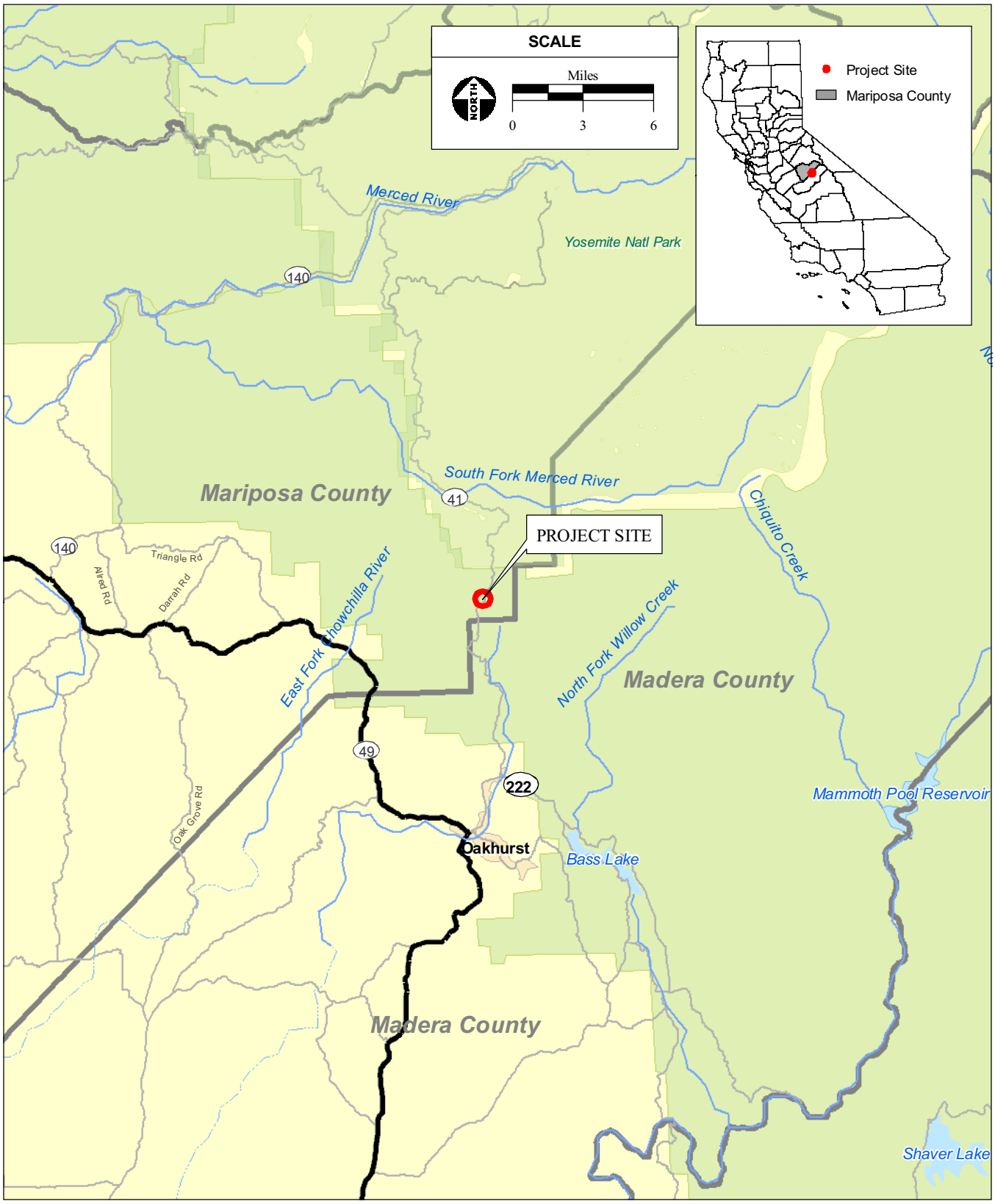
This Environmental Assessment (EA) has been prepared for a proposal by Mariposa County (County) to construct a fire station for an existing volunteer engine company in the eastern region of the County in the unincorporated community of Fish Camp (Proposed Project. Under the American Recovery and Reinvestment Act of 2009 (ARRA), the Department of Homeland Security Federal Emergency Management Agency (FEMA) may provide grant funding for the Proposed Project through its Fire Station Construction Grant Program (SCG) (Proposed Action). In accordance with the National Environmental Policy Act (NEPA), an environmental review is required to assess the environmental impacts to the quality of the human environment should FEMA provide funding to the County for the Proposed Project.

This EA has been prepared in accordance with NEPA, the President's Council on Environmental Quality regulations to implement NEPA (40 CFR Parts 1500-1508), and FEMA's regulations for the implementation of NEPA (44 CFR Part 10). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. This document provides a description of the Proposed Action and an analysis of the potential environmental consequences associated with the release of the funds to the County, which would result in the development of the Proposed Project. This EA also includes a discussion of alternatives, impact avoidance, and mitigation measures. Consistent with the requirements of NEPA, FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.2 LOCATION AND SETTING

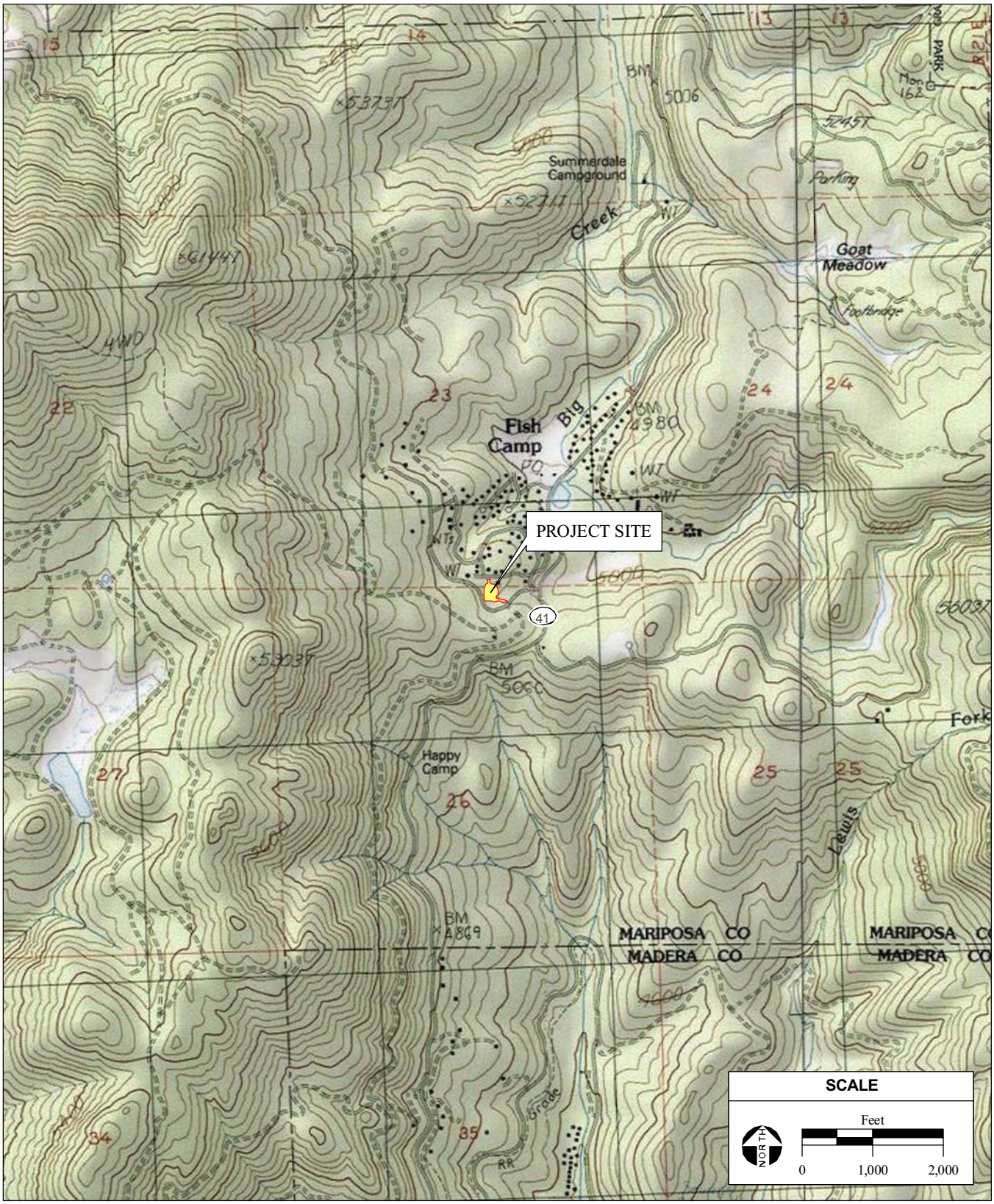
The project site addressed in this EA is located in the unincorporated community of Fish Camp, Mariposa County, California, roughly 14 miles north of the community of Oakhurst. The project site, which covers approximately 5,685 square feet (0.13 acres) is located within a 2.99- acre parcel (Assessor's Parcel No. 010-410-001) let to Mariposa County in a leasehold. The parcel is situated within Section 26 of T5S, R21E, MDBM, as depicted on the *Fish Camp, CA* USGS 7.5 minute topographic quadrangle (**Figures 1** and **2**).

Regional access is provided by Summit Road, which runs in a general east-west direction adjacent to the southern boundary the project site (**Figure 3**). Direct access to the project site is



SOURCE: ESRI Data, 2007; AES 2010

Figure 1
Regional Location Map



SOURCE: "Fish Camp, CA" USGS 7.5 Minute Topographic Quadrangle, Section 23, T5S R21E, Mt. Diablo Baseline & Meridian; AES, 2010

Figure 2
Site and Vicinity

SOURCE: Mariposa County, 2009; NAIP aerial photograph, 2005; AES, 2010

Figure 3
Aerial Photograph

provided by a driveway located on the west and east side of Summit Road and Laurel Way. Surrounding land uses consist primarily of open space and scattered rural residences. The project site is currently zoned General Forest with a Timber Exclusive Zone overlay (Mariposa County, 2004).

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The Mariposa County Fire Department (MCFD) is an all risk volunteer fire department serving a rural population dispersed over 1,451 square miles from twelve community-based fire stations. All of MCFD's fire stations were built using funds raised in the local communities which they serve, prior to the adoption of current building codes, often using substandard building materials and volunteer labor not particularly adept in the building trades. As a result, MCFD's fire stations are decades old, unsafe for firefighters to occupy during major storms and seismic events, and poorly located to effectively and efficiently provide service to portions of the service area that have experienced growth over the past few decades.

Fish Camp is geographically separated from the rest of the County by Yosemite National Park and an imposing mountain range. When assistance is needed, Company 33 depends almost entirely on mutual aid from Yosemite and Madera County fire staff. In addition to a modest number of residential structures, Fish Camp has two regional conference centers that house in excess of 2,000 overnight guests. There are also dozens of smaller motels, Bed and Breakfast facilities and more than 50 residences designated as transient rentals. On any given night Fish Camp will host up to 3,000 visitors and experiences up to 1.5 million national park visitors using the highway each year. In spite of an active volunteer roster, there is no true fire station in Fish Camp; there is a crumbling three stall parking garage with a desk in the corner. Quarters are so cramped that, when someone sits at the desk, the Brush engine must be pulled out of its parking space. There are no restroom facilities anywhere near the parking garage and minimal heating ability to keep apparatus warm during long, cold winters. There is no ability to conduct indoor training unless all three apparatus are out of the bays.

Despite the fact there is no fire station in the Fish Camp community; the local Engine Company (Company 33) emergency service calls total more than 30 per year. Given the demand for Company 33's services, the current facilities in Fish Camp are insufficient, and will be increasingly stressed with the expected short- and mid-term population growth.

MCFD's purpose in applying for SCG grant funding is to construct a new fire station at the project site in order to improve emergency preparedness, provide a suitable working and training environment for Company 33, protect essential fire apparatus, and ensure affordable hazard insurance premiums for local residents.

