DRAFT

Initial Study and Mitigated Negative Declaration Santa Cruz Auto Shop New Construction Project

August 2014

Lead Agency:

State of California
Dept. of Forestry and Fire Protection (CAL FIRE)
1419 9th Street, Sacramento, CA 94244

Prepared For:

CALIFORNIA DEPARTMENT OF GENERAL SERVICES

Real Estate Services Division
707 3rd Street, Fourth Floor
West Sacramento, CA 95605

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2525 Warren Drive, Rocklin, CA 95677

MITIGATED NEGATIVE DECLARATION
SANTA CRUZ AUTO SHOP NEW CONSTRUCTION PROJECT

Lead Agency: State of California Department of Forestry and Fire Protection (CAL FIRE)

Project Proponent: State of California Department of General Services – Real Estate Services Division

Project Location: Ben Lomond Conservation Camp, 13575 Empire Grade Road, Santa Cruz County, California 95060

Project Description: The Proposed Project is located in Santa Cruz County, California. The Proposed Project consists of the construction of the new auto shop located at the Ben Lomond Conservation Camp (BLCC) and the replacement of an existing fuel storage facility located within the BLCC campus.

The Proposed Project would be located southeast of the Ben Lomond Training Center and includes updating an existing facility and construction of a modern auto shop. The primary structure would be a proto-typical five-bay drive-thru auto shop with a covered vehicle wash rack and water filtration system. The building would be oriented northeast to southwest parallel to the existing access road to the north. The wash rack would be located at the east end of the auto shop and the bay doors would be located on both sides of the building (north and south sides). The auto shop would also have security lighting, a fire suppression system with water tank, and landscaping. Other activities associated with constructing the auto shop consist of trenching and connecting into existing underground utilities; and installing a permanent drainage system with erosion and sedimentation control features as part of a Storm Water Pollution Prevention Plan (SWPPP) required to comply with the State Water Resources Control Board (SWRCB) regulations.

Other facilities to be constructed as part of the Proposed Project include construction of an asphalt driveway and parking area for the Ben Lomond Training Center, pavement around the new auto shop (sidewalks and parking apron), a 6- to 10-foot high perimeter fence with two locking gates at the egress/ingress points, a generator building to house an emergency propane powered generator to serve the auto shop with a 1,000-gallon propane tank, footings and raceways for a new radio tower, and a fire engine water pump test pit. The existing driveway has constraints for turning movements for some vehicles that would be serviced at this facility; therefore, the current entryway would be realigned to accommodate larger vehicles. The new Ben Lomond Training Center parking lot and fire engine water pump test pit would be constructed north of the existing access road and new ingress and egress locking gates would be installed along the south side of the existing access road. Pavement would surround the new auto shop and extend to the proposed 6 to 10-foot chain-link perimeter fence. As part of the Proposed Project, a new radio tower, a generator building, and a water tank for the fire suppression system would be located between the new perimeter fence and the existing 8-foot chain-link fence on the northern boundary of the existing BLCC facilities.

The Project includes the replacement of the fuel storage facility located within the BLCC campus. The existing structure and aboveground storage vaults would be demolished. A new building with a concrete fuel dispensing area and two new 2,000-gallon storage vaults (diesel and gasoline) would be constructed. The new construction would occur in the same location as the existing facility.

This facility would be built to comply with the 2013 California Green Building Standards Code.

Proposed Finding: Based on the information contained in the attached Initial Study, CAL FIRE finds that there would not be a significant effect to the environment because the mitigation measures described herein would be incorporated as part of the Proposed Project.

Public Review Period: August 8, 2014 to September 8, 2014

Mitigation Measures Incorporated into the Project to Avoid Significant Effects

Biological Resources

No special-status species were found on the Project site; however, there is potential habitat for several special-status bat species and special-status plants. Additionally, all native birds, including raptors, are protected under the Fish and Game Code and the Federal MBTA. Impacts to these species would be less than significant with implementation of Mitigation Measures B-1 and B-2.

Mitigation Measures

B-1 Pre-Construction Clearance Survey

A. To avoid take of any special-status wildlife species protected under the CESA and/or FESA and/or any bird species protected under the MBTA and California Fish and Game Code, a pre-construction clearance survey for all potentially suitable habitat shall be conducted by a qualified biologist within 14 days prior to the onset of construction activities. If no nesting birds and/or special-status wildlife species are found during the survey, site preparation and construction activities may begin.

   1. If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist in accordance with CDFW recommendations for buffer distances relative to the species identified. Once construction activities commence on-site, all nests will be continuously monitored by a qualified biologist to detect any behavior changes as a result of construction of the Proposed Project. If behavioral changes are observed that may result in adverse effects to the success of breeding, the work causing the change shall cease and consultation with CDFW shall be initiated to identify potential avoidance and minimization measures. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

   2. A qualified biologist shall conduct a dusk emergence survey (start 1 hour before sunset and last 3 hours), followed by a pre-dawn re-entry survey (start 1 hour before sunrise and last for 2 hours), in addition a daytime visual inspection of all potential bat roosting habitat on the Project site included as part of the pre-construction clearance survey. If roosting special-species bats are found on-site or adjacent to the Proposed Project during the surveys, the following measures shall be implemented with consultation with CDFW to reduce adverse impacts to special-status bats:

a. Avoid direct and indirect impacts to roosting sites by establishing a no-disturbance buffer of 100 feet around roost sites.

b. Clearing and grubbing adjacent to the roost site and lighting use near the roost site where it would shine on the roost or interfere with bats entering or leaving the roost shall be prohibited.

c. Operation of internal combustion equipment, such as generators, pumps, and vehicles within 100 feet of the roost site shall be prohibited.

B. In addition, a Worker's Awareness Training will be conducted prior to construction and include training materials and a briefing covering all sensitive species and habitats to further educate construction personnel regarding potential adverse effects to these resources. These training materials and briefings would include the laws and regulations that protect these resources and the consequences of non-compliance with those laws and regulations. A contact person shall be provided in the event that protected biological resources are discovered at the Project site.

B-2 Rare Plant Survey

To avoid take of any special-status plant species protected under the CESA and/or FESA, the presence or absence of special-status plant species shall be determined through rare plant surveys conducted according to CNPS protocol. Surveys will be timed according to the blooming period (late spring) for target species and known reference populations will be visited prior to surveys to confirm the species is blooming where known to occur.

A. If rare species are found, avoidance zones may be established around plants to clearly demarcate areas for avoidance. Avoidance measures and buffer distances may vary between species and the specific avoidance zone distance will be determined in coordination with appropriate resource agencies (CDFW and USFWS).

B. If rare special-status plant species are found within the Project area and avoidance of the species is not possible, then additional measures such as seed collection and/or translocation may be developed in consultation with the appropriate agencies.

Cultural Resources

Due to the sensitivity of the Project area, there remains a possibility that unrecorded cultural resources are present beneath the ground surface, and that such resources could be exposed during project construction. Both CEQA and Section 106 of the National Historic Preservation Act require the lead agency to address any unanticipated cultural resource discoveries during project construction. Mitigation measure C-1 would reduce potential adverse impacts to less than significant with mitigation implemented.

Mitigation Measures

C-1 Unanticipated Discovery

If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification

Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. A Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, shall be required if the nature of the unanticipated discovery is prehistoric.

Work cannot continue within the no-work radius until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR.

If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, total data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead agency as verification that the provisions in CEQA/NEPA for managing unanticipated discoveries have been met.

In the event that evidence of human remains is discovered, construction activities within 100 feet of the discovery will be halted or diverted and the requirements of this mitigation measure will be implemented. In addition, the provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and AB 2641 will be implemented. When human remains are discovered, state law requires that the discovery be reported to the County Coroner (Section 7050.5 of the Health and Safety Code) and that reasonable protection measures be taken during construction to protect the discovery from disturbance (AB 2641). If the Coroner determines the remains are Native American, the Coroner notifies the Native American Heritage Commission which then designates a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code). The designated MLD then has 48 hours from the time access to the property is granted, to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

In the event that fossils are encountered, they shall be analyzed to a point of identification and curated at an established accredited museum repository with permanent retrievable paleontological storage. A technical report of findings shall be prepared with an appended itemized inventory of identified specimens and submitted with the recovered specimens to the curation facility.

Hazards and Hazardous Materials

Impacts from the routine transport, use, and disposal of hazardous materials during demolition, construction, and operation and maintenance of the Proposed Project would be less than significant with implementation of Mitigation Measures HM-1 and HM-2.

Mitigation Measures

HM-1 Hazardous Substances Removal

Prior to demolition of the fuel storage facility, hazardous substances inside and adjacent to the fuel facility shall be removed by a qualified contractor and disposed of in accordance with federal, state, and local regulations.

HM-2 Lead-Containing Paint Disposal

Prior to the demolition of buildings or structures located at the Project site, Title 8, CCR, 1532.1 subsections (e) and (l), compliance and training requirements shall be conducted. All paints at the site shall be treated as LCP for purposes of determining the applicability of the Cal-OSHA lead standard during maintenance, renovation, and demolition activities. Segregation and characterization of waste streams shall be conducted prior to disposal.

Noise

The existing noise environment at the Project site is expected to be in the 45 dBA to 60 dBA range during the daytime hours. The predicted hourly Leq for construction activities does not exceed the existing noise levels at the Project site. In addition, the Santa Cruz County General Plan Noise Element does have a policy (Policy 6.9.7) which requires mitigation of construction noise as a condition of future project approval. Therefore, implementation of Mitigation Measure N-1 would reduce noise levels to a less than significant level at the Project site as required under Policy 6.9.7. A less than significant impact would occur.

Mitigation Measure

N-1 Construction Noise Reduction

A. Construction shall be limited to the hours of 7:00 a.m. and 8:00 p.m. on weekdays.

B. Exceptions to the specified construction hours shall be allowed only for construction emergencies and when requested by the Department of Public Works and approved by the County Planning Department.

Transportation/Traffic

When road improvement plans are completed and the exact nature of finished elevations is determined then sight distance along Empire Grade Road can be determined and confirmed by Santa Cruz County Department of Public Works. Mitigation Measure T-1 shall be implemented to ensure that road improvement plans meet the minimum site distance requirement established by Santa Cruz County.

Mitigation Measure

T-1 Road Improvement Plans

Prior to construction of the Proposed Project, the road improvement plans must meet the minimum site distance requirement established by Santa Cruz County and shall be confirmed by Santa Cruz County Department of Public Works.

This Mitigated Negative Declaration meets the requirements of the California Environmental Quality Act. I hereby recommend approval:

_____ _____

Christopher E. Browder Date
Deputy Chief, Environmental Protection
California Department of Forestry and Fire Protection

Pursuant to Section 21082.1 of the California Environmental Quality Act, the State of California CAL FIRE has independently reviewed and analyzed the Initial Study and Mitigated Negative Declaration for the Proposed Project and finds that the Initial Study and Mitigated Negative Declaration reflect the independent judgment of CAL FIRE. The lead agency further finds that the project mitigation will be implemented as stated in the Mitigated Negative Declaration.

I hereby approve this Mitigated Negative Declaration:

_____ _____

Duane Shintaku Date
Deputy Director, Resource Management
California Department of Forestry and Fire Protection

[To be signed upon approval of the proposed project after the public review period is complete]

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ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
AASHTO	American Association of State Highway and Transportation Officials
ACM	asbestos-containing materials
ADA	Americans with Disabilities Act
APN	Assessor Parcel Number
AST	Aboveground Storage Tank
BAAQMD	Bay Area Air Quality Management District
BLCC	Ben Lomond Conservation Camp
BMPs	Best Management Practices
BRA	Biological Resources Assessment
CAL FIRE	California Department of Forestry and Fire Protection
Cal-OSHA	California Occupational Health and Safety Administration
CARB	California Air Resources Board
CAS	Climate Action Strategy
CDCR	California Department of Corrections and Rehabilitation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CRHR	California Register of Historical Resources
CSA	County Service Area
CUPA	County Certified Unified Program Agency
CWA	Clean Water Act
dBA	A-weighted decibel
DPS	Distinct population segment
DSA	Department of the State Architect
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ESU	Evolutionarily significant unit
FEM	Forestry Equipment Manager
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse gas
HCP	Habitat Conservation Plan
HDM	Highway Design Manual
HEM	Heavy Equipment Mechanics
HFEO	Heavy Forestry Equipment Operators
IPM	Integrated Pest Management
Ldn	Sound Level Day/Night average
Leq	Sound Level Equivalent
Lmax	Maximum level
LCP	lead-containing paints
LID	Low Impact Development
LOS	Level of Service
LUST	Leaking underground storage tank

MBTA	Migratory Bird Treaty Act
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MLD	Most Likely Descendant
MRF	Material Recovery Facility
MROSD	Midpeninsula Regional Open Space District
MT	metric tons
msl	mean sea level
NCCAB	North Central Coast Air Basin
NCCP	Natural Community Conservation Plan
ND	Negative Declaration
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NHD	National Hydrology Database
NMFS	National Marine Fisheries Service
NOA	naturally occurring asbestos
NPDES	National Pollutant Discharge Elimination System Permit
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Services
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NWIC	Northwest Information Center
O_3	ozone
OWS	Oil/Water Separator
OWTS	Onsite Wastewater Treatment Systems
PF	Public Facility
PG&E	Pacific Gas and Electric
$PM_{2.5}$	inhalable particulate matter smaller than 2.5 microns in diameter
PM_{10}	inhalable particulate matter smaller than 10 microns in diameter
ppd	Pounds per day
REC	Recognized environmental conditions
R-M	Mountain Residential
RWQCB	Regional Water Quality Control Board
SC	Santa Cruz County Council of Governments
SLVWD	San Lorenzo Valley Water District
SMARA	Surface Mining and Reclamation Act of 1975
SPCC	Spill Prevention, Control and Countermeasure
SU	Special Use
SWPCP	Storm Water Pollution Control Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
TP	Timber Production
UCMP	University of California Museum of Paleontology
UHQ	Unit Headquarters
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground storage tank
V/C	Volume-to-capacity

SECTION 1. BACKGROUND

1.1 Summary

Project Title:	Santa Cruz Auto Shop New Construction Project
Lead Agency Name and Address:	California Department of Forestry and Fire Protection (CAL FIRE) P.O. Box 944246 Sacramento, California 94244
Contact Person and Phone Number:	Valerie Namba State of California Department of General Services Real Estate Division Services 707 3rd Street, Fourth Floor – MS 509 P.O. Box 989052 West Sacramento, California 95605 (916) 376-1607
Project Location:	Ben Lomond Conservation Camp 13575 Empire Grade Road Santa Cruz, California 95060
General Plan Designation:	P,R-M (Public Facility/Institutional, Mountain Residential)
Zoning:	SU, TP (Special Use, Timber Production)

1.2 Introduction

The State of California Department of Forestry and Fire Protection (CAL FIRE) is the Lead Agency for this Initial Study. The Initial Study has been prepared to identify and assess the anticipated environmental impacts of the proposed Santa Cruz Auto Shop New Construction Project. This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Pub. Res. Code, Section 21000 *et seq.*) and State CEQA Guidelines (14 CCR 15000 *et seq.*). CEQA requires that all state and local government agencies consider the environmental consequences of Projects over which they have discretionary authority before acting on those Projects. A CEQA Initial Study is generally used to determine which CEQA document is appropriate for a Project (Negative Declaration [ND], Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]).

