MOODY FLATS QUARRY PROJECT
HAZARDS AND HAZARDOUS MATERIALS

DECEMBER | 2009

REVISED FEBRUARY 2011

Lead Agency
Shasta County, Department of Resource Management – Planning Division

Applicant/Operator
Moody Flats Quarry, LLC

BENCHMARK RESOURCES

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HAZARDS AND HAZARDOUS MATERIALS

This section addresses hazardous environmental risks associated with aspects of the Moody Flats Quarry (Project). Elements considered in this section include hazards or hazardous materials potential impact on transportation, use or disposal, foreseeable accidents, emissions or materials within ¼-miles of a school, impairing implementation or interference with an emergency response plan, and the potential risk of wildland fires.

1.0 METHODOLOGY AND TERMINOLOGY

1.1 Literature Review

The methodology for analyzing impacts related to hazards and hazardous materials includes identifying general types of hazardous materials and techniques that are likely to be used during the Project construction, operation, and maintenance. The potential for activities and equipment to pose fire hazards were evaluated through review of state Fire Hazard maps. Public safety issues for the Project associated with uses of hazardous materials, risk of property damage by wildfires, and an increase in accidents, were identified through review of Shasta County (County) land use documents.

1.2 Definitions

A material is considered hazardous if it has characteristics defined as "hazardous" or appears on a list of hazardous materials prepared by a federal, state, or local agency. The California Code of Regulations (CCR) defines hazardous material as a substance

that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either:

- Cause an increase in mortality or serious, irreversible or incapacitating illness; or
- Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

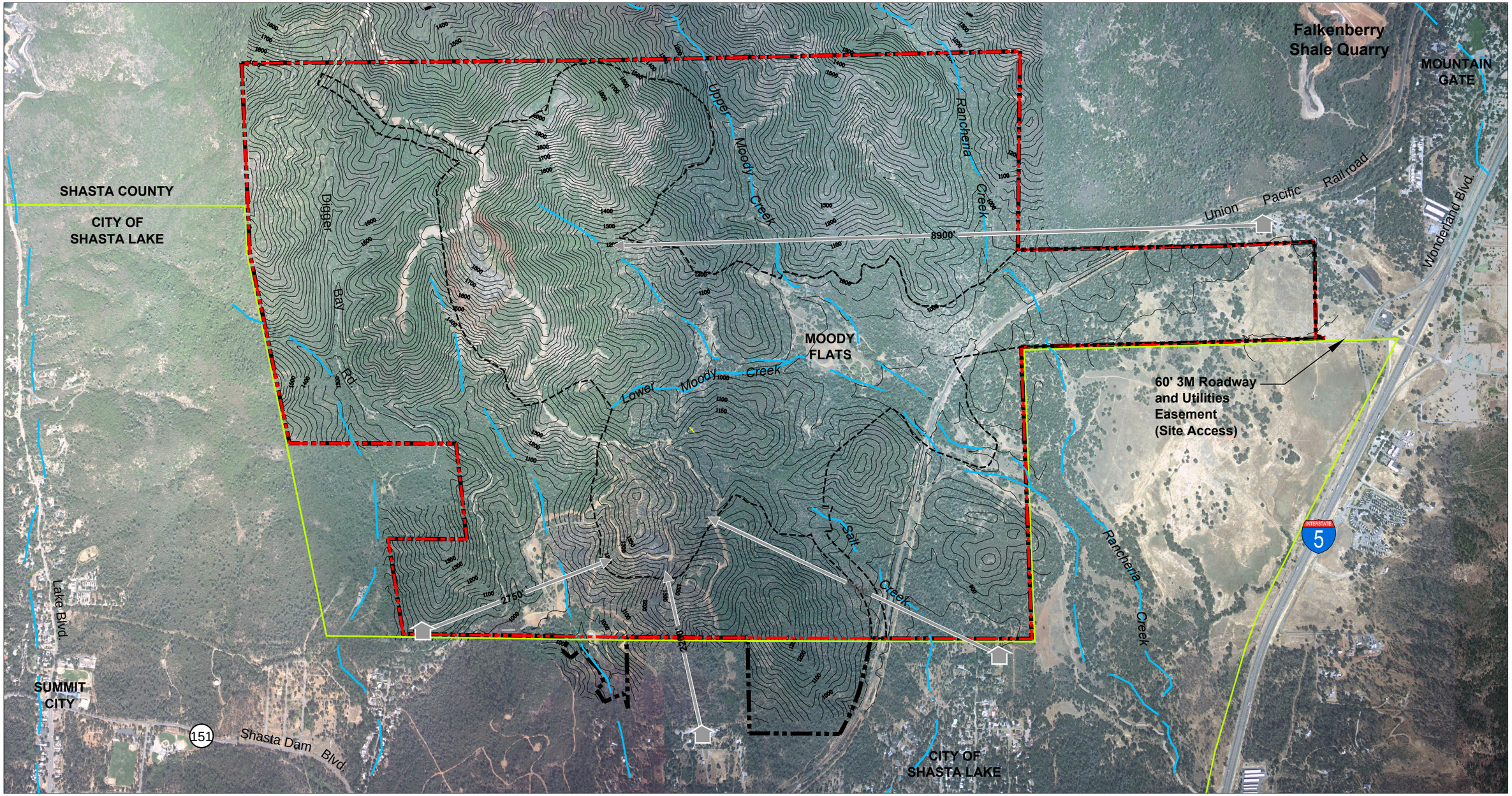
(CCR, Title 22, Division 4.5, Chapter 20, Article 2, Section 66260.10).