1.4 ENVIRONMENTAL ISSUES ADDRESSED

In accordance with NEPA, and based on a review of the approximately 3-acre project site, the following environmental issue areas are evaluated in this EA:

- Geology, Soils, and Seismicity
- Water Resources
- Air Quality
- Biological Resources/Invasive Species
- Historic Properties
- Socioeconomic Conditions / Environmental Justice
- Transportation and Circulation
- Land Use and Agriculture
- Public Services
- Noise
- Hazardous Materials
- Aesthetics
- Growth-Inducing and Cumulative Effects
- Agency Coordination and Permits

SECTION 2.0

ALTERNATIVES CONSIDERED

SECTION 2.0

ALTERNATIVES CONSIDERED

The Proposed Action and project alternatives are described in this section. This section also summarizes the protective measures and Best Management Practices (BMPs) incorporated into the project and provides a comparison of the project alternatives. A discussion of alternatives eliminated from further consideration is also included. Alternatives were selected by considering the economic feasibility, potential environmental impacts, and viability of implementation. The project alternatives evaluated in this Environmental Assessment (EA) are:

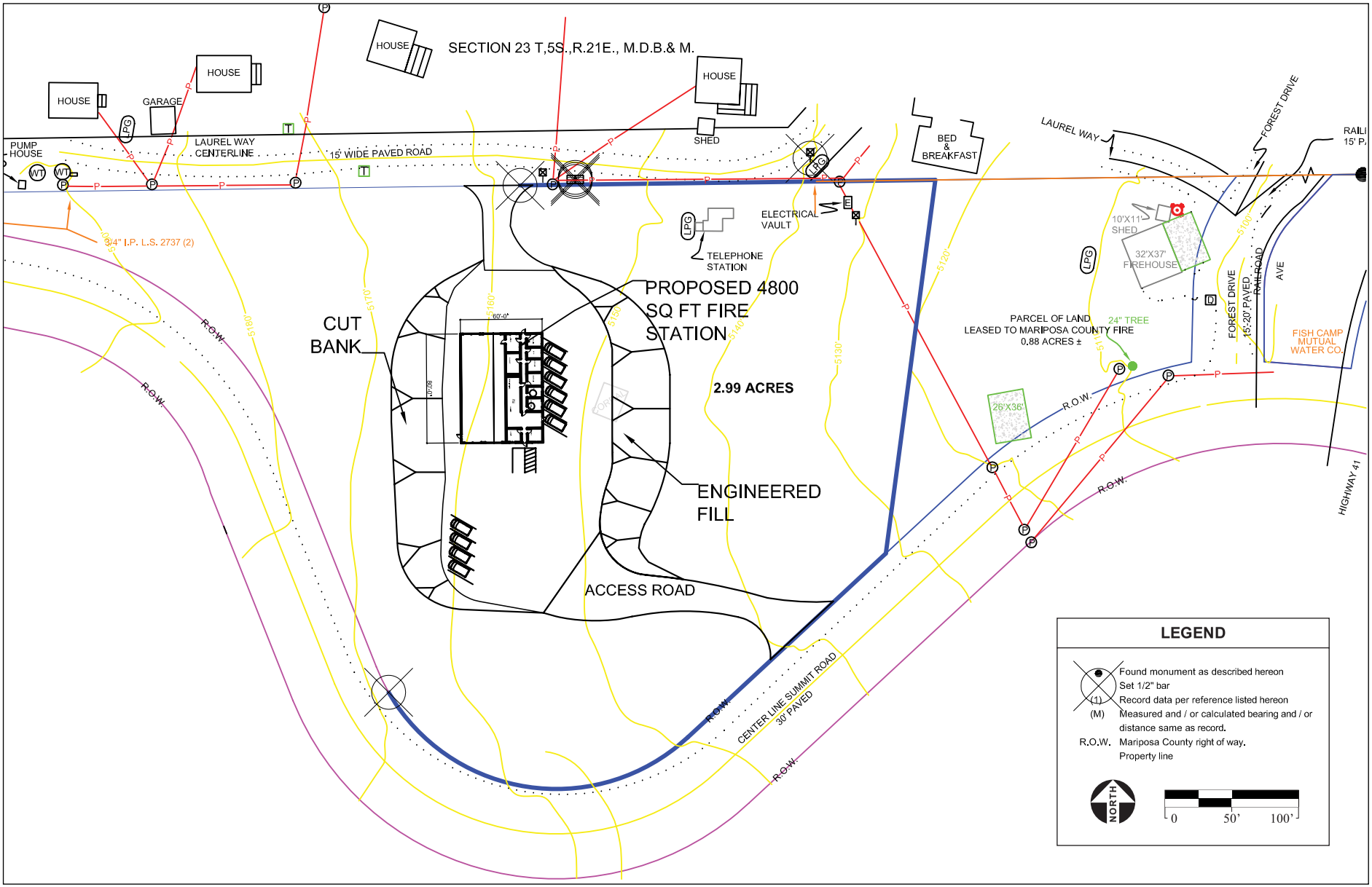
1) Alternative A – Proposed Action
2) Alternative B –No-Action Alternative
3) Other sites eliminated from consideration

The project alternatives consist of:

- Alternative A – (Proposed Action) The Federal Emergency Management Agency (FEMA) would release funds to Mariposa County (County) under FEMA's Fire Station Construction Grant (SCG) Program. The foreseeable consequence of the release of FEMA funds to the County would be the construction of a 4,800 square foot steel building erected within an approximately 2.99-acre parcel that was recently logged off site in a Timber Exclusive Zone. No improvements are planned for the existing roads adjacent to the project site. New paved access roads would be built to the fire station and a concrete apron would be poured at each end of the building. The area to the east of the building would be either gravel or asphalt.
- Alternative B – (No-Action Alternative) FEMA would not provide funds to the County and the existing sub-standard parking garage would continue to serve as the area's fire station and the project site would remain undeveloped. No construction or other improvements would be undertaken on the project site.

2.1 ALTERNATIVE A - PROPOSED ACTION

Alternative A (**Figure 4**) consists of the release of SCG Program funds from FEMA to the County and the resulting construction of a 4,800 square foot pre-engineered fire station with four engine bays and associated office space/training facilities. Auxiliary components of the fire station would include a new concrete driveway and a septic system. The "engineered" septic system would be installed to handle wastewater on-site. Wastewater disposal would consist of



SOURCE: Mariposa County, 10/7/2009; AES, 2010

Figure 4
Site Plan

leach fields contained within the parcel boundary. All development associated with Alternative A would be restricted to the project parcel, APN 010-410-001.

The footprint of the new fire station and driveway would cover approximately 5,685 square feet (0.13 acres). A gravel or asphalt parking area would be provided on the east side of the new building. The proposed leach field would be located west and slightly down-slope of the proposed fire station. Access to the new fire station from Summit and Laurel Roads would be constructed. An encroachment permit would not be required to provide access to the site since the County leases the property and Summit and Laurel Roads are County roads.

The fire station would be constructed of approximately 60 percent recycled steel while meeting engineering standards as required of essential public service buildings. The fire station would include gender-specific and Americans with Disabilities Act-compliant sleeping and bathroom facilities for up to four personnel. Auxiliary components of the fire station would include a new concrete driveway and a septic system.

Mariposa County is a member of United States Green Building Council (USGBC). Construction of the fire station would, to the greatest extent possible within budget constraints, utilize materials and systems to qualify for the maximum number of LEED points. The new fire station would feature Energy Star-certified appliances and would meet or exceed California Title 24 of the State Building Code for insulation value and LEED energy conservation systems. Mariposa County Department of Public Works would ensure compliance with their adopted and federally-approved Quality Assurance Plan. The fire station would feature renewable energy systems such as solar collection panels that would ensure the station is as close to energy neutral as reasonable and feasible. The solar generating system would interface with the PG&E distribution system to ensure peak efficiency.

PUBLIC SERVICES

Water service is already provided to the project site via connection to the Fish Camp Mutual Water Company service line. On-site wastewater disposal would be handled by a septic system, which would be developed entirely within the project parcel. Minor cut and fill operations would be undertaken on-site to ensure that stormwater drains away from the new structure. New impervious surfaces at the project site would be limited, thus eliminating the needed for stormwater conveyance. Telephone service currently exists at the project site.

SITE PLAN SPECIFICATIONS

The following protective measures and BMPs have been incorporated into the project site plans for Alternative A:

AIR QUALITY

1. The construction contractor shall use a water truck to maintain adequate dust control.
2. Sufficient equipment shall be available to provide dust control at all times during construction.
3. Stockpiled earthen materials and soil transport vehicles shall be covered.
4. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
5. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
6. Limit traffic speeds on unpaved roads to 15 miles per hour.

WATER QUALITY

1. Straw wattle shall be erected around the perimeter of the project site during construction.
2. The Summit Road (and Laurel Way if used for access during construction) frontage shall be swept as needed to remove silt and other fugitive dirt related to construction activities.
3. Erosion and sediment control provisions shall be in place prior to the onset of any storm event. The construction contractor shall have all erosion and sediment control features in place for the winter months prior to October 1.
4. All erosion and sediment control measures shall be maintained until disturbed areas are stabilized.
5. All erosion and sediment control measures shall be checked before and after all storm events to ensure measures are functioning properly.
6. A stabilized construction entrance shall be installed prior to commencement of grading. The construction entrance shall be constructed of washed, well-graded gravel, crushed rock, or equivalent.

BIOLOGICAL RESOURCES

1. Landscaping associated with the proposed fire station shall included native species.

TRANSPORTATION

1. Traffic shall be maintained in each direction on the adjacent roadway network at all times during the peak traffic hours of 7:00 A.M. to 8:00 A.M. and 3:30 P.M. to 5:30 P.M.

2.2 ALTERNATIVE B - NO-ACTION ALTERNATIVE

Under the No-Action Alternative, FEMA would not grant funds to the County under the SCG Program and the project site would not be developed with a new fire station as identified under the Proposed Action. The parcel would remain undeveloped for the near term, while the other existing uses on the adjacent parcel would continue unabated. The Company 33's three fire engines would continue to be stored in the parking garage with the single desk.

2.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

The only reasonable alternative actions available to FEMA are to either grant the funds for the proposed project under the SCG Program or deny funding. Both these alternatives are assessed within this EA. For the County's project, alternative sites were considered and then dismissed due to economic and operational factors. The costs associated with purchasing new land for an alternative site would prevent Mariposa County from developing the project. Mariposa County currently leases the parcel considered under Alternative A. Critical infrastructure and utilities are already in place at the project site, thus requiring minimal additional costs to serve the proposed fire station.

2.4 COMPARISON OF THE PROPOSED ACTION AND ALTERNATIVE

Among the project alternatives evaluated in **Section 3.0**, the Proposed Action would potentially result in new impacts (all fully mitigatable), while no development would occur on the project site for the foreseeable future under Alternative B, the No-Action Alternative.

Impacts to land resources under Alternative A would result from earthwork and construction. Erosion control and other best management practices would mitigate potential impacts. Alternative B would have no effect on land resources.

Alternative A would introduce a limited amount of impermeable surfaces to the project site, generating more runoff than existing conditions. At full build-out, Alternative A would have negligible potable water demand and wastewater generation; therefore, potential impacts to water resources would be minimal. With the incorporation of the best management practices described above, impacts to water resources would be less than significant. No impacts to water resources would result from Alternative B.

Construction and operational emissions of criteria air pollutants and greenhouse gases would be generated under Alternative A, but would be reduced through the incorporation of best

management practices above and those recommended as mitigation in **Section 3.0**. Operational emissions under Alternative A, the vast majority of which would be related to mobile sources (vehicle trips), would be similar to existing conditions (and therefore similar to Alternative B), since Company 33 would still be required to respond to requests for emergency assistance. Under Alternative B, no impacts to air quality would occur.

Alternative A and B would not result in any impacts to biological or historic properties.

Construction and operation of Alternative A would provide for enhanced public safety and emergency preparedness, resulting in beneficial impacts related to public services. Under Alternative B, no impacts (negative or beneficial) to public services would occur.

Alternatives A and B would not result in any impacts to socioeconomics or environmental justice.

Alternative A would generate a small number of vehicle trips resulting in minimal impacts to the local transportation network. Vehicle trips generated by the proposed fire station would be equal to the existing number of trips generated by conducting Company 33's business at the project site, and would replace these trips one to one. Construction of the fire station would not result in any increase in the number of requests for emergency assistance. Best management practices and mitigation have been recommended above and in **Section 3.0** to reduce transportation and circulation impacts. Alternative B would not generate a net sum of new vehicle trips, and therefore would not cause impacts to transportation and circulation.

Alternatives A and B would not result in impacts to land use.

Construction and operation of Alternative A would not generate noise at levels that would result in adverse impacts to the ambient noise environment in the project area. The engine is currently stored on site and is considered a component of the existing noise environment of the project site. No noise-related impacts would occur under Alternative B.

Impacts related to hazardous materials would be minimal under Alternative A. No hazardous material impacts would occur under Alternative B.

Aesthetic impacts would be less than significant under Alternative A. No aesthetic impacts would occur under Alternative B.

Alternative A would meet Mariposa County's objectives of improving emergency preparedness, providing a suitable working and training environment for Company 33, and protecting essential fire apparatus.