1.3 Surrounding Land Uses/Environmental Setting

The Proposed Project is located in Santa Cruz County, California (*Figure 1. Project Vicinity*). The Proposed Project would consist of the construction of a new auto shop located adjacent to the Ben Lomond Conservation Camp (BLCC) and the replacement of an existing fuel storage facility located within the BLCC campus.

The new auto shop would be located adjacent to the California Department of Corrections and Rehabilitation (CDCR) BLCC, located approximately 5 miles northwest of the unincorporated community of Ben Lomond. The community of Ben Lomond is located approximately 3 miles north

of the unincorporated community of Felton in the San Lorenzo Valley in Santa Cruz County. The BLCC is located approximately 2 miles west of SR 9, approximately 13 miles north of the City of Santa Cruz, and approximately 20 miles southwest of the City of San Jose.

The BLCC is located at 13575 Empire Grade Road, Santa Cruz, California 95060. This property is designated as Assessor Parcel Number (APN) 080-331-03. The BLCC is comprised of approximately 127 acres and access to the BLCC is provided from Empire Grade Road located along the eastern boundary. Douglas-fir hardwood forest provides the predominant backdrop of the Project area and bounds the BLCC on the east, north, west and south. A public campground, operated by the BLCC, is located immediately adjacent to the BLCC property on the south. The Proposed Project area is directly north of the main BLCC facilities and consists of approximately 2.75 acres of land (*Figure 2. Project Location*).

The Proposed Project would be located adjacent to the Ben Lomond Training Center on a portion of the BLCC property managed by CAL FIRE, north of the main BLCC facilities, which are managed by CDCR. The Proposed Project would be centrally located on the property and directly east of the Ben Lomond Training Center. The Project area is characterized by flat, open grassland with a dirt road that transects the site. Several logs are arranged in squares outlining areas that are used for CAL FIRE training purposes (Representative Site Photo 1). The access road to the Project site is located southeast of the Project site and perpendicular to Empire Grade Road (Representative Site Photo 2). A barracks, a communications tower, and a garden area are located southeast and adjacent to the Project site. An 8-foot chain-link fence separates the BLCC facilities from the Project site (Representative Site Photo 3).

As described above, BLCC facilities operated by CDCR are located south of the Project site. The existing fuel storage facility to be replaced as part of the Proposed Project is located southeast of the proposed auto shop and adjacent to a large storage shed within the CDCR BLCC facilities (Representative Site Photo 4). The western portion of the property consists of open space and the Pacific Gas and Electric (PG&E) Big Basin Substation, located west of the proposed auto shop behind the Ben Lomond Training Center facilities. The substation and surrounding area are bordered with a wire fence that separates the substation from the Ben Lomond Training Center area (Representative Site Photo 5). The Sewage Treatment Facility and associated drying beds and leach field are located southwest of the Proposed Project site. The Ben Lomond Training Center is located at the northwest corner of the property and west of the Project site. The Ben Lomond Training Center consists of classrooms and dormitory buildings, two water storage tanks, and the fire training facility which includes two practice/training buildings (Representative Site Photo 6). Open space grassland and Douglas-fir hardwood forest bound the Project site on the north (Representative Site Photo 7).

Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Location_Vicinity\CEQA_Vicinity_v2.mxd (KO)-JSwager 3/5/2014

Map Date: 3/5/2014

Service Layer Credits: Sources: USGS, ESRI, TANA, AND

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

RESD Santa Cruz Auto Shop

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Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Location_Vicinity\CEQA_New_Location.mxd (KO)-dwagnon 5/19/2014

Map Date: 5/19/2014
Photo Source: ESRI USA Imagery (Accessed 5/19/2014)

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2. Project Location

RESD Santa Cruz Auto Shop

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Representative Site Photo 1. Overview of Project site, view southeast, September 19, 2013.

Representative Site Photo 2. Southeast of Project site, dirt access road to Ben Lomond Training Center and proposed auto shop, eastern property boundary, view northwest, September 19, 2013. The new paved entrance would be approximately where the existing dirt/gravel entrance is currently located.

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Representative Site Photo 3. Southeast corner of Project site, BLCC Administration building and communications tower managed by CDCR in background, view southeast, September 19, 2013.

Representative Site Photo 4. South of Project site, BLCC Fuel storage facility to be replaced, view southwest, September 19, 2013.

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Representative Site Photo 5. Taken from western boundary of Project site, PG&E Big Basin Substation and Sewage Treatment Facility in background, view west, September 19, 2013.

Representative Site Photo 6. Overview of Project site and Ben Lomond Training Center, view northwest, September 19, 2013.

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Representative Site Photo 7. Overview of Project site and surrounding Douglas-fir hardwood forest, view north, September 19, 2013.

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SECTION 2. PROJECT DESCRIPTION

2.1 Project Background

CAL FIRE is proposing to construct a new automotive repair shop and associated facilities and replace an existing fuel storage facility. The Proposed Project would consolidate facilities, improve capacity and useable space, provide a safer environment for employees and local residents, and create a facility that complies with state and federal regulations. The San Mateo-Santa Cruz Unit encompasses 23 stations (including one Demonstration State Forest) and the BLCC. These stations cover areas in the counties of Santa Cruz and San Mateo and serve as the County Fire Departments for Santa Cruz and San Mateo (CAL FIRE 2012a). This Unit also provides training and refresher classes for firefighters and first responders.

The new auto shop would be constructed at the BLCC and Training Facility, and also includes an upgrade of the existing fuel storage facility. The BLCC is operated by the CDCR and CAL FIRE. The BLCC is part of the CDCR Conservation Camp Program which provides cooperative agencies with an able-bodied, trained work force for fire suppression and response to other emergencies such as floods and earthquakes (CDCR 2013).

In 2009, the BLCC had a staff of 10 supervising 101 inmates, with a maximum capacity of 113 inmates. This population allows for five 17-man fire crews (CDCR 2013). The inmates also provide community services including fuel reduction, burning debris, constructing fuel breaks, restoring hiking trails and streams, removal of driftwood from beaches, and delivery of wood to the elder Gray Bears non-profit organization. The Proposed Project would provide mechanical vocational training to the inmates and consolidate related facilities and uses.

The Project site is currently undeveloped; however, between the 1950s and the 1990s it was used as a plant nursery (ENGEO 2013).

2.2 Project Objectives

The following are the objectives for the Proposed Project:

- The Proposed Project would consolidate facilities, improve capacity and useable space, provide a safer environment for employees and local residents, and creates a facility that complies with state and federal regulations.
- The Proposed Project would replace a fuel storage facility to improve safety and increase storage volume for operational flexibility.

2.3 Project Characteristics

The Proposed Project at the Project site would be located southeast of the Ben Lomond Training Center and includes updating an existing facility and construction of a modern auto shop. The primary structure would be a prototypical five-bay drive-through auto shop with a covered vehicle wash rack and water filtration system (*Figure 3. New Auto Shop Site Plan*). The building would be oriented northeast to southwest parallel to the existing access road to the north. The wash rack would be located at the east end of the auto shop and the bay doors would be located on both sides of the building (north and south sides). The auto shop would also have security lighting, a fire suppression system with water tank, and landscaping. Other activities associated with constructing the auto shop consist of trenching and connecting into existing underground utilities, and installing a

permanent drainage system with erosion and sedimentation control features as part of a Storm Water Pollution Prevention Plan (SWPPP) required to comply with the State Water Resources Control Board (SWRCB) regulations.

Other facilities to be constructed as part of the Proposed Project include an asphalt driveway (*Figure 4. New Auto Shop Driveway Details*) and parking area for the Ben Lomond Training Center, pavement around the new auto shop (sidewalks and parking apron), a 6 to 10-foot high perimeter fence with two locking gates at the egress/ingress points, a generator building to house an emergency propane powered generator to serve the auto shop with a 1,000-gallon propane tank, footings and raceways for a new radio tower, and a fire engine water pump test pit. The existing driveway has constraints for turning movements for some vehicles that would be serviced at this facility; therefore, the current entryway would be realigned near the entrance off Empire Grade Road to accommodate larger vehicles (see *Figure 2. Project Location*). The new Ben Lomond Training Center parking lot and fire engine water pump test pit would be constructed north of the existing access road and new ingress and egress locking gates would be installed along the south side of the existing access road. Pavement would surround the new auto shop and extend to the proposed 6-foot chain-link perimeter fence. As part of the Proposed Project, a new radio tower, a generator building, and a water tank for the fire suppression system would be located between the new perimeter fence and the existing 8-foot chain-link fence on the northern boundary of the existing BLCC facilities. A construction staging area would be located northeast of the Project site across the existing road (see *Figure 2. Project Location*).

The Project includes the replacement of the fuel storage facility located within the BLCC campus. The existing structure and aboveground storage vaults would be demolished. A new building with a concrete fuel dispensing area and two new 2,000-gallon storage vaults (diesel and gasoline) would be constructed. The new construction would occur in the same location as the existing facility.

This facility would be built to comply with the 2013 California Green Building Standards Code.

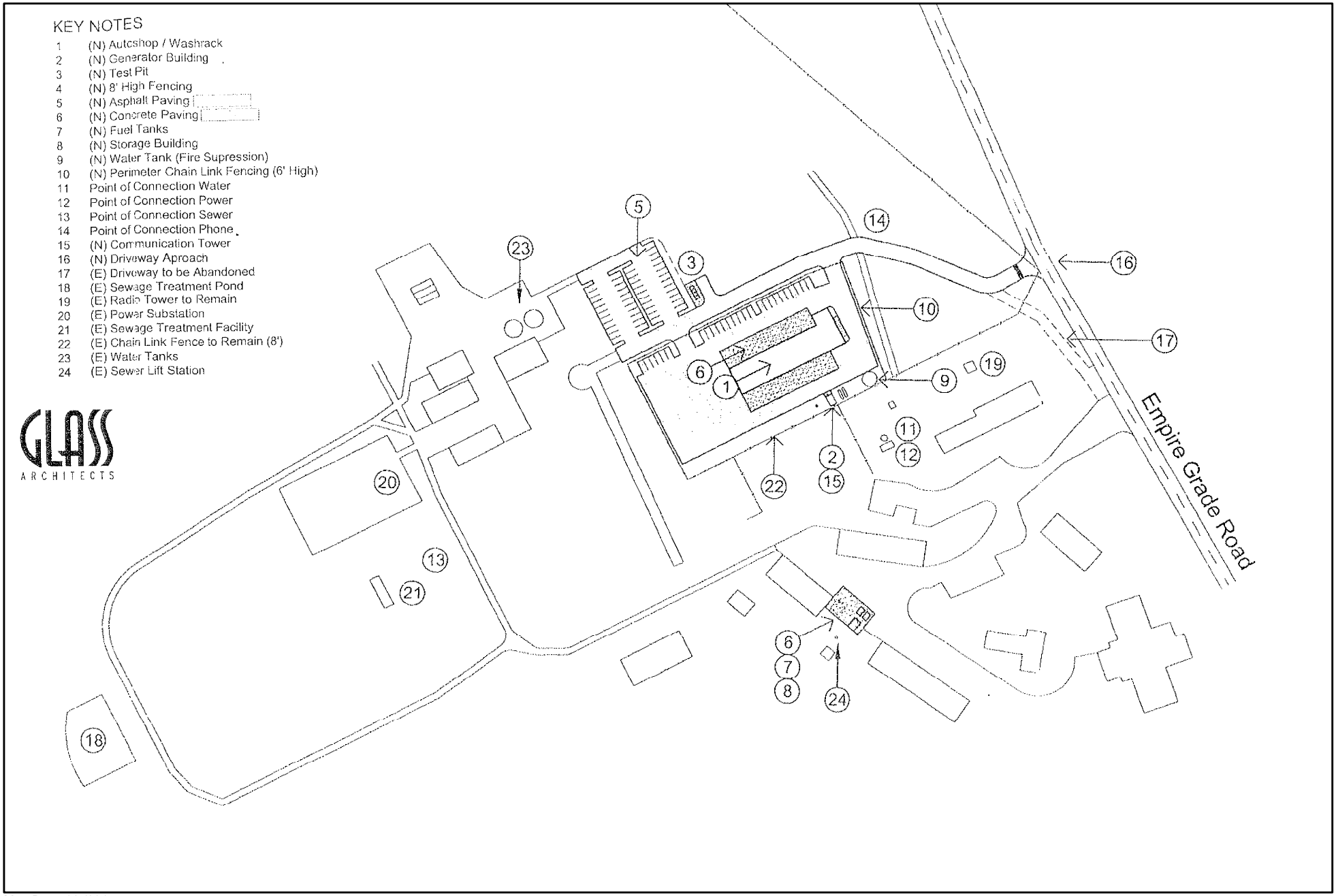
2.4 Operations and Maintenance

Once the construction of the Proposed Project at the Project site is completed, monitoring of the wash rack water filter, soil erosion features (standing water/debris removal), fuel tanks, security lighting and fencing, generator testing, vegetation management, and fire suppression system would be conducted on-site by facility personnel.