A substance may be considered hazardous due to a number of criteria, including toxicity, flammability, corrosivity, or reactivity. Once a hazardous material is ready for disposal it is considered "hazardous waste." Hazardous waste is any hazardous material that is abandoned, discarded, or recycled. The same criteria, as stated above, that renders a material hazardous also renders a waste hazardous.

2.0 EXISTING CONDITIONS

The Project site is located on land historically utilized as undeveloped open space, as shown in HAZ-Figure 1, Existing Conditions Aerial Photograph. The elevation of the site ranges from approximately 800 feet to 2,000 feet above mean sea level (amsl). The site encompasses approximately 1,900 acres dominated by Montane Hardwood-Conifer and Montane Hardwood vegetative habitats. Three creeks, Moody Creek, Salt Creek, and Rancheria Creek, transverse the center and eastern portions of the site. The only man-made structures on the site are the Union Pacific Railroad line through the southeast corner of the site and Digger Bay Road through the southwest and northwest corner of the site.

The site is surrounded by open space with a limited number of rural residential properties to the northeast, south, southeast, and southwest. The closest residential properties to the proposed quarry development are located approximately ½-mile to the southwest and 1 mile to the southeast. Several other aggregate mines are located in the vicinity, with the closest approximately 1.5 miles to the northeast.



AERIAL PHOTOGRAPH SOURCE: Pace Civil, Inc. (08-2006)

N

0 1/4 mile

SCALE: 1" = 1/4 mile

Property Ownership	± 1900 acres
Site Boundary	± 1810 acres
Limits of Surface Disturbance	
City of Shasta Lake Boundary	
Residence	

BENCHMARK RESOURCES

Existing Conditions Aerial Photograph

MOODY FLATS QUARRY

HAZ - Figure 1

3.0 REGULATORY SETTING

A number of federal, state, and local laws have been enacted to regulate the management of hazardous materials and wastes. Implementation of these laws and the management of hazardous materials are regulated independently of the CEQA process through programs administered by various agencies at the federal, State, and local levels. An overview of the key hazardous materials statutes and regulations that apply to the proposed Project and properties located adjacent to the Project site is provided below.

3.1 Federal

The management of hazardous materials and hazardous wastes in the County, related to public safety and environmental protection, occurs within the context of a complex interaction of federal, state, and local requirements. The primary federal agencies with responsibility for hazardous materials management include the U.S. Environmental Protection Agency (EPA), U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (DOT). Federal laws governing the transport, storage, and use of hazardous materials include the following:

- Resources Conservation and Recovery Act (RCRA) – hazardous waste management;
- Hazardous and Solid Waste Amendments Act (HSWA) – hazardous waste management;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – cleanup of contamination;
- Superfund Amendments and Reauthorization Act (SARA) – cleanup of contamination;
- Emergency Planning and Community Right-to-Know (SARA Title III) – business inventories and emergency response planning;
- Toxic Substances Control Act (TSCA) – tracks and screens industrial chemicals; and
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) – controls pesticide distribution, sale, and use.

Specific requirements for implementation of these statutes are codified in Title 40 of the Code of Federal Regulations (CFR). Additional regulations that apply to workplace

safety and transportation of hazardous materials are contained in CFR Titles 29 and 49, respectively.