SECTION 3.0

AFFECTED ENVIRONMENT, IMPACTS, AND MITIGATION FOR THE ALTERNATIVES CONSIDERED

SECTION 3.0

AFFECTED ENVIRONMENT, IMPACTS, AND MITIGATION FOR THE ALTERNATIVES CONSIDERED

This section presents relevant information about existing resources and other values that may be affected by the Proposed Action and alternative, an analysis of potential impacts associated with the implementation of the alternatives, and mitigation to reduce identified impacts. The following resources and issue areas are addressed:

- Geology, Soils, and Seismicity
- Water Resources
- Air Quality and Climate Change
- Biological Resources / Invasive Species
- Historic Properties
- Socioeconomic Conditions / Environmental Justice
- Transportation and Circulation
- Land Use and Agriculture
- Public Services
- Noise
- Hazardous Materials
- Aesthetics
- Growth Inducing and Cumulative Impacts
- Agency Coordination and Permits

3.1 GEOLOGY, SOILS, AND SEISMICITY

3.1.1 GEOLOGICAL SETTING AND TOPOGRAPHY

The project site is composed of relatively flat to gently sloping (west to east) terrain at an elevation of approximately 5,150 feet (1,570 meters) above mean sea level. The project site falls within Climate Zones 7 through 9, "Great Valley and Surrounding Low Mountains." Specifically the climate regimes on-site are more typical of Climate Zone 7, which is characterized by marked seasons of hot summers and moderately cold winters. The regional geology is within the central portion of the Sierra Nevada geomorphic province. The project site is located within the Sierra Nevada Foothills region which includes all of the territory west of the crests of the Sierra Nevada Range (County of Mariposa, 2006).

The underlying geology is generally composed of metavolcanic and granitic formations west of the New Melones Fault and dates to the Jurassic Period (Krauskopf, 1985). Geological structures related to the Calaveras Formation may be found near the project site that includes beds of slate, mica schist, and quartzite. There are a number of fine to medium grained dioritic and aplitic dikes, some of which are associated with the gold-quartz veins. In places, these rocks are overlain by Tertiary channel gravels capped by rhyolite and andesite (**Appendix A**).

The topography of the subject parcel is relatively flat, sloping from west to east. The elevation of the subject parcel is highest in the northwest corner, and slopes to the east (approximately 10 percent slope).

3.1.3 SOILS

Soil survey reports for the project site are available online through the Natural Resources Conservation Service (NRCS), an agency within the United States Department of Agriculture (USDA). Soil types within the project site were determined using the online NRCS soil survey. Each survey maps soil units (soils exhibiting similar physical and chemical characteristics) and provides a summary of major physical characteristics with recommendations based on the soil characteristics. The project site consists entirely of the Chaix-Holland families complex. These soils are classified as Hydrologic Group D, which exhibit transmission very slow infiltration rate and high runoff rate (associated with the shallow bedrock beneath the soils). These soils do not exhibit episodes of ponding or flooding. A customized soil report for the project parcels is included as **Appendix A**.

SOIL HAZARDS

Soil Erosion

Erosion potential on the project site is low because the project site is relatively flat, the potential for erodibility of the soils is considered low (**Appendix A**), annual precipitation levels are low, and wind velocity averages and peaks are low in the region.

Liquefaction

Although soils on the project site exhibit low infiltration rates, the nearest fault is approximately 36 miles east of the project site. Therefore, the project site is not subject to liquefaction.

Expansive Soils

There are no expansive soils on the project site (**Appendix A**).

Landslides

Based on the lack of extreme elevation change and soil types (**Appendix A**), there are no landslide hazards on the project site.

3.1.4 SEISMICITY

No active faults are located near the project region. The closest active fault zone to the project site is the Hartley Spring fault zone, located approximately 35 miles northeast of Fish Camp, on the east side of the Sierra Nevada. The next closest active fault complex is the Hilton Creek fault zone located roughly 42 miles northeast of the project site. The San Andreas and Hayward fault zones, which are among the most seismically active geologic features in California, are located approximately 104 miles southwest and 122 miles west, respectively, of the project site. Several dormant fault zones are present in the western Sierra Nevada foothills, including the Foothills and Melones fault zones located 16 and 32 miles east of the project site, respectively. These geologic features are of pre-Quaternary age (≥ 1.6 million years) and have not been active for at least 10,000 years (County of Mariposa, 2006).

The California Geological Survey (CGS), in coordination with the United States Geological Survey (USGS), maintains a model of seismic shaking hazards throughout California based on the physical and mechanical properties of the Earth's crust. Using this model, the peak horizontal ground acceleration – the fastest measured change in speed for a particle at ground level – is given for a selected site using a latitude and longitude search engine. Shaking intensity at a particular site can vary depending on the overall magnitude of a regional earthquake, the distance from the epicenter, and the type of geologic material. According to CGS, the project site is located within an area of moderate potential shaking intensity (ground shaking motion of 0.15 to 0.208 percent force of gravity). This corresponds to a value of VII on the Modified Mercalli Intensity Scale. Shaking of this intensity generally results in negligible damage to buildings of good design and construction (CGS, 2010; Bolt, 1988).

3.1.5 IMPACTS TO GEOLOGY, SOILS, AND SEISMICITY

ALTERNATIVE A

TOPOGRAPHY

While development of the site would involve a small amount of grading (bank cutting and engineered fill) and other earthwork, it would not result in slope instability or landform impacts given the site's relatively flat topography. There are no unique topographical features that would be impacted from development. Development would not adversely affect the topography of the project site.

SOILS

The soil properties on the site pose no geologic hazard limitations for development (**Appendix A**). The soils are not prone to shrink-swell, subsidence, or landslides. Although erosion potentials on the project site are low, construction would involve soil disturbance, increasing the potential for adverse effects during rainfall. Erosion control practices have been incorporated into

the project description to reduce impacts from construction. The project construction area of disturbance is less than one acre and coverage under the Clean Water Act National Pollution Discharge Elimination System permitting process is not required. The soils on the project site consist of sand loams, which would not restrict the development of adequately draining leach fields on the project site. The soils are excessively drained and therefore development of a leach field on the project site would not adversely impact soils.

FAULTS

Under the authority of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. §§7701-7709 as amended) and Executive Order 12699 [44 CFR §206.226(d) as amended)], all new construction must use appropriate seismic design and construction standards and practices. This includes the construction of new buildings for the replacement of seriously damaged or destroyed buildings, such as the previous fire station. Accordingly, seismic design and construction standards and practices should meet or exceed the most recent edition of the *NEHRP Recommended Provisions of Seismic Regulations for New Buildings or Other Structures*. The interagency Committee on Seismic Safety in Construction (ICSSC) has recommended that the provisions of the *International Building Code and International Residential Code*, National Fire Protection Association 5000: *Building Construction and Safety Code*, and American Society of Civil Engineers *Minimum Design Loads for buildings and Other Structures* meet the requirements. The California Building Code (CBC) details design and construction requirements for new construction within California. Current standards in the CBC include safety precautions for the anticipated seismic shaking intensity that would prevent any structural damage. The codified provisions also meet the above requirements. Construction under the Proposed Project would be required to follow the California Building Code (CBC). The site's location, soils, and topography indicate a negligible risk of major damage from secondary effects such as landslides, subsidence, liquefaction, and other related seismic-shaking hazards. With the design and construction criteria established in concert with the requirements under the CBC, development of the Proposed Project would not result in impacts to the environment or human health and safety as a result of seismic events.

MITIGATION

Impacts to geology, soils, and seismicity are less than significant; no mitigation is required.

ALTERNATIVE B

Under the No Action Alternative, the project site would remain undeveloped and would continue to experience minimal erosion. The topography would remain consistent with existing conditions. No mitigation is required for Alternative B.

3.2 WATER RESOURCES

3.2.1 SURFACE WATER

The project area is located on a low divide separating the Big Creek (Merced River) and Lewis Fork (Fresno River) watersheds. A small, approximately one-foot wide ephemeral drainage occurs on the southeast side of the study area (Figure 5: Photograph 5; Figure 6 **of Appendix B**). The ephemeral drainage receives water through direct precipitation and runoff from the study area. No other water resources were observed during the biological survey of the study area. The nearest water resource is approximately 0.3 miles northeast of the project site. Surface water features are further addressed under waters of the U.S. in **Section 3.4** as well as the Biological Resources Assessment included as **Appendix B**.

DRAINAGE

The project site receives water from direct precipitation events. The minimal runoff appears to sheet flow to the east along a 10% grade off of the project site and is absorbed by the abundant open space surrounding the parcel. There are no stormwater sewers, roadside collection curbs, or drainage ditches associated with the project site and nearby roadway.

WETLANDS AND WATERS OF THE U.S.

There are no potential wetlands or other waters of the U.S. within the project site and none are mapped within the project site on the National Wetlands Inventory (USFWS, 2010; **Appendix B**).

FLOODING

The Federal Emergency Management Agency (FEMA) is responsible for predicting the potential for flooding in most areas. FEMA routinely performs this function through the update and issuance of Flood Insurance Rate Maps (FIRMs), which depict various levels of predicted flood inundation. The project site is included within FIRM panel number 06043C0825C. The project site is located in Zone D, which is defined by the FIRM as an area where flood hazards have not been determined, but are possible (FEMA, 2009). Based on the distance to the nearest water resource (0.3 mile northeast and down slope from the project site), and drainage class of the soils, flooding is not anticipated to occur on the project site.

3.2.2 GROUNDWATER

Of the many mountainous areas in California, groundwater is stored within deep fractures of bedrock underlying soil layers. Availability of groundwater in such formations can vary widely, even over a distance of a few yards. Conditions that affect availability of water within fractured rock include:

- Density of fractures within a given area;

- Connectivity between fractures;
- Fracture size and shape; and
- Recharge source.

How much water passes through fractured rock varies greatly depending on connections between fractures. As a result, interference between neighboring wells is difficult or impossible to predict in advance. Currently there are no identified maps of the many groundwater basins that exist due to the fractured bedrock within the Mariposa area. As a result, groundwater profiles are difficult to characterize. The project site is not located within a specified groundwater basin. Much of the groundwater in the county is recovered from hard rock wells drilled into fractures within the granite of the Sierra Nevada. Granitic groundwater basins in the county have not been studied in depth to date. Groundwater levels in the County wells range from 1.7 to 48 feet below ground surface elevation (County of Mariposa, 2006). Groundwater depths associated with the soil type on the project site are typically greater than 80 inches below surface elevation.

Orientation of the fractured groundwater system and the uphill topography of the Fish Camp area have resulted in several springs in the area surrounding the project site. Most of the domestic water for the Fish Camp area is produced from the springs (County of Mariposa, 2004).

3.2.4 WATER QUALITY

SURFACE WATER QUALITY

The Clean Water Act (CWA) (33 USC 1251-1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. Complying with the anti-degradation provision of the CWA, the Central Valley Regional Water Quality Control Board (CVRWQCB) has established water quality objectives for all inland surface waters to protect designated beneficial uses. Water quality objectives limit the impact of discharges to surface waters. There are no impaired water bodies listed by the Central Valley Regional Water Quality Control Board within the project region.

GROUNDWATER QUALITY

Groundwater quality within the Merced River basin is generally good and is suitable for use in the potable water supply. However, little is known about specific groundwater conditions. The relatively scarce number of wells in Mariposa County does little to contribute more information on groundwater quality, levels, and recharge behavior (County of Mariposa, 2006).

3.2.5 IMPACTS TO WATER RESOURCES

ALTERNATIVE A

There are no surface water resources on the project site that would be physically impacted by the implementation of Alternative A. Potable water would be provided by existing municipal connections, and the increase in demand would not impact groundwater, as the project site is located within the municipal service area. The increase in demand would not result in an increase in groundwater pumping above the municipal service areas water rights.

The soils on the project site are excessively drained and do not exhibit ponding or flooding. The depth to the water table is greater than 80 inches (**Appendix A**) providing adequate filtering substrate for the leach fields. Therefore, the development of an on-site leach field for the disposal of wastewater generated by the proposed fire station would not pose a risk to surface or groundwater resources.

In order to assess the potential impacts from flooding in the area, a Hydrologic and Hydraulic Study (HH Study) was conducted (**Appendix F**). The results of the study indicated that modeled surface water elevations of Big Creek during the 100- and 500-year flood events are approximately 135 feet below the elevation of the proposed fire station. Based on the HH Study, flooding of the project is not anticipated and implementation of the Proposed Action would comply with the provisions of Executive Order 11988, Floodplain Management.

The construction disturbance footprint is approximately 5,685 square feet (0.13 acres). Impervious surfaces would increase by approximately 4,685 square feet (0.1 acres) upon completion of the Proposed Project. Projects that disturb less than 1 acre during construction are not required to apply for coverage under a National Pollution Discharge Elimination System permitting program of the Clean Water Act. The implementation of the best management practices outlined in **Section 2.0** would reduce potential impacts associated with the minimal ground disturbance required to develop the Proposed Project.
Implementation of Alternative A would increase impervious surfaces by less than one acre on the site through the construction of the driveway and building pad. The resulting construction would result in a minimal increase in impervious surfaces on the project site; thus with the implementation of the BMPs described in **Section 2.0**, impacts to surface water drainage and water quality would be less than significant.

MITIGATION

Impacts to water quality are less than significant; no mitigation is required.

ALTERNATIVE B

Under the No-Action Alternative, the proposed fire station would not be developed. No additional impervious surfaces would be created on the project site. Drainage would remain as sheet flow with some infiltration through the native soils. No adverse impacts to water resources would occur under the No-Action Alternative, and no mitigation would be required.