Day-to-day operations would include an average of eight employees on-site:

- One Forestry Equipment Manager (FEM)
- Three Heavy Equipment Mechanics (HEM)
- Two Heavy Forestry Equipment Operators (HFEO)
- Two Inmate Mechanics

The facility would operate Sunday through Saturday between the hours of 8 a.m. and 5 p.m. During the off-season (winter months), approximately five to 10 vehicles would be serviced weekly. During peak fire season, one to two vehicles would be serviced daily. In the case of an emergency situation, the facility would operate 24 hours per day and the number of employees would increase to 15 to 20 on the site.



Map Date: 3/5/2014
Site Plan: Glass Architects

Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Facilities\BenLomand_SitePlan_v1.mxd *(JDS, 3/5/2014)* - JSwager

Approximate Scale in Feet
0 200

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ENVIRONMENTAL CONSULTANTS

Figure 3. Site Plan

RESD Santa Cruz Auto Shop

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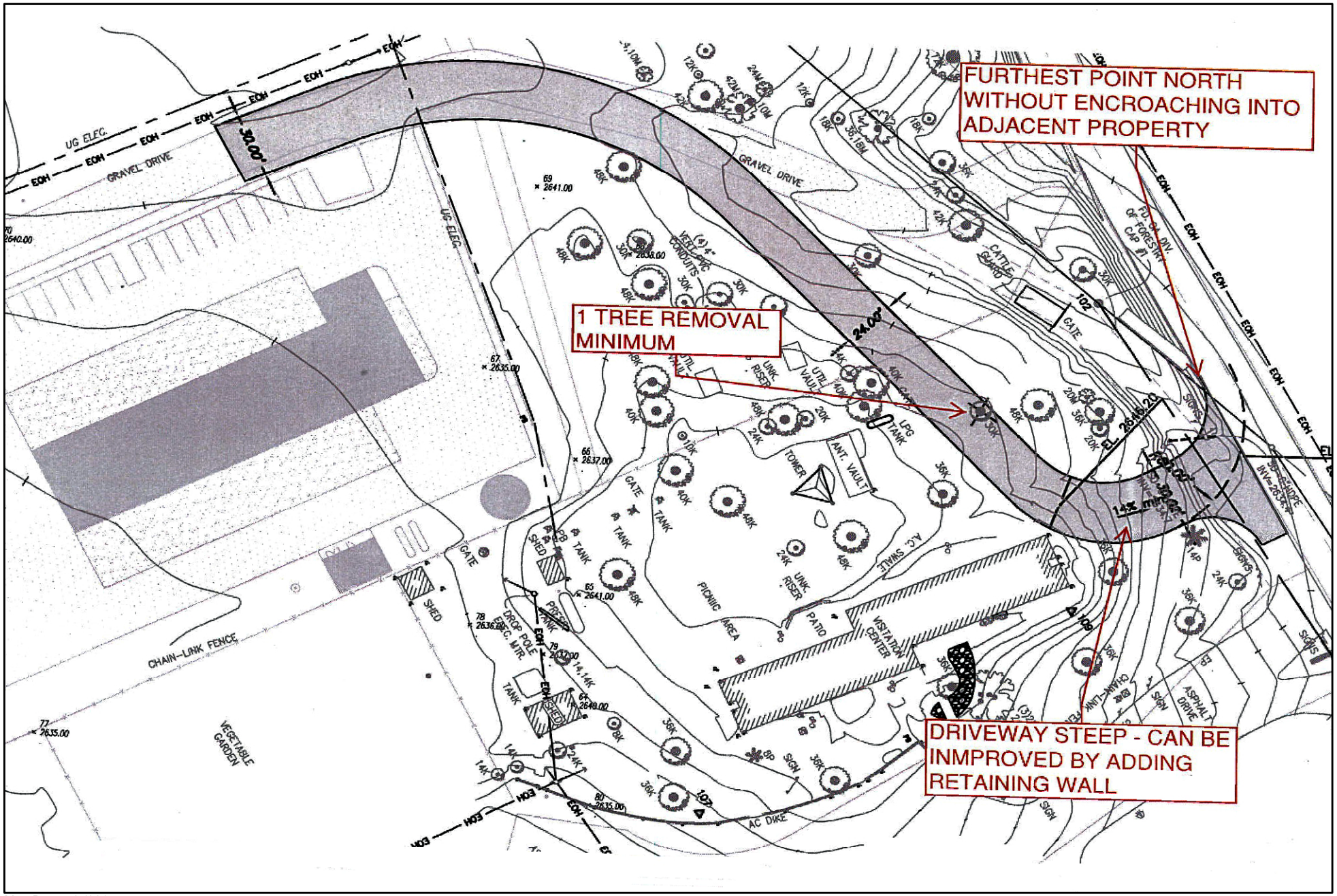

Map Date: 5/5/2014
Site Plan: RESD

Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Facilities\BenLomand_NewDriveway_v1.mxd *(JDS, 5/5/2014)* - JSwager

Approximate Scale in Feet

0 60

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Figure 4. New Auto Shop Driveway Details

RESD Santa Cruz Auto Shop

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On average, there is one emergency situation per year that would require continuous operation of the auto shop facility for 24 hours a day for the duration of approximately one week.

2.5 Project Timing

Project implementation is anticipated to take 10 months; however, an additional 3 months may be needed depending on weather (Table 1. *Construction Schedule*). The project would require approximately 5,000 gallons of water per day for the first 3-4 months of construction for fugitive dust control.

Project Construction Schedule (10 months)

- Demolition and replacement of existing fuel storage facility.
- Construct new auto shop and associated facilities as described previously

Table 1. Construction Schedule

Anticipated Construction Start Date: July 15, 2015			
Duration	**Equipment**	**Number of Construction Employees**	**Number of Vehicle trips per day**
10 months			
Months 1 to 6	• Excavators (1) • Back hoes (2) • Riding compactors (1) • Hand held portable compactors (2) • Grader (1) • Dump truck (1 per day for 7 months) • Water truck (1) Approximately 5,000 gallons per day of water from hydrant on-site.	10-20	2 per worker (coming and going)
Months 6 to 8	• Paving machine • Roller	8-14	2 per worker (coming and going)
Months 8 to 10	• Landscape trencher	6-8	2 per worker (coming and going)
**Construction Schedule could be extended up to 3 months if needed.*			

2.6 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project:

- National Pollutant Discharge Elimination System Permit (NPDES) – issued by the State Water Resources Control Board (SWRCB)
- Storm Water Construction General Permit (including the development and implementation of a Storm Water Pollution Prevention Plan) – issued by the SWRCB
- Approval of fuel tank manufacturer, manufacturer's specification sheet and site installation plan – approved by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) and Santa Cruz County Certified Unified Program Agency (CUPA)
- Authority to Construct permit and Permit to Operate (for the generator, fuel tanks, and fire pump) – issued by the Monterey Bay Unified Air Pollution Control District (MBUAPCD)

- Oil/Water Separator (OWS) permits – issued by Santa Cruz County Certified Unified Program Agency (CUPA)
- Fire Pump Permit
- State Fire Marshal Review Approval
- State Architect Approval for Americans with Disabilities Act (ADA) and structural review by the Department of the State Architect (DSA)
- Encroachment Permit – issued by Santa Cruz County Department of Public Works
- Stormwater Pollution Control Plan (SWPCP) – reviewed by Santa Cruz County Department of Public Works
- Timberland Conversion Permit, Less Than 3-Acre Conversion Exemption – issued by CAL FIRE
- Monterey Bay Unified Air Pollution Control District – Asbestos NESHAP Notification: written notification for Rule 424, ten days prior to demolition for asbestos notification.

SECTION 3. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- ☐ Aesthetics
- ☐ Agriculture and Forestry Resources
- ☐ Air Quality
- ☒ Biological Resources
- ☒ Cultural Resources
- ☐ Geology and Soils
- ☐ Greenhouse Gas Emissions
- ☒ Hazards/Hazardous Materials
- ☐ Hydrology/Water Quality
- ☐ Land Use and Planning
- ☐ Mineral Resources
- ☒ Noise
- ☐ Population and Housing
- ☐ Public Services
- ☐ Recreation
- ☒ Transportation/Traffic
- ☐ Utilities and Service Systems
- ☐ Mandatory Findings of Significance

Determination

On the basis of this initial evaluation:

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

I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☒

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

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

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

Duane Shintaku
Deputy Director, Resource Management
California Department of Forestry and Fire Protection

8/1/14
Date

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SECTION 4. ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

Regional Setting

The Project site is located in the San Lorenzo Valley Watershed on Ben Lomond Mountain in Santa Cruz County, California. Santa Cruz County is located on the coast between the San Francisco Bay area and the Monterey Peninsula. The County is characterized by varying topography, consisting of redwood forested mountains, coastal terraces, and alluvial farmland. The northern portion consists of rugged mountain terrain containing redwood and mixed-conifer hardwood forests, while the southern portion is primarily agricultural land. The majority of the population resides in the central portion, near the coastline and beaches (Santa Cruz County 1994). The State owns and maintains six state parks and six state beaches for a total of 42,334 acres in the coastal and mountainous areas of Santa Cruz County (Santa Cruz County 2013a).

The San Lorenzo River begins in the Santa Cruz Mountains, flows through the mountain towns of Ben Lomond, Boulder Creek, Brookdale, and Felton, and ends at the northern tip of Monterey Bay. The San Lorenzo River and its steep, redwood-covered canyons make up the San Lorenzo Valley. The San Lorenzo Valley mountain towns are known for their redwood forests containing old and second-growth redwood trees. The Big Basin State Park contains the largest continuous stand of ancient coastal redwoods south of San Francisco, and the Henry Cowell Redwoods State Park contains a centuries-old redwood grove (Santa Cruz County 2013a).

<u>State Scenic Highways</u>

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view (Caltrans 2013). There are no highways designated as Scenic Highways in Santa Cruz County; however, several of the highways are listed as eligible for designation under the California Scenic Highway Mapping System, including highways 1, 9, 17, 35, 152, and 236 (Caltrans 2011). In order for an eligible highway to become officially designated as a scenic highway, the local governing body would have to apply to Caltrans for scenic highway approval and adopt a Corridor Protection Program, and then Caltrans would have to give notification of official designation (Caltrans 2013).

Visual Setting

The Project site is located at the CDCR BLCC, located approximately 5 miles northwest of the unincorporated community of Ben Lomond. The community of Ben Lomond is located approximately 3 miles north of the unincorporated community of Felton in Santa Cruz County. The BLCC is comprised of approximately 127 acres and access to the BLCC is provided from Empire Grade Road located along the eastern boundary. Douglas-fir hardwood forest provides the predominant backdrop of the Project area and bounds the BLCC on the east, north, west, and south. The Project area is characterized by flat, open grassland with a dirt road that transects the site. A chain-link fence separates CDCR facilities to the south from the Project area. The CDCR facilities area consists

of one-story buildings and storage sheds. There is a paved entrance and central area and landscaping consists of grass, trees, and a small pond located throughout the property.

Visual Character of the Project Site

The Project site is located adjacent to the Ben Lomond Training Center on a portion of the BLCC property managed by CAL FIRE, north of the main BLCC facilities, which are managed by CDCR. The western portion of the property consists of open space and the PG&E Big Basin Substation, located west of the proposed auto shop behind the Ben Lomond Training Center facilities. The substation and surrounding area are bordered with a wire fence that separates the substation from the Ben Lomond Training Center area (see Section 1.3 Surrounding Land Uses/Environmental Setting, Representative Site Photo 5). The site is relatively flat and bordered by Douglas-fir hardwood forest on the north, east, and west. Open space grassland and Douglas-fir hardwood forest and two practice/training buildings bound the project site on the north (see Section 1.3 Surrounding Land Uses/Environmental Setting, Representative Site Photo 7). Section 1.3 Surrounding Land Uses/Environmental Setting and associated Representative Site Photos provide a detailed visual description of the Project site.

4.1.2 Aesthetics (I.) Environmental Checklist and Discussion

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

The nearest road to the BLCC is Empire Grade Road, which runs along the eastern property boundary. The Project site is surrounded by Douglas-fir hardwood forest on the north, south, and west, which restricts views to and from the site. Views of the Project site and views from the Project site are blocked by the dense Douglas-fir hardwood forest surrounding the majority of the Project site. Scenic vistas located in the Project vicinity would not be affected by Project features. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

In order to accommodate larger vehicles that would frequently access the auto shop, the entryway to the Project site would be realigned. Currently, the entryway is a dirt road with a metal gate accessed from Empire Grade Road. The access road would be paved and the entryway realigned to allow access and turn around space for large vehicles. The realignment would result in the removal of some trees and vegetation directly adjacent to the entrance. The entryway is only visible from Empire Grade Road, which is not designated or eligible for designation as a state scenic highway. The Project site is surrounded by Douglas-fir hardwood forest on the north, south, and west, and is east of Empire Grade Road. The nearest eligible state scenic highway is Highway 236, approximately

1.25 miles east of the Project site; however, views of the Project site from Highway 236 are blocked by thick forest and the Project site is not visible from Highway 236. Therefore, the Proposed Project would not substantially damage scenic resources within a state scenic highway. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

As described in Section 4.1.1 Environmental Setting, the new auto shop would be constructed at the BLCC. Currently, the BLCC contains CDCR and CAL FIRE facilities. The CDCR facilities consist of buildings used for administration, inmate housing, and equipment storage. The CDCR-managed area has a paved driveway and road that runs through the site with manicured lawns and landscaping between the buildings. The CAL FIRE Ben Lomond Training Center adjacent to the Project site also consists of buildings used for housing of trainees and training purposes. There is a dirt access road and the area is mainly flat non-native grassland with minimal landscaping.