3.2 State

3.2.1 Hazardous Materials Management

The California Environmental Protection Agency (Cal/EPA) has established regulations governing the use of hazardous materials in the State. Within Cal/EPA, the Department of Toxic Substance Control (DTSC) has primary hazardous materials regulatory responsibility, but can delegate enforcement responsibilities to local jurisdictions that enter into agreements with DTSC, for the generation, transport, and disposal of hazardous materials under the authority of the hazardous Waste Control Law (HWCL). State regulations applicable to hazardous materials are contained primarily in Title 22 of the CCR. Title 26 of the CCR is a compilation of those chapters or titles of the CCR that are applicable to hazardous materials management.

Also within the "umbrella" of Cal/EPA, the California Integrated Waste Management Board (IWMB) is responsible for protecting the public's health and safety and the environment through management of the solid waste generated in California. Solid waste regulations are generally enforced through local enforcement agencies (usually county agencies). The IWMB works in partnership with local government, industry, and the public to reduce waste disposal and ensure environmentally safe landfills. Solid waste management provisions are outlined in the Public Resources Code (PRC), Division 30.

The California Highway Patrol (CHP) and the California Department of Transportation (CalTrans) are the enforcement agencies for hazardous materials transportation regulations. The California Department of Industrial Relations, Division of Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the State. Cal/OSHA standards are more stringent than federal OSHA regulations, and are presented in Title 8 of the CCR.

The California Office of Emergency Services (Cal/OES) is the state office responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. In addition, Cal/OES regulates businesses by requiring specific businesses to prepare an inventory of hazardous materials, and to prepare risk management plans through the California Accidental Release Prevention Program (Title 19 of the CCR).

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB) regulate surface and groundwater quality according to the provisions of State and federal legislation including the Porter-Cologne Water Quality Act, the Toxic Pits Cleanup Act, Underground Tank Law, and Clean Water Act. Generally, all petroleum-related sites are handled by the RWQCB and all underground tank sites are managed by County environmental management agencies. The Project site is located within the jurisdiction of the Central Valley RWQCB (Region 5). The RWQCB can delegate responsibilities, such as underground tank permitting and monitoring, to local jurisdictions, such as Shasta County.

3.2.2 Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In January 1996, Cal/EPA adopted regulations implementing a "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program). The six elements of the Unified Program are as follows: 1) hazardous waste generators and hazardous waste on-site treatment; 2) underground storage tanks; 3) above-ground storage tanks; 4) hazardous material release response plans and inventories 5) risk management and prevention programs; and 6) Unified Fire Code hazardous materials management plans and inventories. The Unified Program is implemented at the local level by a local agency – the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction. The Shasta County Environmental Health Division (SCEHD) is the designated CUPA in the County.

3.2.3 Emergency Response to Hazardous Materials Incidents

To coordinate emergency services provided by local, state, and federal agencies, California has developed an Emergency Response Plan pursuant to the Emergency Services Act. The Plan is administered by the state Office of Emergency Services. Local agencies are required to develop area plans for an organized response to releases of hazardous materials that are dependent on Business Plans submitted by handlers of hazardous materials and waste within that agency's area. Pursuant to California Health and Safety Code, Section 25503(a) and CCR Section 2729, any business handling hazardous material must establish and implement a Hazardous Materials Business Plan. These Business Plans are then submitted to the local administering agency. In the County, the administering agency is SCEHD.

3.2.4 Above-Ground Storage Tanks

In 1989, the California Legislature enacted the Aboveground Petroleum Storage Act (APS) to protect people and natural resources from aboveground petroleum storage tank spills. APS became effective January 1, 1990. APS requires owners or operators of aboveground petroleum storage tanks larger than 660 gallons or with cumulative storage capacity greater than 1,320 gallons to:

- File a storage statement;
- Pay a facility fee; and
- Prepare and implement a Spill Prevention Control and Countermeasure Program (SPCC) to prevent and control potential spills.

3.3 Local

The Public Safety Group, Fire Safety and Sheriff Protection subsection, of the Shasta County General Plan contains policies regarding fire protection and development practices within an identified high risk fire hazard area. These policies are intended to protect persons and structures from fires and ensure that development minimizes the risk of creating fire hazards or defending against those hazards. The following General Plan Goals and Policies are applicable to the Project:

FS-1: Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measures commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing development from locating in high risk fire hazard areas.