3.3 AIR QUALITY

3.3.1 REGULATORY CONTEXT

The Federal Clean Air Act (CAA) was enacted for the purpose of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. Basic components of the CAA and its amendments include national ambient air quality standards (NAAQS) for criteria air pollutants (CAPs) and, under 40 CFR Part 51, development of state implementation plans (SIPs) to meet the NAAQS. The EPA is the federal agency responsible for identifying CAPs, establishing the NAAQS, and approving and overseeing state air quality programs as they relate to the CAA.

The EPA has identified six CAPs [ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb)] that are used as indicators of regional air quality. Regulation of air pollution is achieved through both the NAAQS and emission limits for individual sources of CAPs outlined in each SIP (40 CFR Part 51). The NAAQS CAPs are presented in **Table 3-1**. For some of the pollutants, the EPA has identified air quality standards expressed in more than one averaging time in order to address the typical exposures times.

The EPA, in conjunction with the California Air Resource Board (CARB), identifies areas throughout California that meet the NAAQS. These areas are labeled either *attainment* or *unclassifiable* for each CAP that is in compliance with the NAAQS. Areas that do not meet the NAAQS are labeled either *nonattainment* or *maintenance* for the CAP that is non-compliant with the NAAQS. The EPA further classifies nonattainment areas according to the level of pollution in each. There are five classes of nonattainment areas: *maintenance* (recently became compliant with the NAAQS); *marginal* (relatively easy to obtain levels below the NAAQS); *serious*, *severe*, and *extreme* (will be difficult to reach levels below NAAQS). The EPA uses these classifications to design clean-up requirements appropriate for the severity of the pollution and set realistic deadlines for reaching those clean-up goals.

Under 40 CFR Part 6, federal projects are required to show conformity with the applicable SIP. Conformity is outlined in 40 CFR Part 51 Subpart W, which requires any project that is located in a area where any CAP is in nonattainment to show that the total project-related emissions of that

particular CAP is less than the *de minimus* level provided in 40 CFR Part 51, Subpart W. The *de minimus* level for Mariposa County is 100 tons per year for each pollutant.

3.3.2 EXISTING AIR QUALITY CONDITIONS

The project site lies at the southern margin of the Mountain Counties Air Basin (MCAB). The MCAB covers the mountainous areas of the central and northern Sierra Nevada, from Plumas County on the north to Mariposa County on the south. Elevation varies from several hundred feet in the foothills to over 10,000 feet at the crest of the Sierra Nevada. The large range in elevation is the most dominate feature of the MCAB with respect to air quality.

TABLE 3-1
NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Standard		Violation Criteria
		parts per million	microgram per cubic meter	
Ozone	8 hours	0.075	-	If exceeded on more than 3 days in 3 years
CO	8 hours	9	10,000	If exceeded on more than 1 day per year
	1 hour	35	40,000	If exceeded on more than 1 day per year
NOx	Annual average	0.053	100	If exceeded
SOx	Annual average	0.03	80	If exceeded
	24 hours	0.14	365	If exceeded on more than 1 day per year
PM_{10}	24 hours	N/A	150	If exceeded on more than 1 day per year
$PM_{2.5}$	Annual arithmetic mean	N/A	15	If exceeded
	24 hours	N/A	35	If exceeded on more than 1 day per year
Source: CARB, 2010.				

ATTAINMENT STATUS

Table 3-2 shows the attainment status for pollutants in the MCAB. Attainment and nonattainment areas are identified through monitoring. Unclassifiable areas are those for which air monitoring has not been conducted, but which are assumed to be in attainment under the NAAQS. **Table 3-3** provides a three-year summary of the MCAB, listing the highest annual concentration observed for federal pollutants of concern.

TABLE 3-2
NATIONAL AMBIENT AIR ATTAINMENT STATUS FOR MCAB

Pollutants	NAAQS
	Designation/Classification
Ozone 8-hour	Nonattainment
PM_{10}	Unclassified/Attainment
$PM_{2.5}$	Unclassified/Attainment
Carbon Monoxide	Unclassified/Attainment
Nitrogen Dioxide	Unclassified/Attainment
Sulfur Dioxide	Unclassified/Attainment
Lead	Unclassified/Attainment
Source: CARB, 2009a.	

TABLE 3-3
FEDERAL AIR MONITORING DATA FOR MCAB

Pollutant	Standard	2006	2007	2008
Ozone				
Highest	0.75 (ug/L)	0.092	0.092	0.093
Days Exceeded		13	12	17
Source: CARB, 2009b.				

Pollutants of Concern

CAPs which are in nonattainment under the NAAQS are considered pollutants of concern. The following discussion summarizes the pollutant of concern for Mariposa County, which is ozone.

Ozone

Ozone is created in the presence of sunlight through a photochemical reactions involving reactive organic gas (ROG) and NO_X. ROG and NO_X are released as a result of incomplete combustion of fossil fuels, which is the largest source of ground-level ozone (O_3). Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. As a photochemical pollutant, O_3 is formed only during daylight hours under appropriate conditions, and is destroyed throughout the day and night. O_3 is

considered a regional pollutant, as the formation takes place over time and is often most noticeable downwind from the sources of the emissions.

CLIMATE CHANGE

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes. Climate change has the potential to reduce the snow packs in the Sierra Nevada Mountains, cause the sea level to rise, and increase the intensity of wildfires and storms intensity. The Council on Environmental Quality recommends quantification of greenhouse gas (GHG) emissions, assessment of the significance of any impact on climate change, and identification of mitigation or alternatives that would reduce GHG emissions.

Regulatory Background

The following are the most recent regulatory actions taken by the USEPA and CEQ:

- In response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110–161), USEPA has issued the Final Mandatory Reporting of Greenhouse Gases Rule. Signed by the Administrator on September 22, 2009, the rule requires in general that suppliers of fossil fuels and industrial greenhouse gases (GHGs), manufacturers of vehicles and engines outside of the light duty sector, and facilities that emit 25,000 metric tons or more of GHGs per year to submit annual reports to USEPA. The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change.

- On February 23, 2010 the CEQ provided for public comment, its Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (NEPA Guidance). The NEPA Guidance provides Federal agencies guidance on how to analyze the environmental impacts of greenhouse gas emissions and climate change when they describe the environmental impacts of a proposed action under NEPA. The NEPA Guidance provides practical tools for agency reporting, including a presumptive threshold of 25,000 metric tons of carbon dioxide equivalent emissions from the proposed action to trigger a quantitative analysis, and instructs agencies how to assess the effects of climate change on the proposed action and its design. The NEPA Guidance exempts land and resource management actions and does not propose to regulate greenhouse gases. The NEPA Guidance does not provide a numerical GHG emission threshold. The NEPA Guidance does not provide a numerical GHG emission threshold.

SENSITIVE RECEPTORS

Sensitive receptors are generally defined as land uses that house or attract people who are susceptible to experience adverse impacts from air pollution emissions and, as such, should be

given special consideration when evaluating air quality impacts from projects. Sensitive receptors include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent homes, parks and recreational facilities, and residential areas are examples of sensitive receptors. As illustrated in **Figure 3**, the area immediately surrounding the project site is dominated by open space, agriculture, with sparse residences and businesses. The closest sensitive receptor is a residence located approximately 300 feet northeast of the center of the project site on Laurel Way.

3.3.3 IMPACTS TO AIR QUALITY

ALTERNATIVE A

Under 40 CFR Part 9, if a federal project is in a nonattainment area, then project-related emissions must be below the *de minimus* level of 100 tons per year to show conformity with the applicable SIP. The MCAB is in nonattainment for ozone (refer to **Table 3-2**); therefore, ozone precursors NOx and ROG emission are required to be below 100 tons per year for the project to show conformity with the applicable ozone SIP.

CONSTRUCTION

Construction of Alternative A would generate criteria air pollutants through the use of construction machinery (primarily diesel operated), construction worker automobiles (primarily gasoline operated), and through land disturbance. Construction of the fire station would proceed in distinct phases, beginning with grading and installation of below-ground utilities, followed by the erection of structure, and finally the finishing of fire station. The generation of construction-related emissions is considered a short-term impact, especially in regard to fugitive dust generation. Alternative A has been designed to incorporate BMPs that would reduce the potential for short-term dust impacts. Short-term construction impacts would be minimal even without the implementation of these measures due to the size of the project (less than 1 acre); however, they are included to reduce impacts by the maximum amount feasible. Implementation of these measures would reduce impacts associated with air quality. Construction of the proposed Fire Station would have a minimal adverse affect on regional air quality.

OPERATION

Operation of Alternative A would result in no increase in total vehicle traffic (refer to **Section 3.7**); therefore, no indirect mobile NOx or ROG emission would occur. The proposed Fire Station would cause a minute increase in area source emissions (i.e. gas heating); however, these emissions would not exceed *de minimis* levels. Alternative A emissions from area sources would be offset or reduced with the use of Energy Star-certified appliances and the exceedance of CA

Title 24 State Building Code for insulation value and LEED energy conservation systems. Operation of the proposed Fire Station would have no adverse affect on regional air quality.

CLIMATE CHANGE

Alternative A related GHG emission would be minimal, because the project generates no mobile source emissions and construction emission would be minimal due to the use of a prefabricated metal building and one acre site. Alternative A would emit a small amount of GHG emissions through area sources (gas heating and cooking) and indirect sources (water conveyance, electricity usage, waste disposal). These GHG emissions would be small in comparison to state or regional GHG emissions. Alternative A's GHG emission would have a minimal adverse effect on climate change. Project-related GHG emission would be reduced with the addition of renewable energy systems through solar collection panels that would ensure the station is as close to energy neutral as reasonable and feasible. The solar generating system would interface with the PG&E distribution system to ensure peak efficiency.

MITIGATION

Impacts to air quality are less than significant; no mitigation is required.

ALTERNATIVE B

Under the No-Action Alternative the site would continue to be undeveloped land and none of the construction or operational air quality impacts identified for Alternative A would occur. The same levels of mobile emissions would occur as the adjacent property currently houses the existing fire fighting operations.

3.4 BIOLOGICAL RESOURCES/INVASIVE SPECIES

3.4.1 REGULATORY SETTING

FEDERAL ENDANGERED SPECIES ACT

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) enforce the provisions stipulated within the Federal Endangered Species Act (ESA) of 1973 (16 USC Section 1531 *et seq*.). USFWS administers ESA for all terrestrial species while NMFS administers ESA for marine species, including anadromous salmonids. Threatened and endangered species on the federal list (50 CFR Section 17.11, 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10(a) Incidental Take Permit is granted or a Biological Opinion with incidental take provisions is rendered.

Pursuant to the requirements of the ESA, a Federal agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present within the study area/project site and determine whether the proposed project would likely jeopardize the

continued existence of any species that is listed or proposed for listing under the ESA or to result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Section 1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require compensatory mitigation.

PROTECTION OF WETLANDS

Under Executive Order No. 11990 (Order) the EPA is required to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands whenever a practical alternative exists (42 CFR 26961). As such, the EPA is required to avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds 1) that there is no practical alternative to such construction, and 2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. Applicants for federal funding shall indicate if proposed actions would be located in wetlands and agencies shall consider factors relevant to a proposal's effect on the survival and quality of wetlands.

INVASIVE SPECIES

Under Executive Order 13112, FEMA is required to identify actions that may affect the status of invasive species and may not fund actions that are likely to cause or promote the introduction or spread of invasive species unless the actions clearly outweigh the potential harm caused by the invasive species and all feasible and prudent measures to minimize the risk of harm will be incorporated into the action.

3.4.2 ENVIRONMENTAL SETTING

The study area is located on Section 26, T5S, R21E, Mt. Diablo Baseline and Meridian, of the "Fish Camp, California" U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad). The centroid of the study area is 37° 28' 29" N, 119° 38' 23.8" W.

METHODOLOGY

A Biological Resource Assessment (BRA) was prepared for the Proposed Action and is included as **Appendix B**. The BRA presents a summary of special status species in the vicinity of the study area based on the USFWS file data and CNPS and CNDDB queries and provides a rationale as to whether the species has the potential to occur within the study area. Presence of species or their habitat was evaluated during the field surveys. Analytical Environmental Services (AES) biologist Kelly Buja, M.S. conducted a general biological survey and an informal delineation on June 2, 2010. The biological survey consisted of evaluating biological communities and documenting potential habitat for special status species with the potential to occur within the

study area. Photographs of the study area are presented in the BRA. A summary of the results of the BRA is provided below.

RESULTS

HABITAT TYPES

Two terrestrial habitat types occur within the study area: white fir/mixed conifer and ruderal/disturbed. Aquatic habitat types are discussed in the "Waters of the U.S." section below. Photographs of the habitat types are shown in Figure 5 of **Appendix B**. A habitat map is illustrated on Figure 6 of **Appendix B**.