The new auto shop would consist of a new five-bay, drive-through auto shop with a covered vehicle wash rack. Other improvements associated with new auto shop include security lighting, landscaping, asphalt driveway and parking area, pavement around new auto shop, chain-link perimeter fence, new radio tower, a generator building, and a water tank (see Section 2.2 Project Characteristics). The new auto shop and the associated improvements would make the CAL FIRE-managed area more consistent with the CDCR-managed area. The addition of landscaping and an asphalt driveway and parking area would complement the CDCR landscaping and paved driveway and roads. The new auto shop would be consistent with the surrounding buildings. The chain-link perimeter fence would also be consistent with the chain-link fence separating the CDCR-managed area from the CAL FIRE-managed area. The Proposed Project would add buildings and infrastructure to the site; however, they would be consistent with existing facilities on-site and would not degrade the visual character or quality of the site and its surroundings. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

The new auto shop would include perimeter security lighting. Currently, there is lighting present on the existing buildings at the BLCC. The security lighting around the auto shop would be a new source of light. The BLCC is surrounded by Douglas-fir hardwood forest on the north, west, and south and Empire Grade Road bounds the site on the east. The Project site is partially visible from Empire Grade Road because the view is obstructed by trees, other vegetation and intervening terrain along the eastern boundary between the property and Empire Grade Road. All other views of the Project site along Empire Grade Road are blocked by dense Douglas-fir hardwood forest. Additionally, there are no sensitive receptors in proximity to the Project site. The nearest sensitive

receptor is a single-family residence approximately 1 mile south and dense Douglas-fir hardwood forest separates the residence from the Project site. Therefore, any additional light or glare from the security light would be substantially blocked due to the existing trees and vegetation and would not adversely affect day or nighttime views in the area. A less than significant impact would occur.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The Project site is designated Public Facility/Institutional (P) and Mountain Residential (R-M) in the Santa Cruz County General Plan and is zoned Special Use (SU) and Timber Production (TP) (Santa Cruz County 2013b). The Project site is located at the BLCC, and the entire area is owned by the State of California and managed by CDCR and CAL FIRE. The BLCC opened in the 1950s and has been used as a CC since. The Project site was previously used as a plant nursery to grow trees from the 1950s through the early 1990s. Since closure of the nursery, the site has been used by CAL FIRE for training activities. On-site vegetation is characterized as ruderal grassland. The Project site is not located on Prime Farmland nor is it under a Williamson Act contract (DOC 2012a), and the Project site is not on a Timber Resource as designated by Santa Cruz County (Santa Cruz County 2005).

4.2.2 Agriculture and Forestry Resources (II.) Environmental Checklist and Discussion

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

The California Farmland Mapping and Monitoring Program (FMMP), Santa Cruz County Important Farmland 2010 map designated the Project site as Urban and Built-up Land. Urban and Built-up Land is an area occupied by structures with a building density of at least 1 unit to 1.5 acres or approximately 6 units to every 10 acres (DOC 2012a). The Project site is not located on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance under the California FMMP and therefore would not covert such Farmland to non-agricultural use. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

The Project site is not located within an agricultural use zone. The BLCC is zoned Special Use (SU) and Timber Production (TP) (Santa Cruz County 2013b). The Project site is located on non-Williamson Act land and therefore would not result in a conflict with an agricultural zoning designation or a Williamson Act contract (DOC 2012b). No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☒	☐

As described above in item b), the BLCC is zoned as SU within a TP zone. The SU zone applies to areas that are permitted or conditionally permitted uses if the use is consistent with the general plan (Santa Cruz County 2012a). The BLCC, as a CDCR facility, is consistent with the Public/Mountain Residential General Plan Land Use designation (Santa Cruz County 2013b). The parcels surrounding the BLCC are zoned as TP; however, the BLCC is not currently used for timber production as it has a SU zoning designation and there are no timber resources on the Project site. The Project site does meet the definition of timberland as defined in Public Resources Code section 42526 (California Public Resources Code 2014), since it is available for and capable of growing a crop of trees, and the site was previously used as a plant nursery to grow trees until the early 1990s. The Project site has not been used to grow trees in over a decade and the conversion of timberland would be negligible due to the presence of surrounding timber resources. However, because the road realignment would result in tree removal on-site and would convert the site to a non-timber use (i.e., auto shop and road), the Proposed Project would require a Timberland Conversion Permit issued from CAL FIRE. The Project site is less than 3 acres; therefore, the Proposed Project qualifies for a less than 3-acre conversion exemption (14 CCR 1104.1 (a)) (CAL FIRE 2012b). The Proposed Project would follow all CAL FIRE protocol associated with Timberland Conversion and would obtain a less than 3-acre conversion exemption. Therefore, a less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐

The Project site does not contain any forest land. The Project site is currently undeveloped grassland. The Proposed Project would occur within the BLCC property boundary and would not impact the surrounding forest land. As stated in item c), the Project site does meet the definition of timberland as defined by Public Resources Code section 42526; however, the Project site has not been used to grow trees in over a decade and the conversion of timberland would be negligible due to the surrounding timber resources. In addition, the Proposed Project qualifies for a less-than-3-acre conversion exemption from CAL FIRE. Therefore, the Proposed Project would not result in a significant loss of forest land or a significant conversion of forest land to non-forest use. A less than significant impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

The Project site is located adjacent to CAL FIRE facilities at the BLCC. The Project site was previously used as a plant nursery; however, it has not been used for any agricultural uses since the early 1990s. Currently, there are no agricultural or forest resources on-site. As stated in item c), the Project site does meet the definition of timberland defined by Public Resources Code section 42526; however, the Project site has not been used to grow trees in over a decade and the conversion of timberland would be negligible due to the surrounding timber resources. In addition, the Proposed Project qualifies for a less-than-3-acre conversion exemption from CAL FIRE. The new auto shop and associated facilities would occur on undeveloped grassland and would not result in the conversion of Farmland to non-agricultural use or a significant conversion of forest land to non-forest use. A less than significant impact would occur.

4.3 Air Quality

4.3.1 Environmental Setting

The Proposed Project is within the North Central Coast Air Basin (NCCAB) and is under jurisdiction of the Monterey Bay Unified Air Pollution Control District (MBUAPCD). The Project site is in an area that is designated a state nonattainment area for ozone, and a federal unclassified/attainment area for ozone. The area is a state nonattainment area for inhalable particulate matter smaller than 10 microns in diameter (designated PM_{10}). The Project area is in an attainment area for federal and state standards for fine particulate matter smaller than 2.5 microns in diameter ($PM_{2.5}$). The Project area is designated attainment or unclassified for carbon monoxide (CO) (KD Anderson 2013a). Table 2 provides a summary of both the State and National Attainment status for Criteria Pollutants for the MBUAPCD.

Table 2. State and National Attainment Status for the MBUAPCD

Criteria Pollutant	State Standards	National Standards
Ozone (O_3)	Non-attainment	Attainment/Unclassified
Inhalable Particulate Matter (PM_{10})	Non-attainment	Attainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment	Attainment/Unclassified
Carbon Monoxide	Attainment	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment/Unclassified

Source: MBUAPCD 2014

Thresholds of Significance

Construction-Related Emissions

Significance thresholds applied to construction-related emissions are from the MBUAPCD document *CEQA Air Quality Guidelines*. Consistent with Table 5-1 of the guidelines, construction-related PM_{10} emissions are considered a significant impact in this Air Quality Study if implementation of the Proposed Project would generate PM_{10} emissions exceeding 82 pounds per day (ppd).

As noted in Section 5.3 of the *CEQA Air Quality Guidelines*, ozone precursor emissions (i.e., ROG and NO_x) "are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone Ambient Air Quality Standards (AAQS)." Therefore, construction-related ROG and NO_x emissions are not addressed in this Air Quality Study.

Asbestos

Naturally occurring asbestos (NOA) has been identified as a toxic air contaminant (TAC) by the ARB. No quantitative significance thresholds have been set for NOA. However, the California Department of Conservation provides a map that may be used as a screening-level indicator of the likelihood of NOA being present on the Project site. If a project site is located outside of all the areas considered to be more likely to contain NOA, it may be considered to have a relatively low probability of containing NOA and would be considered to have a less than significant impact. If a project site is located within an area considered more likely to contain NOA, it may be considered to have an elevated probability of containing NOA and would be considered to have a significant impact (KDA 2014).

Carbon Monoxide

Carbon monoxide levels can be assessed by applying traffic analysis/Level of Service screening procedures, that act as thresholds, as described in the CEQA Air Quality Guidelines. This is due to elevated CO concentrations associated with traffic congestion (see Appendix A).

4.3.2 Air Quality (III.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

The methods used to determine the consistency of the Proposed Project are presented in the *CEQA Air Quality Guidelines*:

> "Consistency of indirect emissions associated with a commercial, industrial or institutional projects intended to meet the needs of the population as forecast in the AQMP is determined by comparing the estimated current population of the county in which the project is to be located with the applicable population forecast in the AQMP. If the estimated current population does not exceed the forecasts, indirect emissions associated with the project are deemed to be consistent with the AQMP."

The California Department of Finance estimated 2013 population in Santa Cruz County of 266,662 is lower than the *CEQA Air Quality Guidelines* forecasts of 275,396 in 2010 and 292,695 in 2020 (KD Anderson 2013a).

Based on significance thresholds presented in the *CEQA Air Quality Guidelines*, proposed new auto shop and associated facilities would be consistent with the AQMP. A less than significant impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

The Proposed Project's air quality impacts are attributed to short-term construction-related activities and long-term operational activities. The CalEEMod program was applied to estimate emissions associated with construction-related activities at the Project site (KD Anderson 2013a). The Proposed Project would be considered to result in significant air quality impacts if it would result in emissions greater than the significance thresholds described in Section 4.3.1 Environmental Setting.

Construction Impacts

Implementation of the Proposed Project would result in construction activity, which would generate air pollutant emissions. Construction activities such as grading, excavation and travel on unpaved surfaces would generate dust, and can lead to elevated concentrations of PM_{10} and $PM_{2.5}$. The operation of construction equipment results in exhaust emissions, which include ROG and NO_x. Construction activity could also potentially entrain asbestos, if present in the soil or structures that would be demolished (KD Anderson 2013a).

Based on application of the CalEEMod model, construction of the Proposed Project would be expected to generate the following amounts of PM_{10} emissions.

- During a summer day, construction activities would generate 7.43 pounds per day (ppd) of PM_{10} emissions.
- During a winter day, construction activities would generate 7.43 ppd of PM_{10} emissions.

The amounts described above would be less than the MBUAPCD significance threshold of 82 ppd of construction-related PM_{10} emissions (KD Anderson 2013a). Therefore, this impact is considered to be less than significant.

The asbestos map shows there are no areas more likely to contain NOA in the vicinity of the Project site. The area more likely to contain NOA that is nearest to the Project site is approximately 9 miles away, along Los Gatos Creek near the Santa Cruz / Santa Clara county line. Therefore, the Project site is considered to have a low probability of containing NOA, and this impact is considered less than significant (KD Anderson 2013a).

Thus, construction activities at the Project site would generate a less than significant impact.

Long-Term Operational Impacts

The Proposed Project would result in the relocation of the existing auto shop operations in the unincorporated community of Felton in Santa Cruz County to the BLCC area. This would result in relocation of emissions associated with operation of the facility. The Proposed Project would not change the amount of operational emissions; however, the generation of emissions would geographically shift between areas within Santa Cruz County. The existing auto shop in Felton would continue to perform minor vehicle maintenance activities such as oil, tire, and wiper blade changes. There would be no environmental impacts associated with the reuse of the Felton auto shop building and reuse would not generate vehicle trips. Overall, the Proposed Project would not change the amount of operational emissions generated by the auto shop (KD Anderson 2013a). Because the new auto shop would not increase long-term operational emissions, the impact of the new auto shop on long-term operational emissions is considered to be less than significant.

Local Carbon Monoxide Impacts

The potential impact of the Proposed Project on local CO levels was assessed by applying screening procedures described in the *CEQA Air Quality Guidelines* and then, if indicated by the screening procedures, conducting detailed microscale air quality dispersion modeling (KD Anderson 2013a).

The screening procedures applied focus on the effects of Proposed Project on traffic congestion, expressed as intersection level of service (LOS). Since elevated CO concentrations are associated with traffic congestion, a project is considered to have no potential for significant impacts on CO concentrations if it does not substantially contribute to excessive traffic congestion (KD Anderson 2013a).

As specified in Section 5.4 of the *CEQA Air Quality Guidelines*, the following would represent a potentially significant impact to intersections or road segments after mitigation (references are to peak-hour LOS):

- Intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic, or
- Intersections or road segments that operate at LOS E or F where the volume-to-capacity (V/C) ratio would increase 0.05 or more with the project's traffic, or
- Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic, or
- Unsignalized intersections that operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic. This criterion is based on the turning movement with the worst reserve capacity, or
- Project would generate substantial heavy duty truck traffic or generate substantial traffic along urban street canyons or near a major stationary source of CO.

If any of these scenarios would occur, carbon monoxide modeling should be undertaken to determine if indirect source emissions would cause an exceedance of State or national AAQS at existing or reasonably foreseeable receptors (KD Anderson 2013a).

Projects that would meet these criteria are considered to have the potential for resulting in a significant CO air quality impact. According to the *CEQA Air Quality Guidelines*, detailed dispersion modeling is not needed for projects that do not meet these criteria and projects that do not meet these criteria are considered to have a less than significant CO air quality impact.

The traffic analysis of the Proposed Project concluded that the study facility would operate at LOS D or better with the Proposed Project. Based on Section 5.4 of the *CEQA Air Quality Guidelines*, the Proposed Project is considered to not have the potential for resulting in a significant CO air quality impact. Therefore, this impact is considered less than significant.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐

As described in Section 4.3.1 Environmental Setting, the Project area is designated a state nonattainment area for ozone, and a federal unclassified/attainment area for ozone, and is designated a nonattainment area for inhalable particulate matter smaller than 10 microns in diameter (designated PM_{10}) (KD Anderson 2013a).

As stated in item b), the Proposed Project would not exceed the MBUAPCD significance threshold of 82 ppd of construction-related PM_{10} emissions. Additionally, the State- and federally-required air plans account for ozone precursor emissions (i.e., ROG and NO_x); therefore, the Proposed Project would not have a significant impact on the attainment and maintenance of ozone AAQS (KD Anderson 2013a). Because the Proposed Project would not result in a significant impact, it is not considered to result in a cumulatively considerable net increase in ozone and PM_{10}. Therefore, this impact is considered less than significant.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Air quality regulators typically define sensitive receptors as schools (preschool – 12th grade), hospitals, resident care facilities, residences, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. A project would have a significant impact on a sensitive receptor if it would result in an unacceptable health risk due to exposure to toxic air contaminant (TAC) emissions. The Air Quality Study examined the Proposed Project for emissions of the TAC asbestos (NOA and demolition of structures containing asbestos).