FS-2: Protection of life and property from crime by encouraging new development projects to incorporate effective defensible space design techniques.

FS-a: All new land use projects shall conform to the County Fire Safety Standards.

FS-e: Development in areas requiring expanded levels of police and fire services shall participate in adopted County programs designed to offset the added costs for providing the expanded level of services.

FS-d: New development in areas designated Urban Residential and Suburban Residential should be encouraged to incorporate effective site planning and structural design features designed to prevent and deter crime.

FS-b: Known fire hazard information should be reported as part of every General Plan amendment, zone change, use permit, variance, building site approval, and all other land development applications subject to the requirements of the California Environmental Quality Act (CEQA).

The Public Safety Group, Hazardous Materials subsection, of the County General Plan contains policies regarding contact and release of hazardous materials. These policies are intended protect persons and property from accidental release of hazardous materials. The following General Plan Goals and Policies are applicable to the Project:

HM-2: Protection of life and property in the event of the accidental release of hazardous materials through emergency preparedness planning.

HM-1: Protection of life and property from contact with hazardous materials through site design and land use regulations and storage and transportation standards.

4.0 THRESHOLDS OF SIGNIFICANCE

Appendix G of the California Environmental Quality Act (CEQA) provides guidance for assessing the significance of potential environmental impacts. Relative to hazards and hazardous materials, a project will normally have a significant effect on the environment if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

5.0 ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND SIGNIFICANCE DETERMINATIONS

Impact HAZ-1: The Project Could Create a Significant Hazard to the Public or the Environment through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment

Construction

The use of hazardous materials for construction of the primary processing plant, secondary and ancillary processing plant, and rail spur/siding could pose a potential hazardous-material related impact if a spill or accident occurred. These potential impacts would be associated with transportation, storage, use, and disposal of various hazardous substances during construction of aforementioned facilities. Typical hazardous materials used during construction of these types of facilities include:

Motor oils	Automatic transmission fluids
Canned spray paints	Gasoline and diesel fuels
Mastic coatings	Bottled oxygen and acetylene
Propane and butane	Lubricating grease
Paint thinners	Antifreeze
WD-40	Brake fluids
Paints (oil based and latex)	Brazing and solder compounds
Cleaning solvents	Disinfectants
Pressurized gases	Hydraulic fluids

Except for gasoline and diesel fuel stored on or transported to the Project site, most of the above hazardous materials used at the site would be in small quantities. Therefore, a spill of these materials would be localized and easily cleaned up. Consequently, small quantities of hazardous material used or stored at the site would not represent a significant impact. Therefore, no mitigation measures are required.

Operation

The use of hazardous materials during mining operations could pose a potential health and safety hazard if a spill or accident occurred. The use of hazardous materials during mining operations would include maintenance supplies and

operational stores. Hazardous materials used for daily operations or the maintenance of on-site equipment and vehicles would primarily include:

Fuels (diesel, gasoline, and natural gas)	Asphalt Oil
Motor oils	Automatic transmission fluids
Paints and thinners	Hydraulic fluids
Lubricating grease	Bottled oxygen and acetylene
Cleaning solvents	Lubricating grease
Brake fluids	Antifreeze

Most of these hazardous materials would be limited to factory-supplied containers of 55-gallon drums or less. These hazardous materials would be stored within the maintenance shop building in accordance with state and local regulations. However, it would be necessary to transport many of these chemicals to on-site locations for repair or maintenance of equipment and/or vehicles. The use of chemicals at localized areas presents the greatest risk of accidental spills, but such use would be limited to small quantities of 5 gallons or less and any spill would be easily cleaned up and disposed of in accordance with governmental regulations. Therefore, the transportation of these chemicals would be considered to be a less than significant impact to on-site locations. Potential spills from the transportation and use of hazardous materials in 55-gallon drums is considered a potentially significant impact.