White fir/mixed conifers occur within a portion of the study area (Figure 5: Photographs 1 and 6 of **Appendix B**). Vegetation observed within this habitat type includes: white fir (*Abies concolor*), incense cedar (*Calocedrus decurrens*), sugar pine (*Pinus lambertiana*), mountain misery (*Chamaebatia foliolosa*), snowberry (*Symphoricarpos mollis*), and mountain strawberry (*Fragaria virginiana*).

The majority of the study area is ruderal/disturbed (Figure 5: Photographs 2, 3, 4, and 6 of **Appendix B**). This habitat type includes areas where the study area has been logged. This habitat is comprised of slash piles and dirt roads. Vegetation observed within the ruderal/devoped habitat type includes: mountain strawberry, Sierra Mariposa lily (*Calochortus minimus*), pine violet (*Viola lobata*), California milkweed (*Asclepias californica)*, fairy bells (*Prosartes hookeri*), mullein (*Verbascum* sp.), and conyza (*Conyza* sp.).

Waters of the U.S.

A small, approximately one-foot wide ephemeral drainage occurs on the southeast side of the study area (Figure 5: Photograph 5; Figure 6 of **Appendix B**). The ephemeral drainage receives water through direct precipitation and runoff from the study area. No other wetland features were observed during the biological survey of the study area. No other potential wetlands or other waters of the U.S. occur within the study area.

FEDERALLY LISTED SPECIAL-STATUS SPECIES

For the purposes of this EA, federally listed species include those plant and animal species that are listed as endangered or threatened under the ESA, formally proposed for listing, or candidates for listing. Regionally occurring federally-listed species were evaluated for their potential to occur on the project site.

No federally-listed special-status plant species have the potential to occur within the study area. One federally-listed candidate wildlife species has the potential to occur within the study area, the fisher. Fishers occur in intermediate to large tree stages of coniferous forests and deciduous

riparian habitats with greater than 50 percent canopy cover. Within California, they are found in the Sierra Nevada, Klamath, and Cascade mountains and within a few areas along the North Coast ranges. Fishers require cavities in large trees, snags, logs, rock areas, or shelters created by slash or brush piles for dens and protection. Fishers are primarily nocturnal and crepuscular foragers with some diurnal behavior (NatureServe, 2009). There are 2 CNDDB occurrences of this species within 5 miles of the study area (Figure 4 of **Appendix B**). The nearest CNDDB occurrence overlaps the study area. The trees within the white fir/mixed conifer forest within the study area provide denning habitat for this species. This species was not observed during the biological survey within the study area. This species has the potential to occur within the study area (**Appendix B**). In accordance with Section 7 of the ESA, FEMA requested concurrence from the USFWS with this finding (**Appendix E**). No response has been received to date.

Migratory Birds and Bird of Prey

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) protects migratory birds by making it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Migratory birds and other birds of prey have the potential to nest in the trees within and in the vicinity of the study area. No birds were observed nesting during the June 2, 2010 survey of the project site.

3.4.3 IMPACTS TO WETLANDS AND WATERS OF THE U.S.

ALTERNATIVE A

The Proposed Project has the potential to affect an ephemeral drainage, a potentially jurisdictional waters of the U.S. There are no wetland features that occur within the project site; therefore, no impact would occur to wetlands.

MITIGATION

A jurisdictional delineation should be conducted within the study area.

ALTERNATIVE B

There are no wetland features that occur within the project site and no construction would occur; therefore, no impact would occur.

3.4.4 IMPACTS TO SPECIAL-STATUS SPECIES

ALTERNATIVE A

The Proposed Project does not have the potential to affect federally-listed special-status plants. The Proposed Project has the potential to impact one federally-listed candidate wildlife species, the fisher. Consultation with USFWS as addressed under Section 7 of ESA is not required for the

Proposed Project because these species have not been formally listed; they are candidates for listing.

Grading and construction activities associated with the Proposed Action have the potential to result in the disturbance of nesting habitat for migratory birds and other birds of prey. Nesting birds and other raptors may utilize trees on the project site as nesting habitat. Potential disruption of nesting migratory birds and other birds of prey during construction could result in nest abandonment or mortality through tree removal. The mitigation measures below would ensure any impacts to nesting birds are reduced to less than significant levels through identification and avoidance of active nests. After mitigation, impacts would be considered less than significant.

MITIGATION

The following mitigation measures are recommended for Alternative A and would avoid potential take of habitat for federal listed plants and wildlife:

Fisher

1. A qualified biologist should survey whether any fishers or their dens occur within the white fir/mixed conifer habitat type no more than 2 weeks prior to commencement of construction activities. If surveys show that there is no evidence of fishers or their dens, then no additional mitigation is recommended.

2. Should the biologist determine that fisher dens occur within the Proposed Project footprint, a 25-foot buffer zone should be established around the den, and consultation with the USFWS would occur within one day following the preconstruction survey. No construction activities would commence until authorized by the USFWS.

Migratory Birds and Other Birds of Prey

1. If construction begins during the nesting season for migratory birds and other birds of prey (between February 1 and October 1), a qualified biologist should conduct a preconstruction survey for nests no more than 2 weeks prior to construction. If surveys show that there is no evidence of nests, then no additional mitigation would be recommended.

2. If any active nests are identified within the project site during the preconstruction survey, a buffer zone should be established around the nests. A qualified biologist should monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. The biologist should delimit the buffer zone with construction tape or pin flags within an appropriate buffer, depending on the species, of the active nest and maintain the buffer zone until the end of breeding season or the young have fledged.

Guidance from USFWS would be requested if establishing an appropriate buffer zone is impractical.

ALTERNATIVE B

Under the No-Action Alternative the site would remain undeveloped. Therefore, there would be no adverse impacts to biological resources within the project site. No mitigation would be required.

3.4.5 IMPACTS FROM INVASIVE SPECIES

ALTERNATIVE A

The funding for the replacement of an existing fire station would not result in the introduction of invasive animal, invertebrate, or fish species to the region. The inclusion of best management practices (**Section 2.0**) which would require any landscaping to exclusively include native species, would prevent the introduction of invasive plant species to the project site. Funding of the proposed fire station would be consistent with Executive Order 13112.

ALTERNATIVE B

No action would be taken by FEMA and therefore implementation of Alternative B would not require consistency with Executive Order 13112.

3.5 HISTORIC PROPERTIES

An archaeological survey was conducted by AES in June of 2010. A historic properties technical memorandum was prepared and is included as confidential **Appendix C**. The cultural resources technical memorandum included a literature search, field survey, and Native American consultation to identify and evaluate any prehistoric and historic-period resources within or adjacent to the project site that may be impacted by the Proposed Action.

3.5.1 REGULATORY SETTING

NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act (NHPA) as amended, and its implementing regulations found in 36 CFR 800, require federal agencies to identify historic properties that may be affected by undertakings involving federal lands, funds, or permitting. The significance of historic properties must be evaluated using established criteria outlined in 36 CFR 60.4, as described below.

If a property is determined to be a historic property, Section 106 of the NHPA requires that effects of the undertaking on the property be determined. A historic property is defined as:

> "*…any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property…*"(NHPA Section 301[5]).

If a historic property would be adversely affected by an agency undertaking, then prudent feasible measures to avoid or reduce adverse impacts must be taken. The ACHP must be provided an opportunity to review and comment on undertakings prior to the expenditure of federal funds.

The criteria for listing on the National Register of Historic Places (NRHP), defined in 36 CFR 60.4, are as follows:

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:*
>
> **A.** That are associated with events that have made a significant contribution to the broad patterns of our history;
>
> **B.** That are associated with the lives of persons significant in our past;
>
> **C.** That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> **D.** That have yielded, or may be likely to yield, information important to prehistory or history.

In addition to meeting at least one of the criteria listed above, the historic property must also retain enough integrity to convey its historic significance. The National Register recognizes seven aspects or qualities that, in various combinations, define integrity (NPS, 1990). These seven elements of integrity are: location, design, setting, materials, workmanship, feeling, and association. To retain integrity, a property will always possess several, and usually most, of these aspects.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

NEPA requires that federal agencies take all practical measures to "preserve important historic, cultural, and natural aspects of our national heritage" (NHPA, Section 800.8(a)). NEPA's mandate for considering the impacts of a federal project on important historic and cultural resources is similar to that of Section 106 of the NHPA, and the two processes are generally coordinated when applicable. Moreover, NEPA's requirement that federal agencies take all practical measures to "preserve important historic, cultural, and natural aspects of our national

heritage" has been widely interpreted to cover paleontological resources potentially impacted by federal projects. Thus, whenever possible, mitigation measures are recommended to lessen impacts to historic properties as a result of federal projects. Section 800.8(a) of NHPA's implementing regulations provides guidance on coordination with NEPA.

3.5.2 HISTORIC PROPERTIES SETTING

PREHISTORY

Mariposa County is located in the western Sierra Nevada Foothill archaeological region. The earliest residents of Central California are represented by the Fluted Point and Western Pluvial Lakes Traditions, which date from about 11,500 to 7,500 years before present (B.P.) (Moratto, 1984). These early peoples are thought to have subsisted using a combination of generalized hunting and exploitation of plants and animals in nearby lakes and streams (Moratto, 1984). Archaeological assemblages attributed to these early cultures have been documented, but are rare in the Sierra.

Following the initial occupation of central California, various regionalized cultural traditions and sequences emerged throughout the San Joaquin Valley, Sierra Foothills, and Coast Range areas. Early attempts to categorize the chronology and cultural attributes of the numerous prehistoric manifestations into a single scheme led to the development of the Central California Taxonomic System (CCTS). The CCTS was a tripartite division of Early, Middle, and Late Periods, that was based upon artifact types, burial patterns, and the condition of human bones (Moratto, 1984). Later recast by Heizer and Fenega (1939) as the Early, Middle, and Late Horizons, the CCTS assumed a basically uniform cultural succession for all of central California and soon became the dominate paradigm in California prehistory.

ETHNOGRAPHY

The project area lies within the ethnographic territory of the Eastern Miwok, specifically speakers of the Mariposa-Chowchilla dialect of the Southern Sierra Miwok (Kroeber, 1925; Levy, 1978). Southern Sierra Miwok territory occupied the upper foothills and upper drainages of the Merced and Chowchilla Rivers (Figure 4 of the confidential **Appendix C**). Their western boundary bordered the Southern Valley Yokuts, with the Central Sierra Miwok to the north, the Monache to the south, and Washoe to the east.

HISTORY

Spanish and Mexican Era

The early Spanish explorer Gabriel Moraga passed through what is now Mariposa County in 1806 and named it *Arroyo de las Mariposas* or "Stream of Butterflies" for the masses of butterflies that seasonally gather in the area (Hoover et al., 1990:186). The area was later settled as part of a

Mexican land grant named Las Mariposas. A grant of ten square leagues (76,280 acres) was granted to Juan Bautista Alvarado in 1844 by Governor Micheltorena (Shumway, 1988). John C. Fremont bought 44,387 acres of the grant in 1847 and the patent was confirmed in 1856 (Durham, 2000:180). The grant, as was common at the time, did not include mineral rights, as those traditionally belonged to the government. Also, the grant had no set boundaries; it was for grazing and as such, the boundaries could be moved to better accommodate the needs of the governments. Fremont was represented in Monterey by Thomas Larkin in the purchase of the rancho from Alvarado, the last Mexican Governor of California.

American Period

Mariposa County is one of the original 27 counties (Hoover et al., 1990:186). It is known as the "Mother of California Counties" because when it was created it was the largest county in California and 11 central California counties were formed entirely or in part from it. The county developed differently from other Mother Lode counties. Due to the long legal entanglements of John Fremont and the lack of easy access to abundant water, mining in Mariposa County soon evolved into industrial pursuits. While the placer period lasted only a few years, hard-rock quartz mining conducted underground quickly became the order of the day. This meant that men no longer held individual claims but worked for the 'company,' often living in company housing,

The area of Fish Camp has been visited by Euro-Americans for over 150 years, because of it was a logical resting point for tourists travelling to Wawona in the Yosemite Valley. Accounts put Euro-Americans in the vicinity of Fish Camp as early as 1851. Major James D. Savage and Captain John Boling both entered the region in search of Native American with whom they were fighting. Semi-permanent American settlers arrived in Fish Camp during the Civil War in order to pasture their sheep in the foothills of the Sierra Nevada. The Union Army needed blankets and uniforms which increased the demand for wool. In 1872, construction began on an irrigation ditch to divert water from Big Creek into Lewis Creek; the canal was completed in 1873 or 1874 (Mariposa County, 1979).

A road to Wawona was constructed as early as 1875 and it is likely that travelers would have passed by the vicinity of Fish Camp. In 1878, a road was constructed to bring tourists from the terminus of the Southern Pacific Railroad (SPRR) to the Yosemite Valley. One of the six stage stops on this road was Summerdale (modern day Fish Camp), which increased the number of visitors to Fish Camp. The Madera Flume and Trade Company was in business in the region as early as 1878. Also, a sawmill was established at Fish Camp in 1883 that was in operation until 1893. Annie Philip claimed 640 acres of timber in Section 25, located just east of the APE. Two years later Annie and her husband built a two-story hotel with 12 bedrooms. They named their home Fish Camp due to the high number of fish caught. At that time, a large commercial building was located across the street, which held a Post Office. The Post Office marked the town of Summerdale (Mariposa County, 1979).