As stated in item a) the Project site is not located in an area considered likely to contain NOA. Additionally, construction emissions of PM_{10} would be temporary and would be less than the MBUAPCD significance threshold of 82 ppd of construction-related PM_{10} (KD Anderson 2013a). Therefore, the Proposed Project would not expose sensitive receptors to substantial pollution concentrations. A less than significant impact would occur.

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Would the project create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Construction of the Proposed Project could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. However, construction equipment would be operating at various locations throughout the Project site, and any construction activities near sensitive receptors would be temporary. Additionally, long-term operations of the new auto shop would not include large amounts of heavy equipment exhaust that could potentially produce odor compounds. Any odor compounds produced by auto shop operations would be minimal and be contained within the auto shop area. Therefore, a less than significant impact would occur.

4.4 Biological Resources

4.4.1 Environmental Setting

A Biological Resources Assessment (BRA) was prepared for the Proposed Project by ECORP Consulting, Inc. (ECORP 2013a; Appendix B). The purpose of the assessment was to collect information on biological resources present within both Project sites and to determine any potential biological constraints to site construction. The BRA analyzed the Project site for the potential for sensitive vegetation communities and special-status plants and wildlife species, including species listed as endangered or threatened under the California or Federal Endangered Species Act (CESA and FESA), to occur on-site (ECORP 2013a). To estimate the extent and approximate the location of potential Waters of the U.S. and Waters of the State, including wetlands on-site, a review was conducted of existing databases included U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) online database, U.S. Geological Survey (USGS) National Hydrology Database (NHD), California Department of Fish and Wildlife (CDFW) vernal pool data, Natural Resources Conservation Services (NRCS) soil survey data, and visually assessed publically accessible online aerial photographs (e.g. Google Earth) of the site. A general list of potentially occurring special-status plants and wildlife species for the site was developed following review of aerial photographs, CDFW's Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Electronic Inventory and USFWS species lists.

The literature review was supplemented by a field investigation conducted by ECORP on September 19, 2013. Biological resources information that was collected included:

- Potential Waters of the U.S.;
- Plant and animal species directly observed;
- Characterization of habitats present on-site;
- Animal signs (e.g., scat, tracks);
- Active bird nests;
- Burrows and any other special habitat features; and
- Representative site photographs.

The BRA is included as Appendix B and the results are summarized below.

Vegetation Communities

Vegetation at the Project site consists of introduced annual grasslands with ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceous*), and wild oats (*Avena fatua*) as dominant species. Forbs were scattered throughout the grassland, and consisted of lupine (*Lupinus* sp.), plantain (*Plantago major*), California poppy (*Eschscholzia californica*), and turkey mullien (*Croton setigerus*) among other plants. Several large trees, including foothill pine (*Pinus sabiniana*), coast redwood (*Sequoia sempervirens*), and ornamentals are located within the CCC Campus and east of the Project site along Empire Grade Road. The surrounding topography is gently rolling, hilly, or steeply mountainous, and the surrounding vegetation is characterized as Douglas-fir hardwood forest. Incense cedar (*Calocedrus decurrens*) is the dominant tree in the immediate perimeter of the Project site; however, many of the incense cedars were planted from stock grown in the plant nursery that was previously on-site. The surrounding forest is dominated by Douglas-fir (*Pseudotsuga menziesii*) and other components of the overstory include Ponderosa pine (*Pinus ponderosa*), coast live oak (*Quercus agrifolia*), and coast redwood. Madrone (*Arbutus menziesii*) is a major component of the understory. A list of plants observed during the field surveys is included in Appendix B.

Wildlife

The Project site has diverse terrestrial wildlife. Common ravens (*Corvus corax*), Brewer's blackbirds (*Euphagus cyanocephalus*), Steller's jays (*Cyanocitta stelleri*), house finch (*Haemorhous mexicanus*), and house sparrow (*Passer domesticus*) were among the bird species observed. Arboreal salamander (*Aneides lugubris*), Western fence lizard (*Sceloporus occidentalis*), California ground squirrel (*Otospermophilus beecheyi*), and Botta's pocket gopher were also documented. A list of wildlife observed during the field surveys is included in Appendix B.

Soils

According to the Soil Survey for Santa Cruz County, one soil type, (110) Ben Lomond sandy loam, 5 to 15 percent slopes, has been mapped within the Project site (NRCS 2013) (*Figure 2. Natural Resources Conservation Service Soil Types*, Appendix B).

Potential Waters of the U.S.

No potential Waters of the U.S. were found within the Project area and there are no previously mapped NWI features on-site (ECORP 2013a). During the site visit a small potential seasonal wetland was mapped approximately 50 feet north of the northern project boundary. A small riverine feature, freshwater ponds, and a freshwater forested/shrub wetland occur southwest, south and southeast of the Project site. All NWI features are greater than 500 feet away and separated from the Project site by infrastructure, managed fields, and/or forest (*Figure 3. Preliminary Wetland Assessment*, Appendix B).

Special-Status Plants

Numerous special-status plants have been reported within 5 miles of the Project site (ECORP 2013a) (*Figure 4. CNDDB Occurrences of Special-Status Plant Species and Attachment E*, Appendix B). The vast majority of special-status plants in the Project region are associated with unique soil/geological characteristics, vegetation communities, and/or habitats, such as coastal scrub, serpentine soil, chenopod scrub, vernal pools, and coastal dunes. Additionally, many special-status plant species in the area are shrubs, trees, or mosses, which are noticeably absent from the formerly cultivated site.

However, one individual manzanita shrub was observed along the access road to the Project site. The shrub was not identified to species because flowers and fruit needed to make the species determination were not present during the time of the survey. There is a possibility the plant could be one of a few special-status manzanita species reported for the area. Additionally, although the likelihood is low, the grasslands on-site may provide habitat for one or a few special-status species that occur in grasslands or meadows (ECORP 2013a).

Special-Status Wildlife

No special-status animals were observed during the field survey; however, a number of special-status animals have been documented within 5 miles of the Project site (ECORP 2013a) (*Figure 4. CNDDB Occurrences of Special-Status Animal Species*, Appendix B). The special-status animals previously documented are provided in Table 3. Additionally, the Project site occurs within USFWS-designated critical habitat for California red-legged frog, although aquatic habitat is not present on-site.

Table 3. Special-Status Species Previously Documented within 5 Miles of the Project Site

Species Common Name	Species Scientific Name
San Francisco garter snake	*Thamnophis sirtalis tetrataenia*
California red-legged frog	*Rana draytonii*
Western pond turtle	*Actinemys marmorata*
Black swift	*Cypseloides niger*
osprey	*Pandion haliaetus*
tricolored blackbird	*Agelaius tricolor*
American peregrine falcon	*Falco peregrinus anatum*
California black rail	*Laterallus jamaicensis coturniculus*
marbled murrelet	*Brachyramphus marmoratus*
Western snowy plover	*Charadrius alexandrinus nivosus*
Central Coast evolutionarily significant unit (ESU) of Coho salmon	*Oncorhynchus kisutch*
Southern California distinct population segment (DPS) of southern steelhead	*Oncorhynchus mykiss irideus*
tidewater goby	*Eucyclogobius newberryi*
Antioch specid wasp	*Philanthus nasalis*
unsilvered fritillary	*Speyeria adiaste adiaste*
Sandy Beach tiger beetle	*Cicindela hirticollis gravida*
monarch butterfly	*Danaus plexippus*
Mount Hermon June beetle	*Polyphylla barbata*
Western pearlshell	*Margaritifera falcata*
Zayante band-winged grasshopper	*Trimerotropis infantilis*
pallid bat	*Antrozous pallidus*
hoary bat	*Lasiurus cinereus*
Townsend's big-eared bat	*Corynorhinus townsendii*
Santa Cruz kangaroo rat	*Dipodomys venustus venustus*

Source: ECORP 2013a

Most of these species are associated with unique vegetation communities or habitats such as coastal dunes, marshes, creeks, and specific soils. None of these communities or habitats are present within the Project site. Trees in the vicinity may provide habitat for nesting birds and special-status bats. Most are not proposed for removal, but some trees would be removed during the realignment of the access road. Other trees are located in proximity to the Project site. Nesting birds during the nesting season (February 1 through August 31) or roosting bats (year-round) may be affected if ground

clearance or tree felling occurs during Project construction. The potential also exists for ground-nesting birds, covered under MBTA, to use the site during the breeding season (ECORP 2013a).

Wildlife Movement Corridors

The Project site is located within a large clearing within an otherwise dense Douglas-fir hardwood forest. Abundant use of the site by black-tailed deer (*Odocoileus hemionus*) was noted during the site visit. The site does not appear to serve as a corridor for movement, but rather as a browsing/foraging area. (ECORP 2013a).

4.4.2 Regulatory Setting

Federal Regulations

Federal Endangered Species Act

The FESA protects plants and wildlife that are listed as endangered or threatened by the USFWS and the National Marine Fisheries Service (NMFS). Section 9 of FESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging-up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 USC 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of FESA provides for issuance of incidental take permits where no other federal actions are necessary provided a HCP is developed.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the U.S. and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

Federal Clean Water Act

The federal Clean Water Act's (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The definition of waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes and wetlands. Wetlands are defined as those areas "that are inundated

or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

State or Local Regulatory Requirements

California Endangered Species Act

The CESA generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called "candidates" by the state).Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill". CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, mammals, amphibians and reptiles, birds and mammals. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code Sections 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The CESA of 1984 (California Fish and Game Code Section 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

California Streambed Alteration Notification/Agreement

Section 1602 of the California Fish and Game Code requires that a Streambed Alteration Application be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the

proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines, which provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

Santa Cruz County General Plan 1994

The overall goal of the General Plan is to “guide future growth and development in a manner consistent with the goals and quality of life desired by Santa Cruz County residents. The plan guides commercial and residential development in a way which accommodates reasonable growth and redevelopment while limiting urban expansion.” The “1994 General Plan serves two functions: it is a regulatory framework against which all proposed development is measured; and it is a vision statement for the desired future of the County.”

Additionally, Chapter 5 of the plan provides a conservation and open space element for the "conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources." The overall goals of the conservation and open space element are:

- *Natural and Cultural Resource Protection:* To protect and restore unique, rare, threatened, endangered, and other natural and cultural resources that warrant preservation because of their biological value, scarcity, scientific value, aesthetic quality, or cultural significance.
- *Open Space Protection:* To retain the scenic, wooded, open space and rural character of Santa Cruz County; to provide a natural buffer between communities; to prevent development in naturally hazardous areas; and to protect wildlife habitat and other natural resources.
- *Resource Utilization:* To provide for the conservation and environmentally sound and orderly economic use of renewable and nonrenewable natural resources to provide employment and income in Santa Cruz County while minimizing impacts to adjoining land uses and the environment.

Santa Cruz County Code Title 16, Chapter 16.34 Significant Trees Protection

Chapter 16.34 of the Santa Cruz County Code protects significant trees and forest communities to in order to "protect and enhance the County's natural beauty, property values, and tourist industry." The County Code defines a "significant tree" (any tree, sprout clump, or group of trees) as follows:

- Within the urban services line or rural services line, any tree which is equal to or greater than 20 inches d.b.h. (approximately five feet in circumference); any sprout clump of five or more stems each of which is greater than 12 inches d.b.h. (approximately three feet in circumference); or any group consisting of five or more trees on one parcel, each of which is greater than 12 inches d.b.h. (approximately three feet in circumference).
- Outside the urban services line or rural services line, where visible from a scenic road, any beach, or within a designated scenic resource area, any tree which is equal to or greater than 40 inches d.b.h. (approximately 10 feet in circumference); any sprout clump of five or more stems, each of which is greater than 20 inches d.b.h. (approximately five feet in circumference); or, any group consisting of 10 or more trees on one parcel, each greater than 20 inches d.b.h. (approximately five feet in circumference).
- Any tree located in a sensitive habitat.

Additionally, unless a project is found exempt under the County Code, no person shall do, cause, permit, aid, abet, suffer, or furnish equipment or labor to remove, cut down, or trim more than one-third of the green foliage of, poison, or otherwise kill or destroy any significant tree as defined in this chapter within the Coastal Zone until a significant tree removal approval for the project has been obtained (Santa Cruz County 2013c).

4.4.3 Biological Resources (IV.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

The proposed new auto shop would be located at the BLCC on approximately 2.75 acres of land. Douglas-fir hardwood forest provides the predominant backdrop of the project area and bounds the BLCC on the east, north, west, and south. A public campground, operated by the BLCC, is located immediately adjacent to the BLCC property on the south, and the Project area is directly north of the main BLCC facilities. No special-status species were found on-site; however, there is potential habitat for several special-status bat species and special-status plants. Additionally, all native birds, including raptors, are protected under the Fish and Game Code and the Federal MBTA. Impacts to these species would be less than significant with implementation of Mitigation Measures B-1 and B-2.

Mitigation Measures

B-1 Pre-Construction Clearance Survey

A. To avoid take of any special-status wildlife species protected under the CESA and/or FESA and/or any bird species protected under the MBTA and California Fish and Game Code, a pre-construction clearance survey for all potentially suitable habitat shall be conducted by a qualified biologist within 14 days prior to the onset of construction activities. If no nesting birds and/or special-status wildlife species are found during the survey, site preparation and construction activities may begin.