Operation of mobile equipment and certain ancillary processing equipment (e.g. asphalt batch plant) would require on-site storage of large quantities of fuels. On-site storage of fuels would be necessary for refueling of vehicles (e.g., gasoline and diesel). The primary on-site heating chemical would be propane for heating the asphalt in the asphalt batch plant. Fuels would also be transported to service various on-site vehicles, particularly the equipment used for aggregate mining. A spill during on-site fueling of a vehicle or a leak from equipment represents the highest risk of on-site and off-site contamination. This could result in a potentially significant impact.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Mitigation Measure HAZ-1

1. *Transportation, storage, use, and disposal of hazardous materials shall be in accordance with all applicable pertinent federal, state, and local laws, ordinances, regulations, and standards.*

2. *The following preventative measures shall be implemented during construction and/or operation of the Project to minimize impacts associated with (a) fueling and maintenance of vehicles; (b) maintenance of equipment; and/or (c) transport, storage, use, and dispose of hazardous materials.*
   a. *Normal refueling and maintenance operations will occur in specified areas.*
   b. *Procedures will be outlined to minimize the chance of a fuel spill during servicing and refueling.*
   c. *Gasoline, diesel, and/or propane above ground storage tanks will be provided with pylons or other restricting access devices to minimize the risk of a vehicle hitting the tanks.*
   d. *Hazardous material will be transported in DOT-approved containers and allowed only on approved access roads. Additionally, vehicles and/or storage containers would be properly marked.*
   e. *Only authorized personnel will conduct equipment servicing and maintenance.*
   f. *All equipment used for storage or dispensing of gasoline or diesel will be used in accordance with the National Fire Protection Administration (NFPA) requirements. This equipment will include but will not be limited to ASTs, pumps, hoses, and nozzles.*
   g. *Vehicles carrying hazardous materials will be equipped with appropriate materials to contain a small spill should one occur during transport. Additionally, all service vehicles will be equipped with Class B fire extinguishers and will have adequate supplies of spill containment equipment (e.g., granular absorbents, absorbent pigs, and/or catch-basins).*
   h. *Equipment engines will be turned off during refueling operations to minimize fire risk.*
   i. *Smoking, open flames, or welding will not be allowed in or near the refueling areas or areas containing or used for storage of flammable materials.*
   j. *All refueling and maintenance operations will be performed away from drains, culverts, and stormwater runoff collection areas to prevent contamination of local water bodies in the event of an accidental release of hazardous materials.*
   k. *Hazardous wastes, including used oil, used oil filters, used gasoline containers, spent batteries, and other items, will be collected regularly and stored at the facility's permitted 90-day temporary hazardous material storage area. Additionally, contaminated soil and other materials will be placed in appropriate containers and transported to the 90-day temporary hazardous*

material storage area. All hazardous waste will be disposed of at a regulated treatment, disposal, and storage facility.

l. *Hazardous materials will be stored in proper containers and in designated areas. Cleanup and emergency response materials will be stored near these areas.*

m. *Detailed information about the use, storage, and disposal of hazardous materials will be provided in the construction and operational Hazardous Communication (HAZCOM) Plans. These HAZCOM Plans will define specific procedures for vehicle refueling and servicing, transportation and storage of hazardous materials, and the disposal of hazardous wastes.*

n. *The Project will develop and implement a site specific Spill Control and Countermeasure (SPCC) Plan and a Hazardous Material Business Plan (HMBP).*

o. *All fuel containers will be inspected periodically for signs of leaking or failure.*

p. *All personnel involved in handling hazardous materials shall be trained in accordance with OSHA HAZWOPER regulations.*

Level of Significance After Mitigation: Less than Significant

Impact HAZ-2: The Project May Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials

Please refer to the discussion in Impact HAZ-1, above.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: See Mitigation Measures 1 and 2 (a-p).

Level of Significance After Mitigation: Less than Significant

Impact HAZ-3: The Project Could Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School

The Project is not located within ¼ miles of an existing or proposed school. As described above, mitigation measures have been established to prevent the emission of hazardous materials, substances, or waste from any storage unit or

transport. The above-mentioned mitigation measures will be utilized to ensure that emission of such hazardous materials will not occur.

Level of Significance Before Mitigation: Less than Significant

Mitigation Measures: None Required

Impact HAZ-4: The Project Could Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to Urbanized Areas or Where Residences Are Intermixed With Wildlands