The Summerdale Post Office was removed to the Sugar Pine area in 1908. The railroad constructed to move cut timber was brought to Fish Camp in the same year. In 1912, advances in technology replaced the horse-drawn stage stops with automobile stops. The Fish Camp post office was re-established in 1924, suggesting an increase in population density. In 1932, construction of present day State Highway 41 (CA 41), leading to Wawona, was completed. The installation of CA-41 proximal to Fish Camp tremendously increased traffic in the region. In 1933, the post office was moved again to Oakhurst, only to return several years later in 1939 (Mariposa County, 1979).

METHODOLOGY

As part of the study, a records search was conducted at the Central California Information Center (CCIC) of the California Historical Resources Information System by CCIC staff, on January 4, 2010 (CCIC File No. 7510 M/O). The CCIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of archaeological and historic records and reports for a 7-county area that includes Mariposa County, and is housed at California State University, Stanislaus, located in Turlock, California. Additional research was conducted using the files and literature maintained at AES. The records search materials are provided in **Confidential Appendix C**.

The records search and literature review for this study were done to (1) determine whether known historic properties had been recorded within or adjacent to the study area and determine if the APE was subject to survey in the past; (2) assess the likelihood of unrecorded historic properties based on archaeological, ethnographic, and historical documents and literature; and (3) to review the distribution of nearby archaeological sites in relation to their environmental setting.

Other sources reviewed included the *California Inventory of Historical Resources* (California Office of Historic Preservation, 1976), the California Office of Historic Preservation's *Five Views: An Ethnic Historic Site Survey for California* (1988), *California Historical Landmarks* (1990), California Points of Historical Interest (1992), and the *Historic Properties Directory Listing for Mariposa County* (2009). The *Historic Properties Directory* includes the *National Register of Historic Places*, the *California Register of Historical Resources*, and the most recent listings (through September, 2009) of the *California Historical Landmarks and California Points of Historical Interest*. Additionally, historical maps were examined in an effort to identify potential historical properties that may be located within the vicinity.

The record search revealed that no previously recorded historic properties are located within the project area. The record search indicated four previously recorded historic properties are located within ¼-mile radius of the project area. P-22-180 was recorded as a segment of the Madera-Sugar Pine Railroad grade; this historic property is also known as the trinomial CA-MPR-624/H. The grade is the only surviving portion of this railway, which was constructed during the period

of 1908-1918. At the time of recordation, this historic property was in poor condition (Napton, 1999a). P-22-2081 is a log cabin located at 1173 Railroad Avenue and was likely built in the late 19th century or early 20th century. Reportedly, this cabin was originally used by the United States Calvary during the Mt. Savage Indian Fracas. However, this report remains unsubstantiated at this time. In the 1970s, the cabin was restored and was in good condition at the time of recordation (Mendershausen, 1982a; Office of Historic Preservation, 2009). P-22-2083 was described as a manmade lake built by Bill Footman in the early 20th Century and deepened by Bill Footman in 1945. The lake was made strictly for the tourist industry within the area (Mendershausen, 1982b; Office of Historic Preservation, 2009). P-22-2084 is a multi-component resource comprised of two prehistoric bedrock mortars and the historical town site of Summerdale. The town site of Summerdale was first depicted on an 1897 map of the vicinity. Summerdale was founded by Albert Philip and his wife in the late 19th century when he established a homestead in the vicinity. The town was shown on maps until the first quarter of the 20th century (Fireman's Fund Insurance Company, 1918). After Summerdale was destroyed by fire, the town was renamed Fish Camp (Mendershasuen and Millar, 1982; Office of Historic Preservation, 2009).

The record search revealed that no historic property investigations have taken place within the project area. However, a total of five historic property studies have been conducted within a ¼-mile radius of the project area.

On December 28, 2009, the State of California Native American Heritage Commission (NAHC) was asked to review the Sacred Lands file for information concerning significant Native American cultural resources within the project area. On January 4, 2010 the NAHC responded stating they have no knowledge of any Native American cultural resources or sacred sites within or adjacent to the APE. However, they did provide a list of individuals and groups for further consultation. Letters to these individuals and groups were sent on June 30, 2010 (**Appendix E**). To date, no response has been received.

On June 2, 2010, a pedestrian survey and visual inspection of the APE containing the proposed Fish Camp Fire Station was conducted with Mariposa County personnel. The entire parcel was examined in transects of 20-meters or less. The parcel had been cleared of the timber within the past year and was littered with debris from this process. The parcel was covered in vegetation, leaf litter, and pine needles which lowered the visibility to poor in most areas. Additionally, the parcel was littered with depressions from where large Pine trees were recently felled. A debris pile located in the APE had recently been burnt and was still smouldering at the time of the survey. The ground surface was examined for historic properties, while rodent burrow backdirt piles and road cuts were examined for indicators of buried archaeological deposits.

Two historical jars, located approximately 66 feet (ft.) apart, were observed within the APE. Jar 1, designated FC-ISO-1, was marked with an Owens-Illinois Maker's Mark and measured 6 ¼ inches (in.) in height, the width was 4 in. and the diameter of the base was 2 1/3 in. The Maker's Mark was embossed on the base of FC-ISO-1 as: "20 [Owens-Illinois Symbol] 3 / 58 / 3762-C." This mark indicates the jar was likely made in the Oakland, Ca. Plant in 1933 (Lockhart, 2004: 25; Toulouse, 1971:406). The jar was made of clear glass, did not retain a lid, and retained glue indicating the jar once had a label. The jar contained side seams that continued up through the neck and mouth of the jar. This artifact was not located within the project footprint and was not collected.

Jar 2, designated FC-ISO-2, also had a Maker's Mark of a K in a keystone, which dates to the period of 1924-1968. The company attributed to this mark was Knox Glass Bottle Co. who, in 1956, changed to Knox Glass Bottle, Inc (Toulouse, 1971: 293). This jar was clear glass and had the following dimensions: 6 ¼ inches (in.) in height, a width of 4 in., and a base diameter of 2 1/3 in. FC-ISO-2 retained its lid and there was no evidence that this jar had a label. This artifact was not in the project footprint and was not collected.

3.5.3 PALEONTOLOGICAL SETTING

The presence of paleontological resources at any particular site is influenced by geological composition resulting from formation processes occurring over long periods of time. Fossils typically reside in sedimentary layers, and may or may not become mineralized dependent upon the mineral composition within their depositional environment.

The region's geologic history is characterized by volcanic eruptions, tectonic uplift and tilting, and erosion. Locally, the dominant geologic feature is the Sierra Nevada Batholith, a massive Mesozoic-era grano-dioritic structure, which underlies the project area and is visible at the surface to the east. Within the project area a thin soil mantle is present, which consists mostly of well drained sandy loams and very rocky coarse sandy loams, derived from quartz diorite and granitic alluvium. Significant fossil resources generally do not occur within the very shallow sediments overlying the western edge of the Sierra Nevada Batholith, and none are present within the batholith itself. Areas along the western edge of the San Joaquin Valley and adjacent southern Coast Range have the highest frequency of fossils in Central California.

A search of the University of California Paleontology Museum's (UCMP) database indicates that only 15 paleontological specimens have been reported in Mariposa County (UCMP, 2009) dating from the Jurassic (205 – 145 million years ago) through Quaternary Periods (1.8 million years ago to present).

Regionally, significant fossil discoveries have been made within the deep alluvial fans within the San Joaquin Valley. Of particular importance is the Fairmead fossil bed in Madera County,

located roughly 45 miles south of the project area. The Fairmead locale, discovered in 1993 at the Madera County Landfill, contains a wide variety of Pleistocene fauna including mammoth, birds, reptiles, and large cats, among others (Dundas et al., 1996).

Several sources were consulted to identify unique geologic formations within the project site. Sources reviewed include: the California Geotour Index maintained by the California Geologic Survey (CA Geologic Survey, 2007); California Geology (Harden, 2004); California Landscape (Hill, 1984); Roadside Geology of Northern and Central California (Alt and Hyndman, 2000); California Fossils for the Field Geologist (Schenck and Keen, 1955); and A Natural History of California (Schoenherr, 1992). A review of the above-referenced sources did not identify the presence of any unique geologic features or known deposits of significant fossils within the project area.

3.5.4 IMPACTS TO HISTORIC PROPERTIES/PALEONTOLOGICAL RESOURCES

ALTERNATIVE A

The reconnaissance survey revealed the presence of two isolated historical bottles. No indication was given that these bottles were associated with a larger debris scatter or subsurface cultural deposit. The bottles are not eligible for listing on the NRHP under any of the four criteria and therefore are not considered historic properties. Furthermore, the bottles were not located within the project footprint and would not be affected as a result of the Proposed Project. Based on the results of the historical properties evaluation, FEMA requested concurrence from SHPO regarding FEMA's finding of No Historic Properties Affected by the implementation of the Proposed Project and FEMA's subsequent undertaking of providing financial assistance (**Appendix E**). SHPO responded with a letter concurring with the finding of No Historic Properties Affected (**Appendix E**).

No further historic properties study is warranted. There is the possibility, although very remote, that subsurface archaeological deposits may exist in the area of potential effect (APE), as archaeological sites may be buried with no surface manifestation. As currently designed, all ground disturbance associated with Alternative A would occur within the areas already disturbed. In the event that concentrations of prehistoric or historic-period materials are encountered during ground-disturbing work, the following procedures will be followed.

MITIGATION

The following mitigation will be implemented for Alternative A:

Cul-1 Should any buried archeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archeological indicators include: obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders

with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The County shall be notified of the discovery and a professional archeologist shall be retained to evaluate the find and recommend appropriate treatment measures. Project-related activities shall not resume within 100 feet of the discovery until all approved mitigation measures have been completed.

Cul-2 Encountering Human Remains

There is a remote possibility that an unanticipated discovery of human remains could occur. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human grave. If human graves are encountered, work shall halt in the vicinity and the Mariposa County Coroner shall be notified immediately. At the same time, an archaeologist shall be contacted to evaluate the discovery. If human remains are of Native American origin, the Mariposa County Coroner will notify the Native American Heritage Commission within 24 hours of this identification.

ALTERNATIVE B

Under the No-Action Alternative the site would remain undeveloped. Therefore, there would be no adverse impacts to any unknown archaeological or paleontological resources on the site. No mitigation is required.

3.6 SOCIOECONOMIC CONDITIONS / ENVIRONMENTAL JUSTICE

3.6.1 SOCIOECONOMIC CHARACTERISTICS OF MARIPOSA COUNTY

Historically, the mining, timber, and tourism industries fueled the Mariposa County economy. Today, one of the largest industries is tourism and recreation. Demographic data for the town of Mariposa and Mariposa County were gathered from a variety of sources including the 2000 Census, the annual American Community Survey (U.S. Census Bureau), the U.S. Bureau of Labor Statistics, and the California Employment Development Department's Labor Market Information. Each of the above-referenced sources presented limitations related to the age, scope, and ability to verify the data. For example, the 2000 Census provides the most up to date demographic information available for Mariposa, whereas the U.S. Census Bureau has provided updated statistics for the County as a whole as part of the annual American Community Survey. Unfortunately, the annual American Community Survey is only completed for communities with

a population of 65,000 or more, thus the immediate vicinity of the project site is not covered. Nonetheless, the most recent and reliable information was culled from the various sources to sketch the demographic profile provided below.

Mariposa County has a total population of approximately 18,297 (Department of Finance, 2009). According to the United States Bureau of Labor Statistics, the county-wide estimated labor force in September 2008 was 9,237. The population of Mariposa County has remained relatively constant, with a 6.8 percent increase in population since 2000. The U.S. Census Bureau estimates the population within Mariposa was approximately 17,130 persons in 2000.

The project site is located within Mariposa County Census Tract 4, which had a median household income of $30,645 and an average household size of 2.28. This figure is much higher than for the town of Mariposa, which reported a median household income of $18,144 in 2000. Approximately 28 percent of families within Mariposa were below the poverty level (US Census Bureau, 2000). According to the 2000 Census, the median household income for Mariposa County was $34,626 (U.S. Census Bureau, 2000). Average annual unemployment rates for Mariposa County, California, and the United States are provided in **Table 3-4**.

TABLE 3-4
COUNTY, STATE, AND NATIONWIDE EMPLOYMENT (ANNUAL AVERAGE)

Unemployment Rate (%)	2004	2005	2006	2007	2008
Mariposa County	6.7	6.4	5.6	6.0	7.5
California	6.2	5.4	4.9	5.4	7.2
United States	5.5	5.1	4.6	4.6	5.8

SOURCE: California Employment Development Department, Labor Market Information, 2009; Bureau of Labor Statistics, 2009

3.6.2 ENVIRONMENTAL JUSTICE COMMUNITIES

All projects involving a federal action (funding, permit, or approval.) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, as amended, which directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority, low-income, and Native American populations to the greatest extent practicable and permitted by law. Low income is defined based on U.S. Census Bureau established poverty thresholds and is discussed further below.