   1. If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist in accordance with CDFW recommendations for buffer distances relative to the species identified. Once construction activities commence on-site, all nests will be continuously monitored by a qualified biologist to detect any behavior changes as a result of construction of the Proposed Project. If behavioral changes are observed that may result in adverse effects to the success of breeding, the work causing the change shall cease and consultation with CDFW shall be initiated to identify potential avoidance and minimization measures. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

   2. A qualified biologist shall conduct a dusk emergence survey (start 1 hour before sunset and last 3 hours), followed by a pre-dawn re-entry survey (start 1 hour before sunrise and last for 2 hours), in addition a daytime visual inspection of all potential bat roosting habitat on the Project site included as part of the pre-

construction clearance survey. If roosting special-species bats are found on-site or adjacent to the Proposed Project during the surveys, the following measures shall be implemented with consultation with CDFW to reduce adverse impacts to special-status bats:

a. Avoid direct and indirect impacts to roosting sites by establishing a no-disturbance buffer of 100 feet around roost sites.

b. Clearing and grubbing adjacent to the roost site and lighting use near the roost site where it would shine on the roost or interfere with bats entering or leaving the roost shall be prohibited.

c. Operation of internal combustion equipment, such as generators, pumps, and vehicles within 100 feet of the roost site shall be prohibited.

B. In addition, a Worker's Awareness Training will be conducted prior to construction and include training materials and a briefing covering all sensitive species and habitats to further educate construction personnel regarding potential adverse effects to these resources. These training materials and briefings would include the laws and regulations that protect these resources and the consequences of non-compliance with those laws and regulations. A contact person shall be provided in the event that protected biological resources are discovered at the Project site.

B-2 Rare Plant Survey

To avoid take of any special-status plant species protected under the CESA and/or FESA, the presence or absence of special-status plant species shall be determined through rare plant surveys conducted according to CNPS protocol. Surveys will be timed according to the blooming period (late spring) for target species and known reference populations will be visited prior to surveys to confirm the species is blooming where known to occur.

A. If rare species are found, avoidance zones may be established around plants to clearly demarcate areas for avoidance. Avoidance measures and buffer distances may vary between species and the specific avoidance zone distance will be determined in coordination with appropriate resource agencies (CDFW and USFWS).

B. If rare special-status plant species are found within the Project area and avoidance of the species is not possible, then additional measures such as seed collection and/or translocation may be developed in consultation with the appropriate agencies.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

Sensitive habitats include those that are considered rare within the region, are considered sensitive by the State of California, and are listed as sensitive under local conservation plans. Sensitive

habitats within the region are associated with unique soil/geological characteristics, vegetation communities, and/or habitats, such as coastal scrub, serpentine soil, chenopod scrub, vernal pools, and coastal dunes (ECORP 2013a). The Project site does not support any of these characteristics, communities, or habitats described above. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

As previously stated in Section 4.4.1 Environmental Setting, no potential Waters of the U.S. were found within the Project area, and there are no previously mapped NWI features (ECORP 2013a). No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐

The Project site is located directly adjacent to the existing BLCC facilities with human and vehicle traffic present. Perimeter fencing and existing exterior BLCC lighting throughout nighttime hours could deter significant wildlife movement throughout the area. As described in Section 4.4.1 Environmental Setting, the Project site is located in a large clearing within an otherwise dense Douglas-fir hardwood forest. Abundant use of the site by black-tailed deer (*Odocoileus hemionus*) was noted during the site visit. However, the area does not appear to serve as a corridor for movement, but rather as a browsing/foraging area, and development of the Project site is not expected to adversely affect wildlife movement in the region. A less than significant impact would occur related to wildlife movement corridors.

Additionally, all native birds, including raptors, are protected under the MBTA, while additional protection for raptors is afforded under the California Fish and Game Code. As described in item a), 14 days prior to the commencement of construction activities, a pre-construction clearance survey shall be conducted to avoid potential for take of any special-status wildlife species and any bird species protected under the MBTA. Therefore, adverse impacts to nesting birds or use of wildlife nursery sites would be less than significant with implementation of Mitigation Measure B-1.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

The Project site is comprised of ruderal, non-native grassland surrounded by Douglas-fir hardwood forest. The surrounding Douglas-fir hardwood forest would not be affected by the Proposed Project. Tree removal would occur during realignment of the access road. The Project site is not inside an urban or rural service line, within a scenic area, or within sensitive habitat as defined by the General Plan (Santa Cruz County 2013b). Therefore, any tree removal during the access road realignment would not conflict with the Santa Cruz County Code Significant Trees Protection (Title 16, Chapter 16.34) (see Section 4.4.3 Environmental Setting). As stated in Section 4.2 Agriculture and Forestry Resources (II.) Environmental Checklist and Discussion, item c), the Project site does meet the definition of timberland as defined in Public Resources Code section 42526 (California Public Resources Code 2014), since it is available for and capable of growing a crop of trees, and the site was previously used as a plant nursery to grow trees until the early 1990s. The Proposed Project would require a Timberland Conversion Permit issued from CAL FIRE. The Project site is less than three acres; therefore, the Proposed Project qualifies for a less-than-3-acre conversion exemption (14 CCR 1104.1 (a)). A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The Land Trust of Santa Cruz County's *A Conservation Blueprint: An Assessment and Recommendations from the Land Trust of Santa Cruz County* is a "a science-based and community-informed document that recommends strategies and priorities for the next generation of land conservation and resource stewardship in Santa Cruz County" (Land Trust of Santa Cruz County 2011). According to the Conservation Blueprint, the Project site is not located within important areas for Multi-Benefit Conservation or areas Critical for the Biodiversity Goals of the document (Land Trust of Santa Cruz County 2011). The Project sites are also not located within areas subject to a Habitat Conservation Plan or Natural Community Conservation Plan (CDFG 2011; CDFW 2013). No impact would occur.

4.5 Cultural Resources

4.5.1 Environmental Setting

Cultural Resources

A Cultural Resources Inventory Report was prepared by ECORP Consulting, Inc. (ECORP 2013b, Appendix C) for the Proposed Project to determine if cultural resources were present in or adjacent to the Project area and assess the sensitivity of the Project area for undiscovered or buried cultural resources. The cultural context of the Project area including regional and local prehistory, ethnography, and regional and Project area histories can be found in the report in Appendix C.

The analysis of cultural resources was based on a records and literature search conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University on March 29, 2013, a literature review, and a field survey on August 29, 2013. The literature search included the results of previous surveys within a 0.5-mile (800 meters) radius of the Proposed Project location.

A search of the Sacred Lands File by the NAHC showed no Native American cultural resources in the Project area.

There are no prehistoric or historic archaeological sites within the Project area that indicates the potential for existence of subsurface deposits. Resources from the built environment are present and are discussed in more detail below.

The Project site would be located adjacent to the BLCC. The majority of the Project area is currently undeveloped; however, from the 1950s until the 1990s, this area was used as a plant nursery. The southern portion of the survey area is a fuel storage facility. The Project area is along the eastern ridge of Ben Lomond Mountain, surrounded by the Big Basin Redwoods State Park to the north and west, and the community of Boulder Creek to the east.

The records search results indicated that none of the Project area has been previously surveyed for cultural resources. Within 0.5 mile of the property, nine cultural resource investigations have been conducted covering approximately 60 percent of the total area surrounding the property. These previous studies revealed that no cultural resources were within 0.5 miles of the Project area. However, because the entire Project area had not been previously surveyed, a pedestrian survey was warranted.

On August 29, 2013, the entire Project area was subject to an intensive pedestrian survey using transects at 15 meter intervals. No historic resources were observed during the survey. One structure indicated on the 1955 Big Basin, California topographic map was not observed at the location shown, and may have been plotted incorrectly or demolished in the past. It is possible that it is represented only by a storage shed located directly south of the southeastern portion of the survey area. The road shown on the 1967 map is not historic in age. An electrical distribution wood pole line following the road is also not historic in age. One corrugated metal storage building was observed within the isolated rectangular shaped portion of the Project area. The fuel storage facility building does not appear on historical maps or aerials. In addition, a close architectural inspection of the building indicates that the metal and roof materials, doorway, windows, and attached features all do not appear weathered or potentially older than 50 years of age. Therefore, the fuel storage building does not qualify as a historical resource.

Paleontological Resources

A paleontological database search of the paleontology locality and specimen collection records for the Project area and surrounding areas (0.5 mile radius) was requested from the University of California Museum of Paleontology (UCMP) in August 2013. Additional information from a query of the UCMP online catalog records, a review of regional geologic maps from the California Geological Survey, and a review of existing literature on paleontological resources of Santa Cruz County was used to provide information about paleontological resources. A paleontological assessment was prepared by ECORP Consulting, Inc. (ECORP 2013c, Appendix D) for the Proposed Project to determine if paleontological resources were present in or adjacent to the Project area and assess the sensitivity of the Project area for undiscovered paleontological resources. The UCMP database

results, more details about the geology, and the probability of finding fossil specimens can be found in the assessment in Appendix D.

The underlying geologic rock unit for the Project area is described as cretaceous quartz diorite specifically and part of the larger rock unit described as Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite, according to the 2010 Geologic Map of California and the Geologic Map of the Sacramento Quadrangle (ECORP 2013c, Appendix D). The soil survey for Santa Cruz County published by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) indicates that the soil type on-site corresponds to the Ben Lomond sandy loam (USDA-NRCS 2013). This soil type is a deep well drained soil formed in material weathered from sandstone, granodiorite, and quartz diorite. The parent material occurs approximately 4 feet below the surface (ECORP 2013c, Appendix D).

The paleontological assessment determined that there are fossil vertebrate localities located in proximity to the Project area; however, these localities were deposited during a more recent geologic time than when the soil type and rock unit underlying the Project area formed. The geology of the Project area is not associated with any of the documented geologic formations associated with the documented localities. Based on this information, the Project area has low potential for containing nonrenewable paleontological resources (ECORP 2013c, Appendix D).

4.5.2 Regulatory Setting

Cultural Resources Obligations Under CEQA

CEQA (Title 14, CCR, Article 5, Section 15064.5) applies to cultural resources of the historical and prehistoric periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant impact on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California Register of Historical Resources (CRHR) (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) or the National Register of Historic Places (NRHP) (36 CFR 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered to be Historical Resources (significant) under CEQA.

The Lead Agency is responsible for ensuring compliance with mitigation measures for Historical Resources, as defined by CEQA, in order to reduce impacts. Section 15097 of Title 14, Chapter 3, Article 7 of CEQA, Mitigation Monitoring or Reporting, “the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the Project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.”

If the Project will not require federal approval, permits, or funding, then compliance with CEQA will be required. To meet the regulatory requirements of the Project, a cultural resources investigation was conducted pursuant to the provisions for the treatment of cultural resources contained within CEQA (Pub. Res. Code § 21000 et seq.). In order to state in a CEQA environmental document that there are or are not Historical Resources in the Project area as defined by CEQA (CCR Title 14,

Section 15064.5), the standing structures identified by the survey that would be subject to impacts as a result of the Project, must be evaluated for significance using CRHR eligibility criteria. If determined eligible, then mitigation could consist of either avoidance by preserving them in dedicated open space or by carrying out photographic and historical documentation efforts prior to Project approval, implementation, or demolition.

4.5.3 Cultural Resources (V.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐

At the Project site, no cultural resources were identified in the Project area as a result of the records search and field survey. Although no resources were identified, the potential for unrecorded cultural resources below the ground surface exists. These resources may be disturbed during construction of the Proposed Project. Impacts to unknown resources would be less than significant with Mitigation Measure C-1.

Mitigation Measures

C-1 Unanticipated Discovery

If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. A Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, shall be required if the nature of the unanticipated discovery is prehistoric.

Work cannot continue within the no-work radius until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR.

If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and Project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, total data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead agency as verification that the provisions in CEQA for managing unanticipated discoveries have been met.

In the event that evidence of human remains is discovered, construction activities within 100 feet of the discovery will be halted or diverted and the requirements of this mitigation measure will be implemented. In addition, the provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and AB 2641 will be implemented. When human remains are discovered, state law requires that the discovery be reported to the County Coroner (Section 7050.5 of the Health and Safety Code)

and that reasonable protection measures be taken during construction to protect the discovery from disturbance (AB 2641). If the Coroner determines the remains are Native American, the Coroner notifies the Native American Heritage Commission which then designates a Native American Most Likely Descendant (MLD) for the Project (Section 5097.98 of the Public Resources Code). The designated MLD then has 48 hours from the time access to the property is granted, to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

In the event that fossils are encountered, they shall be analyzed to a point of identification and curated at an established accredited museum repository with permanent retrievable paleontological storage. A technical report of findings shall be prepared with an appended itemized inventory of identified specimens and submitted with the recovered specimens to the curation facility.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

According to the cultural resources inventory report (ECORP 2013b, Appendix C), no archaeological resources were found within Project area during the records search and field survey. A less than significant impact to buried resources, if present, would occur with implementation of Mitigation Measure C-1. See item a) discussion above.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

According to the paleontological assessment (ECORP 2013c, Appendix D), the Proposed Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Impacts to paleontological resources would be less than significant with the implementation of Mitigation Measure C-1. See item a) discussion above.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Would the project disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

According to the cultural resources inventory report (ECORP 2013b, Appendix C), a search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources within the Proposed Project area. While there is no reason to suspect the presence of human remains in the Project area, it is possible that currently unknown remains may occur. In the event that evidence of human remains is discovered the requirements of Mitigation Measure C-1 would be implemented. The Proposed Project would have less than significant impacts with the incorporation of Mitigation Measure C-1. See item a) discussion above.

4.6 Geology and Soils

4.6.1 Environmental Setting

Geomorphic Setting

The Proposed Project is situated within the Coast Ranges, mountain ranges and valleys that trend northwest and subparallel to the San Andreas Fault. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata and are divided into the northern and southern ranges, separated by the natural depression of the San Francisco Bay (California Geological Survey 2002).

The Project site is located on Ben Lomond Mountain, a large eroded mass of granitic rock that has been elevated by vertical movement along the Ben Lomond fault. Ben Lomond Mountain is underlain by marble, creating highly irregularly topography with short knobs or short ridges separated by intersecting valleys (Santa Cruz County 2007).

Regional Seismicity and Fault Zones

An “active fault,” according to California Department of Conservation, Division of Mines and Geology, is a fault that has indicated surface displacement within the last 11,000 years. A fault that has not shown geologic evidence of surface displacement in the last 11,000 years is considered “inactive.”