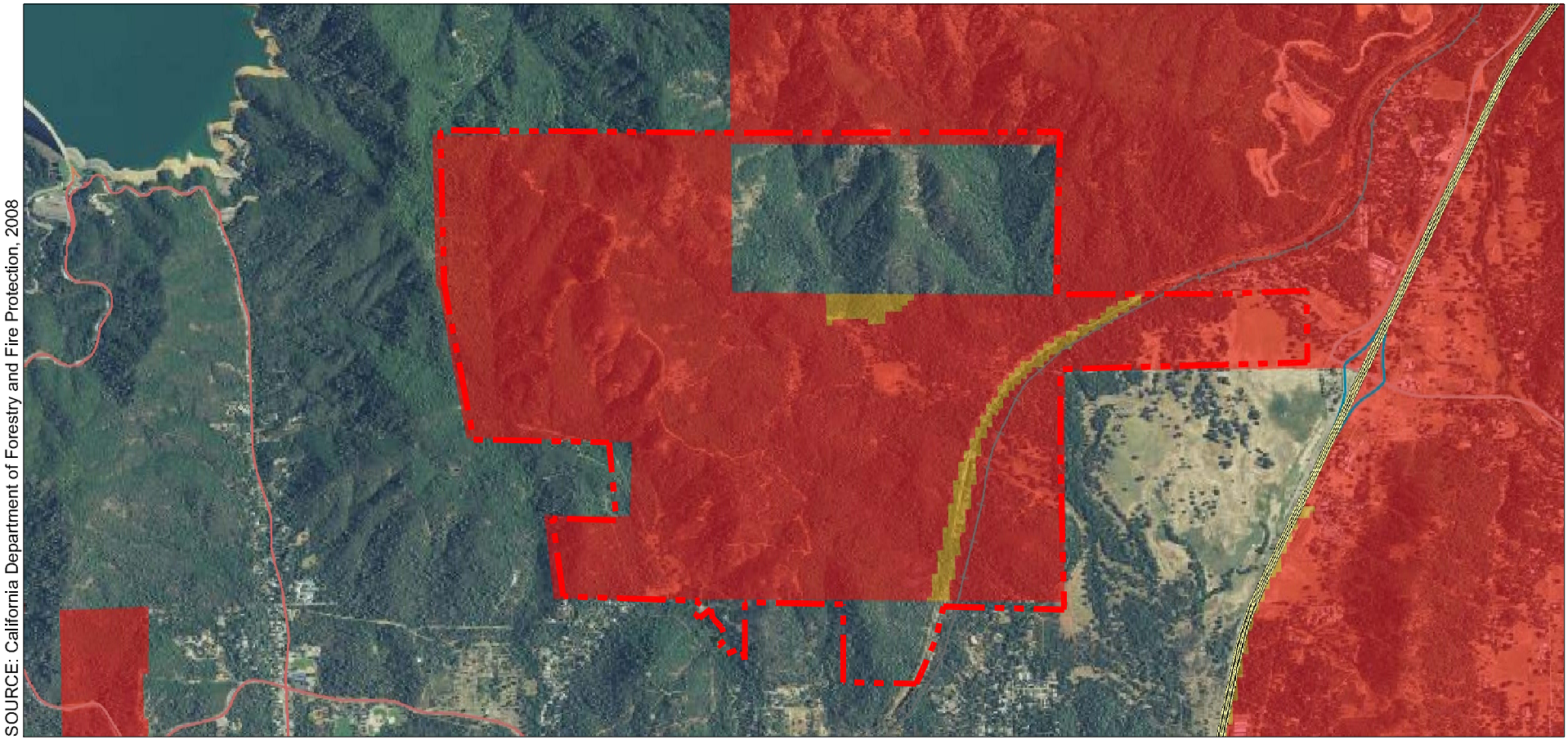
The Project site is located within an area of the County assigned as a "wildland area that may contain a substantial forest fire risks and hazards" by the California Department of Forestry and Fire Protection (see HAZ-Figure 2, Wildland Fires). Property owners within this designated area are subject to the requirements of PRC Sections 4125 and 4142. PRC Section 4291 establishes six maintenance requirements for "any person that owns, leases, controls, operates, or maintains any buildings or structure in, upon, or adjoining any mountainous or forest-covered lands, brush-covered lands, or grass-covered lands, or any land covered with flammable material." Because the Project site is located within such a designated area, the potential of the Project to expose people or structures to a significant risk of loss, injury, or death because of wildland fires is potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Mitigation Measure HAZ-2

The Operator shall comply with County and State guidelines to prevent potential fires on the Project site, as enumerated in California Health and Safety Code 13800 et. seq. and Public Resources Code Section 4125 et. seq.

Level of Significance After Mitigation: Less than Significant



Property Ownership

Fire Hazard Severity Zones:

Very High

High

N

0 1/2 mile

SCALE: 1" = 1/2 mile

BENCHMARK RESOURCES

Wildland Fires

MOODY FLATS QUARRY

HAZ - Figure 2