The following six principles are provided as guidance for the analysis of impacts under NEPA (Council on Environmental Quality [CEQ], 1997:9):

- Agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by the proposed action.
- Agencies should consider relevant public health data and industry data concerning the potential for multiple or cumulative exposure to human health or environmental hazards in the affected population and historical patterns of exposure to environmental hazards.
- Agencies should recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed agency action.
- Agencies should, as appropriate, acknowledge and seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation, and should incorporate active outreach to affected groups.
- Agencies should assure meaningful community representation in the process.
- Agencies should seek tribal representation in the process.

The EPA's Final Guidance for Incorporating Environmental Justice Concerns in the EPA's NEPA Compliance Analysis, (April 1998) provides the following guidance for defining and assessing impacts to minority and/or low-income populations:

- A minority population may be present if the minority population percentage of the affected area is 'meaningfully greater' than the minority population percentage in the general population or other 'appropriate unit of geographic analysis'.
- The NEPA analysis should also make every effort to identify the presence of distinct minority communities residing both within, and in close proximity to, the proposed project, and to identify those minority groups which utilize or are dependent upon natural resources that could be potentially affected by the proposed project.
- Pursuant to the CEQ guidance, low-income populations in an affected area (that area in which the proposed project will or may have an effect) should be identified with the statistical poverty thresholds from the U.S. Census Bureau on Income and Poverty.

In identifying low-income populations, agencies may consider as a community a group of individuals living in geographic proximity to one another or set of individuals (such as migrant workers or Native Americans) where either type of group experiences common conditions of environmental exposure.

Mariposa County has a predominately Caucasian ethnic composition, with individuals identifying themselves as "white" making up more than 88 percent of the overall single-ethnicity population. This is considerably higher than California as a whole. American Indians and Alaskan Natives compose the next highest group, among one-race individuals, accounting for 3.5 percent of the

County's population (County of Mariposa, 2006). This too is higher than the rest of California. The project site is not located in a low-income or minority-populated neighborhood.

3.6.3 IMPACTS TO SOCIOECONOMICS/ENVIRONMENTAL JUSTICE

ALTERNATIVE A

Implementation of Alternative A would expand emergency services to the community by creating a fully operational fire station. With the implementation of Alternative A, any identified minority and low-income populations would not be subjected to disproportionately high or adverse human health or environmental impacts.

ALTERNATIVE B

Under the No-Action Alternative, the site would not be developed in the near future and the associated emergency facilities would not be constructed. The community would not receive any of the socioeconomic benefits associated with the Proposed Action. The environmental justice setting would remain similar to the existing setting.

3.7 TRANSPORTATION AND CIRCULATION

3.7.1 ENVIRONMENTAL SETTING

Mariposa County is considered a rural, low-density region. Major trip attractors are dispersed throughout the County; therefore, the dominant mode of transportation is by automobile. The roadway network that would be affected by the Proposed Action is located in the southeastern portion of the County, near the Madera County border. Regional Access to the project site is provided by State Route 41 (SR-41) which travels in a north-south direction approximately 525 feet east of the project site.

SR-41 is a major north-south state route extending 187 miles from San Luis Obispo County to Yosemite in Mariposa County past Fish Camp. SR-41 experiences approximately 2,200 vehicle trips per day, at a rate of approximate 420 peak hour trips per day. The resulting average trips indicate the roadway operates under capacity and at an acceptable level of service (LOS) rating of "B" (Mariposa LTC, 2008). LOS is a qualitative measure that includes factors such as speed, travel time, delay, freedom to maneuver, driving comfort, and convenience. LOS ratings are represented as letters ranging from A to F, whereby LOS A represents the best traffic flow driving conditions and LOS F represents the worst traffic flow driving conditions.

The project site is located adjacent to Summit Road, classified as a major collector in Mariposa County, and Laurel Way, an unclassified roadway (County of Mariposa 2006).

PUBLIC TRANSIT, BICYCLE, AND PEDESTRIAN CIRCULATION

Mariposa Transit provides a transit service with designated routes. While there are scheduled routes by day of week and hours of operation, passengers must call the Mariposa Transit office to arrange a ride. The service is essentially a "lifeline" service providing most residents with one day of service each week for both local and regional travel. Mariposa Transit operates and maintains their own bus equipment, which includes vehicles equipped for wheelchair access. The service is divided into two service areas: northside and southside. The project area is located within the southside service area. The project site has no bicycle or pedestrian amenities.

3.7.2 IMPACTS TO TRANSPORTATION AND CIRCULATION

ALTERNATIVE A

CONSTRUCTION

Construction activities during the implementation of Alternative A have the potential to result in traffic-related impacts associated with employee trips, heavy equipment deliveries, and construction material importation/exportation. Adverse impacts to transportation and circulation resulting from the construction of Alternative A would be minimal given the scope of the project, temporary nature of construction, and limited existing traffic in the project area. With the incorporation of the best management practice discussed in **Section 2.1** project construction would result in a minimal adverse impact to transportation and circulation.

OPERATION

Fire Station activities are currently being conducted within Company 33's service area from the adjacent parcel (where fire fighting equipment is also stored, including the fire fighting vehicles). Therefore, Alternative A would redistribute trips on local roads and would not result in a net increase in additional vehicle trips on the existing roadway network. There would be no adverse impact to transportation with the implementation of Alternative A.

MITIGATION

No mitigation is required.

ALTERNATIVE B

Under the No-Action Alternative, there would be no increase in vehicular traffic from construction or operation on area roadways. None of the traffic impacts identified under Alternative A would occur under No-Action Alternative because the status quo of operating out of the present facility would remain unchanged.

3.8 LAND USE AND AGRICULTURE

3.8.1 LAND USE

Surrounding land uses consist primarily of open space and scattered rural residences. A Town Planning Area Specific Plan has been adopted for Fish Camp to allow a comprehensive mix of zoning and land uses associated with the areas rural scale "urban" character. The project site is currently zoned General Forest (Mariposa County, 2004).

3.8.2 AGRICULTURE

FARMLAND PROTECTION POLICY ACT

The Agriculture and Food Act of 1981 (Public Law 97-98) contained the Farmland Protection Policy Act (FPPA) (Subtitle I of Title XV, Section 1539-1549). The purpose of the FPPA is to minimize the impact of federal programs on the unnecessary and irreversible conversion of farmland to nonagricultural uses. The Farmland Mapping and Monitoring Program (FMMP), maintained by the California Department of Conservation (CDC), maps activity from the U.S. Department of Agriculture (USDA) on a continuing basis. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources.

The FPPA created the farmland classification system which consists of five specific farmland categories. However, there are no designated farmlands subject to protection under the FPPA located within Mariposa County (CDOC, 2009).

3.8.3 IMPACTS TO LAND USE AND AGRICULTURE

ALTERNATIVE A

Land Use

The development of Alternative A is consistent with the zoning of the project parcels (the County has approved a zoning and general plan change that permits the fire station) and is consistent with existing fire-fighting operations staged from the adjacent parcel. No adverse impacts to land use would occur as a result of the implementation of Alternative A.

Agriculture

There would be no impacts to agricultural lands as a result of the implementation of Alternative A.

ALTERNATIVE B

Land Use

Under the No-Action Alternative, the project site would remain undeveloped. No land use consistency or compatibility impacts would occur under this alternative.

Agriculture

There would be no impacts to agricultural lands as a result of the no action alternative.

MITIGATION

No mitigation is required for Alternatives A and B.

3.9 PUBLIC SERVICES

3.9.1 ENVIRONMENTAL SETTING

Water service is provided to the project site by a Fish Camp Mutual Water Company service line. The line is current pressurized and meets the requirements for the fire department. On-site waste disposal would be handled by a septic system, which would incorporate the portion of the parcel located east and down slope of the proposed fire station for a leach field. Solid waste would be collected at the on-site transfer station. Electricity is provided by Pacific Gas and Electric. There are no known limiting factors for power delivery to the project site. Telephone services are currently provided to the project site.

3.9.2 IMPACTS TO PUBLIC SERVICES

ALTERNATIVE A

Implementation of Alternative A would result in the construction of a formal fire station. Currently, operations are conducted within a three-stall parking garage on the adjacent parcel. Implementation of the Proposed Project would not generate new demands for public services, as the existing operations currently conducted at the site would be moved into the new facilities. With adequate existing water supply connections, solid waste disposal area for the leachfields, electricity connections, and telephone service within the area, no physical impacts to the environment would occur from the transposition of the demands for public services currently experienced at the parcel adjacent to the proposed fire station site. Environmental impacts from the development of the leach fields are addressed throughout this EA. **Section 3.1** addresses impacts to soils, and **Section 3.2** addresses impacts to water resources from the proposed leach field.

ALTERNATIVE B

Under the No-Action Alternative, the site would not be developed in the near future and the adjacent parcel would continue to experience the demand for public services associated with fire operations of the Company 33.

MITIGATION

No mitigation is required for Alternatives A and B.

3.10 NOISE

3.10.1 AMBIENT NOISE SETTING

EXISTING NOISE LEVELS AND SOURCES

Pressure variations occurring frequently enough (at least 20 times per second) that the human ear can detect them are called sound. Noise is often defined as unwanted sound. The decibel scale measures sound levels using the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum (20 hertz to 20,000 Hz). As a result, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz to represent the human ear's better sensitivity to mid-range frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard method of frequency de-emphasis and is typically applied to community noise measurements. In practice, the level of a sound source is measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve.

The area surrounding the project site is considered rural. Rural areas are generally considered to have an ambient noise level of approximately 55 dBA (Caltrans, 2009).

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to ambient noise levels than others, sensitivity being a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. Residential land uses are generally more sensitive to noise than commercial and industrial land uses. As illustrated in **Figure 3**, the area immediately surrounding the project site is dominated by open space and sparse rural residences. The closest sensitive receptor is a residence located approximately 300 feet northeast of the center of the project site on Laurel Way.

3.10.2 IMPACTS TO AMBIENT NOISE

ALTERNATIVE A

Table 3-5 provides the Federal noise abatement criteria, which were developed by the Federal Highway Administration in accordance with the *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (23 CFR 772). The noise abatement criterion in **Table 3-5** were developed to be used as absolute values which, when approached or exceeded, require the consideration of traffic/construction noise abatement measures.

TABLE 3-5
FEDERAL NOISE ABATEMENT CRITERIA (HOURLY– dBA SOUNDLEVEL)

Activity Category	Leq (h), dBA	Activity Category Description
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	---	Undeveloped Lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

SOURCE: Federal Highway Administration, 2009.

Construction of Alternative A would temporarily introduce noise from heavy construction equipment, additional vehicle trips to the project area from construction employees, and material and equipment delivery. Heavy equipment operation would dominate the noise environment during construction. Heavy equipment used in the construction of Alternative A would emit an ambient noise level of approximately 85 Leq, dBA at 50 feet from the project site. The nearest sensitive noise receptor to the project site is residences located 300 feet northeast of the project site. Using an attenuation rate of 5.5 Leq, dBA per doubling of distance, the temporary ambient noise level at the nearest sensitive receptor would be 66.3 Leq, dBA, which is less than the acceptable noise level of 67 Leq, dBA (refer to **Table 3-5**). There would be a minimal adverse impact to the ambient noise level during construction of Alternative A.

Traffic noise would dominate the noise environment during operation of Alternative A. Typically, a doubling of the traffic volume would result in an audible increase in the ambient noise level, with a three dBA increase in noise considered audible (Caltrans, 2009). Since operation would not increase the traffic volume on area roads there would be no audible increase

in the ambient noise level (refer to **Section 3.7**). There would be a minimal adverse impact to the ambient noise level during operation of Alternative A.

ALTERNATIVE B

Under the No-Action Alternative, the project site would remain undeveloped. With regard to noise, the project site would not be a source of transportation and/or non-transportation noise. No noise impacts would occur under the No-Action Alternative.

MITIGATION

No mitigation is required.

3.11 HAZARDOUS MATERIALS

3.11.1 ENVIRONMENTAL SETTING

Site reconnaissance was conducted on June 2, 2010 of the project site to determine if any Recognized Environmental Conditions (RECs) exist. RECs refer to the presence or likely presence of conditions on a property that indicate an existing release, a past release, or a material threat of release of any hazardous substances including petroleum products on the property or into the ground, groundwater, or surface water of the property.

The project site is currently undeveloped and was previously cleared of timber. A telephone station with associated liquefied petroleum gas above ground storage tank are located northeast of the site of construction of the fire station. The liquefied petroleum gas above ground storage tank is considered an REC. No other potential RECs exist on the project site.