The Project site is surrounded by a broad system of faults (*Table 4. Distances and Directions to Local Faults*). The San Andreas, Zayante-Vergeles, and San Gregorio faults and the Monterey Bay-Tularcitos fault zone are considered active faults located less than 20 miles from the vicinity of the Project areas. Historically, the most severe earthquake to affect the Project areas was the 1989 Loma Prieta Earthquake (Butano fault) with a Richter magnitude of 7.1 (Santa Cruz County 2007; Santa Cruz County 1994). Although other faults in this region may be considered active, their potential contribution to seismic hazards is considered to be minimal in comparison to these four faults (Santa Cruz County 2007).

Table 4. Distances and Directions to Local Faults

Fault Name	Distance from Project area	Direction from Project area
San Gregorio	6.22 miles	west
San Andreas	9.00 miles	northeast
Sargent	12.33 miles	east
Monte Vista-Shannon (Altamont fault)	13.25 mile	northeast
Monterey Bay-Tularcitos	14.49 miles	south
Butano (Loma Prieta Earthquake Fractures)	9.89 miles	east
Zayante-Vergeles	17.65 miles	southeast

Source: Santa Cruz County 2007; USGS 2013

Soils

According to the Soil Survey for Santa Cruz County the Project area consists of one soil type, (110) Ben Lomond sandy loam, 5 to 15 percent slopes (NRCS 2013). This soil type is part of the Ben Lomond Series which consists of deep, well-drained soils that formed in material weathered from sandstone or granitic rocks at elevations from 400 to 3,000 feet. This soil series is found on mountain slopes and ridges, in a coastal Mediterranean climate that is warm and dry with the exception of foggy summers and cool, moist winters. The mean annual precipitation is 35 to 60 inches and the mean annual temperature is 54 to 57 degrees Fahrenheit. The frost-free season is approximately 220 to 240 days. These soils are typically used for timber production, recreation, wildlife, watershed, and in some areas home sites and orchards. Typical vegetation includes redwood, Douglas-fir, oak tanoak, oaks, madrone, and shrubs (NRCS 2009).

4.6.2 Geology and Soils (VI.) Environmental Checklist and Discussion

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
	☐	☐	☒	☐
ii) Strong seismic ground shaking?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	☐	☐	☒	☐

iii)	Seismic-related ground failure, including liquefaction?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		☐	☐	☒	☐
iv)	Landslides?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		☐	☐	☐	☒

i and ii) The Project site is not located within a Fault-Rupture Hazard Zone / Alquist-Priolo Earthquake Fault Zone boundary (DOC 2006). Although it is expected that the Project site could experience very strong seismic shaking during the anticipated life expectancy of the Proposed Project, the risk of fault rupture within the site is low due to the absence of known active faults within the immediate vicinity of the Project area (Santa Cruz County 2007). A geotechnical study will be conducted to assess the Project site and make site-specific recommendations in accordance with the seismic code requirements. The potential for damage due to ground shaking would be minimized by proper design of the Proposed Project with seismic design criteria, as recommended in applicable building codes. A less than significant impact would occur.

iii) Liquefaction is a phenomenon where water-saturated granular soil loses shear strength during strong ground shaking produced by earthquakes. The loss of soil strength occurs as a consequence of cyclic pore water pressure increases below the groundwater surface. Potential hazards due to liquefaction include loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements and differential settlements. Liquefaction generally occurs in areas where the groundwater table is less than 50 feet below the surface. According to the County of Santa Cruz, California Flood Hazard Mitigation Plan, the Project site is not located in an area that is subject to liquefaction potential (Santa Cruz County 2002).

iv) The California Department of Conservation Landslide Inventory map (DOC 2013a) was used to identify possible landslide problem areas. The Project site is located on relatively level terrain and is not located in an area with a probability of landslides. No impact would occur.

b)	Would the project result in substantial soil erosion or the loss of topsoil?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		☐	☐	☒	☐

Best Management Practices (BMPs) are included as part of the Storm Water Pollution Prevention Plan (SWPPP) prepared for the Proposed Project and would be implemented to manage erosion and the loss of topsoil during construction-related activities (see Hydrology and Water Quality (IX.) Environmental Checklist and Discussion). Soil erosion impacts would be reduced to a less than significant impact.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

The Project site was previously developed and is level. The Project area is subject to substantial seismic ground shaking due to the proximity to major faults within the region; however, there is a low to zero potential for liquefaction, subsidence, or collapse (Santa Cruz County 2002). The Proposed Project would be constructed in accordance with seismic safety requirements and a geotechnical study will be prepared and include site-specific recommendations for grading and installation of foundations. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒

The Project site is comprised of one soil type, (110) Ben Lomond sandy loam, 5 to 15 percent slopes, which consists of deep, well drained soils and has a low shrink/swell potential (UC Santa Cruz 2005; NRCS 2013). No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Septic tanks or alternative wastewater disposal systems are not part of the Proposed Project design. The BLCC maintains its own sewage treatment facility and all wastewater is treated on-site. The new auto shop and associated facilities would connect to the existing wastewater treatment system located to the southwest of the project site. Construction of the project would not require the installation of a new wastewater treatment system (see 4.16 Utilities and Service Systems for further discussion). No impacts would occur.

4.7 Greenhouse Gas Emissions

An Air Quality Study, which includes an analysis of greenhouse gas emissions, was prepared for the Proposed Project by KD Anderson & Associates (KD Anderson 2013a; Appendix A). The findings of the Air Quality Study are summarized in this section.

4.7.1 Environmental Setting

The main source of greenhouse gas (GHG) emissions associated with the Proposed Project would be short-term combustion of fossil fuels during construction activities. As stated in 4.3 Air Quality, the Proposed Project would not result in a change in long-term operational emissions (KD Anderson 2013a). The generation of GHG emissions has the potential to affect climate on a global scale. Pursuant to AB 32, the California Air Resources Board (CARB) prepared and adopted the Climate Change Scoping Plan. The Climate Change Scoping Plan outlines the State's strategy to achieve the year 2020 GHG emissions limits specified in AB 32. The Climate Change Scoping Plan includes a comprehensive set of actions designed to reduce overall GHG emissions in California.

4.7.2 Greenhouse Gas Emissions (VII.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Neither the MBUAPCD nor Santa Cruz County has established a quantified threshold for determining the significance of GHG emissions. This Air Quality Study, therefore, applies a significance threshold adopted by the Bay Area Air Quality Management District (BAAQMD). The quantified BAAQMD threshold is applied for two reasons:

- A quantified threshold is needed in response to the direction provided in Section 15064.4(a) of the *State CEQA Guidelines* to calculate GHG emissions, and the direction provided in Section 15064.4(b) of the *State CEQA Guidelines* to assess whether project emissions exceed the threshold.
- While the Proposed Project is in the MBUAPCD, it is geographically close to the BAAQMD. The Project site is approximately six miles from the BAAQMD (KD Anderson 2013a).

The BAAQMD *Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010* presents significance thresholds for several types of pollutants, and presents thresholds for both construction-related emissions and operational emissions. For GHG emissions, a threshold of 1,100 metric tons (MT) of CO_2e per year is presented (KD Anderson 2013a).

The BAAQMD GHG threshold is described in *Adopted Air Quality CEQA Thresholds of Significance* as applying to operational emissions. No thresholds are presented for construction-related emissions. While the BAAQMD threshold applies to operational emissions, rather than construction-related emissions, the threshold is applied in this Air Quality Study to construction emissions. This approach is applied to provide a quantitative basis for determining the significance of project-related GHG emissions, as specified in the *State CEQA Guidelines*, and neither Section 15064.4(a) nor Section 15064.4(b) of the *State CEQA Guidelines* make a distinction between construction-related and operational GHG emissions. Applying an operational significance threshold to construction-related emissions is considered conservatively strict because the operational significance thresholds are intended to apply to annual emissions, which would repeatedly occur every year for the lifetime of a project. Conversely, the Proposed Project would only generate construction-related emissions, which would only occur once, during the finite construction period (KD Anderson 2013a).

The CalEEMod program was applied to estimate GHG emissions associated with construction-related activities at the Project site (KD Anderson 2013a). The Air Quality Study analyzed the potential GHG emissions of the Proposed Project and the impacts are summarized below.

Implementation of Proposed Project would result in the following amounts of construction-related GHG emissions:

- In 2015, the Proposed Project would result in 149.16 MT of CO_2e emissions.
- In 2016, the Proposed Project would result in 112.30 MT of CO_2e emissions during 2016 (KD Anderson 2013a).

Because the Proposed Project would result in GHG emissions which are less than the significance threshold of 1,100 MT per year of CO_2e emissions, this impact is considered less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

As previously stated in Section 4.7.1 Environmental Setting, pursuant to AB 32, CARB prepared and adopted the Climate Change Scoping Plan, which outlines the State's strategy to achieve the year 2020 GHG emissions limits specified in AB 32. The Climate Change Scoping Plan includes a comprehensive set of actions designed to reduce overall GHG emissions in California. However, CARB has not yet determined what amount of GHG reductions it recommends from local government operations. The Climate Change Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined (KD Anderson 2013a).

The Santa Cruz County Board of Supervisors approved the Climate Action Strategy (CAS) on February 26, 2013. The CAS outlines a course of action to reduce GHG emissions produced by governmental operations and community activities within unincorporated Santa Cruz County. Implementation of the CAS will build on the fact that Santa Cruz County has already met the 2020 emissions reduction target recommended by the state and will set the County on a path toward reducing emissions to 59 percent below 2009 levels by 2050 (KD Anderson 2013a).

The CAS articulates a broad strategy for reaching emission reduction goals, and then goes further to identify the individual programs, policies, and initiatives that, together, will move County operations and the community toward the goals. Strategies are included to reduce emissions in the major focus areas of transportation, energy, and solid waste (KD Anderson 2013a).

The Proposed Project would not conflict with AB 32, BAAQMD's Climate Protection Program, or other applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases because the total construction GHG emissions estimated for the Proposed Project would be below the BAAQMD significance threshold. Furthermore, the Proposed Project would solely generate construction-related emissions, which would be temporary and only occur once. As stated in Section 4.7.1 Environmental Setting, the Proposed Project would not have an effect on long-term operational emissions. Therefore, no impacts from conflicts with applicable plans, policies, or regulations are expected. No impact would occur.

4.8 Hazards and Hazardous Materials

4.8.1 Environmental Setting

A Phase I Environmental Site Assessment (ESA) report was prepared by ENGEO, Inc. (ENGEO 2013, Appendix E) for the Project site to identify recognized environmental conditions (REC) associated with the property. As defined in the ASTM Standard Practice E 1527-05, a REC is "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property" (ENGEO 2013).

The Project site would be located adjacent to BLCC. The Project area (approximately 2.75 acres) is characterized by flat, open grassland with a dirt road that transects the site. A chain-link fence separates CDCR facilities to the south from the Project area. The CDCR facilities included in the Project consist of a fuel storage facility. The Project would construct a new automotive repair shop and associated facilities, and replace the existing fuel storage facility. The open grassland area was formerly used as a plant nursery. The Project area is relatively level at approximately 2,640 feet above mean sea level (msl); no water supply wells or historic oil and gas wells are located within the Project area.

4.8.2 Hazards and Hazardous Materials (VIII.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐

The Proposed Project may include the transport, short-term storage and use, and disposal of hazardous materials related to construction, demolition, and operation and maintenance of the new facilities. BMPs stipulating proper storage of hazardous materials and vehicle fueling would be implemented during construction and demolition as part of the Stormwater Pollution Prevention Plan (SWPPP). CAL FIRE and its contractors shall follow all applicable federal, state, and local regulations, including California Occupational Health and Safety Administration (Cal-OSHA), California Fire Code, and National Fire Protection Association (NFPA) requirements, and manufacturer instructions for the management and use of hazardous materials for the construction, demolition, and operation and maintenance of the Proposed Project.

Hazardous materials would be involved in the construction, demolition, and operation and maintenance of the following facilities (as described in Section 2.3 Project Characteristics) in the Proposed Project: the five-bay auto shop, a vehicle wash rack with an oil/water separator to prevent discharges of contaminants to the wastewater system, a hydraulic vehicle lift, fire suppression system, a generator building to house an emergency propane powered generator with a 1,000-gallon propane tank, and a fuel storage facility with two 2,000-gallon aboveground storage tanks (AST) (diesel and gasoline). The new ASTs would meet national and California standards for fire protection and safety, and secondary containment would be built around the ASTs, vehicle fueling area, and any other bulk storage containers that hold oil of any kind with a capacity of 55 gallons or

more. The Proposed Project would also demolish and reconstruct a fuel storage facility building and two aboveground fuel storage vaults within the BLCC.

The fuel storage facility building was built prior to 1979; therefore, the structure was assessed for potential presence of asbestos-containing materials (ACM) and lead-containing paints (LCP). The ACM survey sampling resulted in one substance, a wall base sealant, containing non-friable asbestos. National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations do not require the wall base sealant to be removed prior to demolition or renovation, or be treated as a hazardous waste since it is non-friable. However, disturbance of this material is still covered by the Cal-OSHA asbestos standard (Title 8, CCR 1529). In accordance with the Monterey Bay Unified Air Pollution Control District Rule 424, written notification to the District is required ten working days prior to commencement of any demolition activity (whether asbestos is present or not). (GEOCON 2014a)

The LCP survey samples resulted in non-detection for lead above 4.0 mg/kg. However, the survey recommends all paints at the site be treated as LCP due to lead being used as a common ingredient of paints manufactured prior to 1978. (GEOCON 2014a) To ensure impacts from building-related hazards are less than significant, Mitigation Measures HM-1 and HM-2 would be implemented.

CAL FIRE and CDCR would regularly inspect these facilities and maintain a Spill Prevention, Control and Countermeasure (SPCC) Plan as part of the operation and maintenance to ensure that they are functioning properly and would not create a health and environmental hazard.

The Project site Phase I ESA found no RECs or historical RECs. However, a potential REC was identified that would require sampling to confirm. A review of past records found the Project area had been used as a plant nursery from the 1950s to the early 1990s. Chemicals potentially used in the nursery business consist of persistent organochlorine pesticides or arsenical herbicides. A geotechnical study was prepared for the Proposed Project (GEOCON 2014b). As part of the geotechnical study, environmental sampling and analytical testing for pesticides was conducted and determined the soil to be non-hazardous (GEOCON 2014c). The soil has been determined to be suitable for unrestricted reuse based on the pesticide concentrations (Rodacker 2013).