ENVIRONMENTAL DATABASE REPORT

Database searches were conducted for records of known storage tank sites and known sites of hazardous materials generation, storage, and/or contamination within the vicinity of the proposed project. The environmental database review was accomplished by using the services of the computerized search firm *Environmental Data Resources, Inc*. (EDR). EDR uses a geographical information system to plot locations of past and/or current hazardous materials involvement. The analysis determines if hazards/hazardous materials on adjacent sites would impact surface and/or subsurface conditions on the project site. The EDR report indicated that there are no listed sites within a mile of the project site. The EDR Report is provided as **Appendix D**.

3.11.3 IMPACTS TO HAZARDOUS MATERIAL MANAGEMENT

ALTERNATIVE A

The results of the site visit and databases searches indicated one REC on the project site and no RECs adjacent to the project site that could limit development of Alternative A. The liquefied petroleum gas above ground storage tank is outside of the area of disturbance for construction of the fire station and does not limit development of the Proposed Project. Implementation of the Proposed Project would not result in adverse impacts associated with hazardous materials management.

ALTERNATIVE B

The results of the Phase I ESA did not identify any RECs on or adjacent to the project site. Under Alternative B, no development would occur and no impacts related to hazardous material management would occur.

3.12 AESTHETICS

The Fish Camp area is characterized by the surrounding forest and the residential-resort buildings within the area. An existing firehouse is located east of the project site adjacent to Forest Drive (off of SR-41). The project site is currently disturbed from timber harvesting and existing telephone, electrical, and water supply utility upgrades. The project site is not located adjacent to a national scenic by-way, officially designated state scenic highway, or eligible state scenic highway. SR-41 (located 525 feet east of the project site) is eligible to be designated as a state scenic highway (County of Mariposa, 2006).

3.12.2 IMPACTS TO AESTHETICS

ALTERNATIVE A

Development of Alternative A would result in the construction of a four-bay fire station, consistent with the existing fire station east of the project site. The project site has previously been cleared by timber harvesting and is surrounded by remaining stands of trees. Construction of the fire station would move operations further away from the SR-41, which is eligible for designation as a state scenic highway. Construction of the fire station would result in minimal impacts to the aesthetics of the region and would not impact the eligibility of SR-41 as a state scenic highway.

ALTERNATIVE B

Under the No-Action Alternative, the project site would remain vacant under existing conditions. The existing equipment would continue to be stored at the existing fire house located adjacent to SR-41.

3.13 GROWTH-INDUCING AND CUMULATIVE IMPACTS

3.13.1 GROWTH-INDUCING IMPACTS

Under NEPA, growth-inducing effects of a Proposed Action must be analyzed (40 CFR §1508.8[b]). Growth-inducing effects are defined as effects that foster economic or population growth, either directly or indirectly. Direct growth inducement could result, for example, if a project included the construction of a new residential development. Indirect growth inducement could result if a project established substantial new permanent employment opportunities (e.g., new commercial, industrial, or governmental enterprises) or if it removed obstacles to population growth (e.g., expansion of a wastewater treatment plant to increase the service availability).

Growth inducement may constitute an adverse impact if the increased growth is not consistent with or accommodated by the land use and growth management plans and policies for the area affected. Local land use plans provide for development patterns and growth policies that allow for orderly development supported by adequate public services and utilities such as water supply, roadway infrastructure, sewer services, and solid waste disposal services. A project that would induce "disorderly" growth (i.e., would conflict with local land use plans) could indirectly cause adverse environmental or public service impacts.

The Proposed Action would provide facilities for fire fighting operations already conducted in the region. The result of the implementation of the Proposed Project would not provide new services to the region, and would therefore not result in additional growth to the region outside of forecast growth within the area-specific plan.

Analyses of the adequacy of local infrastructure and services are included in the discussion of environmental consequences for each proposed Alternative. No significant, unmitigatible impacts have been identified that would result from the Proposed Action. No indirect impacts are expected, as no long-term or permanent employment opportunities would be created. Utility infrastructure would not be improved or expanded to increase service availability to any surrounding areas. Growth-inducing impacts would be less than significant for all of the proposed alternatives.

3.13.2 CUMULATIVE IMPACTS

Potential cumulative impacts for each environmental issue area are discussed below. Cumulative impacts are defined in 40 CFR §1508.7 as the impacts:

> *... on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless what agency*

> *(federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

Except for anticipated growth for the planned community (up to 93 residential lots, with 300 resort dwellings listed in the Fish Camp specific plan), no specific development projects are known to have been approved in the vicinity that would cause cumulative impacts when considered in conjunction with the Proposed Action. The following analysis is based on the cumulative impacts associated with the planned development in the project area.

LAND RESOURCES

Potential project impacts to land resources (topography, soils, seismicity, and mineral resources) are related to measures required to ensure proper design for site conditions. The Proposed Project and adjacent development would be required to comply with the CBC, which requires design provisions to reduce impacts from on-site land resource hazards. With the incorporation of required design provisions, no potential cumulative impacts would be relevant to this issue area.

WATER RESOURCES

The Proposed Action and other cumulative projects that may be constructed in the vicinity would be required to comply with the CWA as it relates to stormwater and point-source discharges. Compliance with USEPA and/or State stormwater pollution prevention requirements would prevent off-site development, in combination with the Proposed Action, from causing cumulatively significant stormwater related impacts.

Impacts to the groundwater basin from water consumption at the fire station would not be cumulatively significant, as the existing fire house is currently served by the water district and the project site is located within the water district's service area. Therefore, the development of the fire station and impacts to groundwater from water consumption on the project site is not cumulatively considerable.

With the implementation of the protective measures listed in **Section 2.0**, impacts to water resources would be less than significant. The Proposed Project and other projects that may be constructed in the vicinity of the site must comply with the Clean Water Act (CWA) as it relates to stormwater and point source discharges. Compliance with State storm water pollution prevention requirements would prevent off-site development and development under the Proposed Project from causing cumulatively considerable impacts.

AIR QUALITY

Cumulative impacts to the air basin are addressed within the requirements of the Clean Air Act and the General Conformity Rule. Using the significance thresholds in the General Conformity

Rule, the Proposed Action is presumed to conform with the State Implementation Plan and would not result in changing the basin's air quality designation. The Proposed Action does not reach the emissions significance criteria of the MCAB. Therefore the Proposed Action would not result in a change in the basin's air quality designation. Alternative A, when considered in combination with other planned and reasonable foreseeable future actions, would not lead to a cumulatively significant impact to air quality.

BIOLOGICAL RESOURCES

Potential impacts to biological resources on the project site, including sensitive habitats, special-status species, and migratory birds, would be reduced to a less-than-significant level through measures incorporated into project construction and design (**Section 2.0**) and mitigation. Other developments in the vicinity would also be constructed on developed land since the project site is surrounded by disturbed areas. Any cumulative developments affecting jurisdictional waters of the U.S. or special-status species would be required to mitigate according to the applicable provisions of the CWA and the ESA, and migratory birds would be protected from take subject to the Migratory Bird Treaty Act. With the incorporation of mitigation measures presented in **Section 3.4.4**, Cumulative impacts to biological resources would be less than significant.

HISTORIC PROPERTIES

Cumulative effects to historic properties typically occur when sites that contain cultural features or artifacts are disturbed by development. As these historic properties are destroyed or displaced, important information is lost and connections to past events, people and culture is diminished. As discussed above no significant historic properties were identified within or adjacent to the project site. The records search and archival research indicates that the study area has been readily reviewed reducing the potential for disturbance of historic properties. However, the Proposed Project may impact previously unknown archaeological resources, as these sites may be buried with no surface manifestation. Significant cumulative impacts to unknown historic properties could occur if sites continued to be lost, damaged, or destroyed without appropriate recordation or data recovery. Mitigation for potential cumulative impacts to unknown historic properties has been specified above and similar measures are required for all development in Mariposa County in accordance with Federal regulations and the California Environmental Quality Act (CEQA). Implementation of these measures would reduce cumulative impacts to a less-than-significant level.

SOCIOECONOMIC CONDITIONS / ENVIRONMENTAL JUSTICE

Alternative A, when considered in combination with other planned and reasonable foreseeable future actions, would not lead to a significant cumulative impact to socioeconomic conditions or environmental justice. As discussed above, the implementation of Alternative A would result in beneficial socioeconomic and environmental justice impacts by providing improved services to an underserved population including minority groups and low-income populations.

TRANSPORTATION AND CIRCULATION

Alternative A, when considered in combination with other planned and reasonable foreseeable future actions, would not lead to a significant cumulative impact to the transportation network. The existing transportation network adequately operates within acceptable LOS for the roadways serving the project area. Additional development within the transportation network has been accounted for in the growth projections in the area specific plan.

Bicycle, Pedestrian, and Transit Networks

The Proposed Action would not adversely affect a pedestrian or bicycle networks under the Cumulative plus Proposed Action conditions. None of the known cumulative scenario projects are expected to affect these networks. No significant cumulative impacts would occur.

LAND USE

Any surrounding cumulative projects would be subject to local land use regulations within the Fish Camp Town Specific Planning Area. Since Alternative A is consistent with the existing and proposed land uses in the vicinity, no cumulative land use impacts would occur.

AGRICULTURE

The retention or development of agricultural land is largely a policy consideration for governmental entities. Important farmlands are considered a limited and valuable resource. The project site does not contain important farmland and is located within a region that is classified as developed land. Considering that the project site is not used for agriculture, and no known agricultural lands are located in the immediate area, cumulatively significant impacts to agricultural land would not occur.

PUBLIC SERVICES

Public services for the Proposed Action would be accommodated by existing public services. As development of other areas continues, the combined need for public services may create a cumulative impact. However, all future land uses in the region would be subject to approval by local governments, and would include provisions for public services reducing potential cumulatively considerable impacts to a less-than-significant level.

NOISE

Traffic noise would dominate the noise environment in the area surrounding the project site during cumulative conditions. The Proposed Project, in combination with the proposed cumulative projects in the area, would cause a less-than-significant impact with regard to noise.

HAZARDOUS MATERIALS

Any new developments would be required to adhere to State and municipal regulations regarding the delivery, handling, and storage of hazardous materials, thereby reducing the risk to the public's health and welfare due to accidental exposure. Therefore, there are no significant cumulative hazardous materials impacts associated with the Proposed Action.

AESTHETICS

Development of the project site would be consistent with the existing fire house buildings located on the adjacent parcel (to the east). Any future development in the vicinity would be subject to County review and approval, and potentially significant impacts to visual resources would require mitigation such as landscaping shielding and specific design provisions.. Therefore, Alternative A, when considered in combination with other planned and reasonably foreseeable future actions, would not lead to a significant cumulative impact to aesthetics.

3.14 AGENCY COORDINATION AND PERMITS

3.14.1 AGENCY COORDINATION REQUIREMENTS

All necessary permits and coordination with governing agencies would be the responsibility of Mariposa County coordinated through the County's architects and contractors selected for site construction. All construction and required regulatory permits would be maintained and posted at the construction site. In accordance with applicable local, state, and federal regulations, the County would be responsible for acquiring any necessary permits and completing compliance with the California Environmental Quality Act prior to commencing construction at the project site.

SECTION 4.0

PUBLIC INVOLVEMENT

SECTION 4.0

PUBLIC INVOLVEMENT

4.1 PUBLIC COMMENT PERIOD

The Environmental Assessment will be publicized during a fifteen-day public comment period in the Mariposa Gazette and will be made available to the public at the County of Mariposa Libraries: Main Branch. If no substantive comments are received, the Draft EA will become final and this initial Public Notice will also serve as the final Public Notice. Substantive Comments will be addressed as appropriate in any final documents.

SECTION 5.0

CONSULTATION, COORDINATION, AND LIST OF PREPARERS

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CONSULTATION, COORDINATION, AND LIST OF PREPARERS

5.1 FEDERAL AGENCIES CONSULTED

U.S. Fish and Wildlife Service

5.2 STATE AGENCIES CONSULTED

California Department of Parks and Recreation, Office of Historic Preservation

Native American Heritage Commission

California Department of Fish and Game

5.3 TRIBES CONSULTED

Southern Sierra Miwuk Nation

Anthony Brochini, Chairperson
Jay Johnson, Spiritual Leader
Les James, Spiritual Leader

Buena Vista Rancheria

Rhonda Morningstar Pope

5.4 PREPARERS OF ENVIRONMENTAL ASSESSMENT

Federal Emergency Management Agency

Donna M. Meyer, Deputy Regional Environmental and Historic Preservation Officer

Analytical Environmental Services (AES)

Project Director, David Zweig, P.E.

Project Manager, Trenton Wilson

AES Technical Staff:

Melinda McCrary, Cultural Resources

Peter Bontadelli, Biological Resources

Kelly Buja, Biological Resources

Anna Elzeftawy, P.E., Water Resources

Dana Hirschberg, GIS, Graphics

Glenn Mayfield, GIS, Graphics

SECTION 6.0

REFERENCES

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