Impacts from the routine transport, use, and disposal of hazardous materials during the Proposed Project demolition, construction, and operation and maintenance would be less than significant with implementation of Mitigation Measures HM-1 and HM-2.

Mitigation Measures

HM-1 Hazardous Substances Removal

Prior to demolition of the fuel storage facility, hazardous substances inside and adjacent to the fuel facility shall be removed by a qualified contractor and disposed of in accordance with federal, state, and local regulations.

HM-2 Lead-Containing Paint Disposal

Prior to the demolition of buildings or structures located at the Project site, Title 8, CCR, 1532.1 subsections (e) and (l), compliance and training requirements shall be conducted. All paints at the site shall be treated as LCP for purposes of determining the applicability of the Cal-OSHA lead standard during maintenance, renovation, and demolition activities. Segregation and characterization of waste streams shall be conducted prior to disposal.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project 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?	☐	☒	☐	☐

Hazardous materials, such as diesel fuel and oil, would be used during construction, demolition, and operation and maintenance at the Project site. The release of any hazardous substance to the environment would be prevented through the implementation of BMPs listed in the SWPPP and SPCC Plan.

As described above in the discussion under a), routine use, storage, and handling of hazardous substances would be conducted in accordance with applicable federal, state, and local regulations. Hazards related to building-related materials may be present at the Project site. Implementation of Mitigation Measures HM-1 and HM-2 would reduce the potential for significant hazards to the public, construction workers, and environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment to a less than significant impact.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

The Project site is not located within 0.25 mile of an existing or proposed school. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

The Phase I ESA for the Project site found no RECs associated with the property. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

The Project site is not located within an airport land use plan and there are no airports located within two miles of the Project site. The closest airports are the Bonny Doon Village Airport located approximately 4.8 miles south of the Project site and the Las Trancas Airport located approximately 6.3 miles southwest of the Project site (Google Earth 2013; TollFreeAirline.com 2013). Given the distance between the airports and the Project site, there would be no safety hazards for people residing or working in the Project area. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

There are no private airstrips within the vicinity (2 miles) of the Project site (Google Earth 2013; TollFreeAirline.com 2013). No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g)	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

There are no roads bisecting the Project area and all construction activities associated with the Proposed Project would occur on the Project site. Vehicles and equipment would be staged on-site in designated staging areas. The Proposed Project areas would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
h)	Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

The Proposed Project would adhere to the Santa Cruz County General Plan Fire Hazard Policies and Standards. The Project site is located on vacant land characterized by level topography, low-lying grasses, and a few oak trees along the driveway. Exposure to wildland fires would be a less than significant impact.

4.9 Hydrology and Water Quality

4.9.1 Environmental Setting

Regional Hydrology

The Proposed Project is located within the San Lorenzo River Watershed, which contributes to the water supply for the City of Santa Cruz and for the communities of the San Lorenzo Valley (DWR 2009). The drainage area of the San Lorenzo River Watershed extends north-south, from its source at the southern boundary of San Mateo County. The San Lorenzo River Watershed has eight tributaries including Branciforte, Zayante, Lompico, Bean, Fall, Newell, Boulder, and Bear Creeks (Santa Cruz County Environmental Health Department 2011). Approximately 80 percent of Santa Cruz County's water supply comes from four major groundwater aquifers in the county, including Santa Margarita, Purisima, Aromas, and the Pajaro Valley. The Santa Margarita aquifer is located adjacent to and east of the San Lorenzo River and supplies groundwater to the community of Felton (Santa Cruz County 2013d).

The Project site is located within the Boulder Creek Watershed, sub-basin to the Larger San Lorenzo River Watershed. Surface water bodies located less than 1 mile from the Project site include Big Creek to the west and southwest and Pea Vine Creek to the southeast (Santa Cruz County 2013b).

Site Hydrology and On-Site Drainage

The Project site consists of relatively flat terrain that is comprised of introduced annual grasslands. The surrounding topography is gently rolling, hilly, or steeply mountainous, and the surrounding vegetation is characterized as a mixed conifer forest. There are no natural drainages located on the Project site. It is expected that stormwater is directed in the form of sheet flow towards Empire Grade Road located 450 feet to the east.

Regulatory Framework

<u>State Water Resources Control Board</u>

In 1972, the CWA was amended to prohibit discharge of pollutants to Waters of the U.S. from any point source unless it is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, further amendments to the CWA added Section 402(p), established a framework for regulating municipal and industrial storm water discharges under the NPDES

Program. On 16 November 1990, the EPA finalized regulations establishing storm water permit requirements for specific industries. These regulations provide that storm water discharges to waters of the US from construction projects with 5 or more acres of soil disturbance are prohibited unless the discharge is in compliance with an NPDES Permit. Further regulations (titled the Phase II Rule) which became final on December 8, 1999 lowered the permitting threshold from 5 acres to 1 acre.

While EPA regulations allow two permitting options for storm water discharges (Individual Permits and General Permits), the California State Water Resources Control Board (SWRCB) has elected to adopt only one statewide General Permit that applies to the majority of storm water discharges associated with construction activities. On August 19, 1999, the State Water Board reissued the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ). On December 8, 1999 the State Water Board amended Order 99-08-DWQ to apply to sites as small as one acre (SWRCB 2010).

The latest General Construction Permit (Order No. 2009-0009-DWQ), which the Proposed Project would comply with, was adopted 2 September 2009. Order No. 2009-0009 DWQ created several new significant changes including, formal training requirements, online permitting/SWPPP documentation upload, minimum BMPs, Numeric Action Levels for pH and turbidity, as well as monitoring based on Project risk to sediment loss and threat to receiving waters (SWRCB 2010).

<u>Santa Cruz County Code</u>

Chapter 7.79 Runoff and Pollution Control

The purposes of this chapter are to:

(A) Protect the health, safety, and welfare of the public by protecting the surface and groundwater quality, groundwater recharge, beneficial uses, marine habitats, watershed health, and ecosystems of the receiving waters of the County, including the Monterey Bay, from discharge of pollutants and the adverse effects of hydromodification.

(B) Comply with Federal and State laws concerning stormwater. [Ord. 5117, 2012].

7.79.120 Best management practices for special category uses—General

All new discretionary development and redevelopment projects that fall into one of the following categories are subject to best management practices in accordance with the State Water Resources Control Board General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) and outlined in the County Design Criteria (Santa Cruz County 2013e). These categories are:

(A) Single-family development on slopes exceeding 30 percent;

(B) Commercial developments disturbing 10,000 square feet or more;

(C) Automotive repair shops;

(D) Retail gasoline outlets;

(E) Restaurants;

(F) Subdivisions with 10 or more housing units;

(G) Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to stormwater runoff. [Ord. 5117, 2012].

Hydrology and Water Quality (IX.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Short-term adverse storm events can occur during the winter months, when the majority of precipitation occurs in the Proposed Project area. During construction of the Proposed Project, water quality impacts could occur without proper controls. Soil loosened during grading, spills of fluids or fuels from vehicles and equipment or miscellaneous construction materials and debris, if mobilized and transported off-site in overland flow, could degrade surface and groundwater quality. In the event of heavy rainfall, runoff from construction areas could flow off-site and reach nearby surface water drainage facilities. The Project site and area impacted would be less than 1 acre; however, as described above in 4.9.1 Environmental Setting, according to Santa Cruz County Code, the Proposed Project would be subject to the requirements of the statewide NPDES stormwater permit for construction (Order 99-08-DWQ) (Santa Cruz County 2013e). A SWPPP, listing BMPs to prevent construction pollutants and products from violating any water quality standard or waste discharge requirements would be prepared for the Proposed Project.

In addition, the Proposed Project would be subject to the requirements of a Stormwater Pollution Control Plan (SWPCP). The SWPCP would be prepared in accordance with the *County of Santa Cruz – Construction Site Stormwater Pollution Control BMP Manual* (Santa Cruz County 2011; Edler 2013). Furthermore, the Proposed Project's drainage plan would be designed by a registered civil engineer to safely manage conveyance of stormwater runoff. A less than significant impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

The Proposed Project would connect to the BLCC's water system, which includes an on-site water treatment facility (CAL FIRE 2013). Total water demand during construction is estimated to be 5,000 gallons per day from an on-site hydrant for approximately 120 work days, totaling 600,000 gallons over the duration of a six-month time period. The Proposed Project would require water for two

bathrooms, a kitchen, eyewash and emergency shower, a mop sink, a hand wash sink, and the vehicle wash rack. Project improvements would result in a minor increase in impervious surfaces at the site and would be expected to have a negligible impact on recharge to the local groundwater basin. The current storage capacity of BLCC's water system includes 150,000 gallons for all domestic water use and 100,000 gallons for fire suppression (CAL FIRE 2013). The Proposed Project would not deplete groundwater supplies or interfere with groundwater recharge. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

The Project site would require grading and paving on-site to accommodate the new auto shop and associated facilities. The Proposed Project would cause a slight increase in impervious surfaces compared to the existing ground conditions of compacted dirt, gravel and paving. The Proposed Project includes the installation of a permanent drainage system with erosion and sedimentation control features. As part of auto shop maintenance, the soil erosion features of the drainage system would be monitored for standing water and debris removal, which would help prevent malfunction of the drainage system.

There are no streams or rivers that transect the Project site. The Proposed Project would not alter the natural course of drainage on-site due to grading and paving and placement of structures. As previously mentioned in item a), a SWPPP and a SWPCP would provide BMPs required during construction to prevent erosion and siltation and also BMPs to be incorporated after Project completion to prevent future erosion and siltation. Implementation of proper temporary and long-term erosion and sediment control BMPs would minimize potential erosion or siltation on or off-site both during and following construction. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐

As previously mentioned in item c), the Proposed Project would cause a slight increase in impervious surfaces compared to the existing ground conditions of compacted dirt, gravel and paving. As discussed in item a), the Proposed Project's drainage plan would be designed by a registered civil engineer to safely retain, detain, and/or convey stormwater runoff. Implementation of BMPs during construction would ensure that flooding would not occur on- or off-site. A less then significant impact would occur.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Would the project create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

As previously mentioned is items c) and d), the Proposed Project would cause a slight increase in impervious surfaces compared to the existing ground conditions of compacted dirt, gravel and paving. Implementation of BMPs and installation of on-site drainage infrastructure would increase the site's capacity to control runoff. The Proposed Project is not expected to exceed the capacity of existing stormwater drainage systems. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
f)	Would the project otherwise substantially degrade water quality?	☐	☐	☒	☐

Please see the answer to item a) of the Hazards and Hazardous Materials Environmental Checklist and Discussion in section 4.8 regarding potential hazardous substances used on-site. The Proposed Project would follow all state and federal regulations regarding discharge of effluent and would not discharge any materials or substances that may degrade water quality into any water bodies. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
g)	Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

The Proposed Project is not located within a 100-year flood hazard area (Santa Cruz County 2013b). There is no housing involved as part of the Proposed Project. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
h)	Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒

As described in item g), the Proposed Project is not located within a 100-year flood hazard area (Santa Cruz County 2013b). Therefore, no structures would impede or redirect flood flows. No impact would occur.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
i)	Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒

The Project site is not located in an area subject to inundation because of dam or levee failure (Santa Cruz County 2013b). No impacts would occur.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
j)	Would the project be subject to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

The Proposed Project is located inland and not within a seiche, tsunami, or mudflow hazard area. Therefore, the Proposed Project would not be subject to inundation by seiche, tsunami, or mudflow. No impact would occur.

4.10 Land Use and Planning

4.10.1 Environmental Setting

The State of California and State-owned land are not subject to local city or county land use and zoning regulations. However, the state is subject to the requirement under CEQA to assess project-related impacts that may occur as a result of conflicts between existing and proposed land uses. The Proposed Project was reviewed to determine consistency with Santa Cruz County's plans and policies (Santa Cruz County 1994; Santa Cruz County 2013b).

The Project site is designated Public Facility/Institutional (P) and Mountain Residential (R-M) in the *1994 General Plan and Local Coastal Program for the County of Santa Cruz, California* (General Plan) (Santa Cruz County 2013b). The Project site is located on 127 acres of State-owned land that is shared by CDCR and CAL FIRE staff. All components of the Proposed Project would be built within the property, which is bound by mixed conifer forest on the east, north, west, and south (see Section 1.3 Surrounding Land Uses/Environmental Setting for a detailed discussion).

4.10.2 Land Use and Planning (X.) Environmental Checklist and Discussion

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project physically divide an established community?	☐	☐	☐	☒

The Project site is located at the BLCC, approximately 5 miles northwest of the unincorporated community of Ben Lomond. The BLCC is comprised of approximately 127 acres and is surrounded by Douglas-fir hardwood forest. The Proposed Project would be located completely within BLCC

property and would support the current use of the BLCC. There are no established communities within the vicinity of the Project site.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

As previously mentioned in Section 4.10.1 Environmental Setting, the project site is designated Public Facility/Institutional (P) and Mountain Residential (R-M) in the County of Santa Cruz General Plan (Santa Cruz County 2013b). The Proposed Project would include updating an existing facility and construction of a modern auto shop. As mentioned previously in item a), the Proposed Project would be located completely within BLCC property and would support the current use of the Ben Lomond Training Center; therefore, it would be consistent with the Public Facility/Institutional (P) and Mountain Residential (R-M) land use designation (Santa Cruz County 2013b).

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

As previously described in the Biological Resources Section (IV.) Environmental Checklist and Discussion, item f), the project site is not located in an area subject to a habitat conservation plan or natural community conservation plan (CDFG 2011; CDFW 2013). No impact would occur.

4.11 Mineral Resources

4.11.1 Environmental Setting

The Proposed Project would reside in the western portion of Santa Cruz County.

Santa Cruz County is known to provide important mineral resources for industrial and construction purposes including bituminous rock, cement, clay, lime and limestone, sand, gravel, and crushed rock (Santa Cruz County 1994). There are eight quarries scattered throughout Santa Cruz County: Olive Springs Quarry, Hanson Quarry (Kaiser Quarry), Felton Quarry, Olympia Quarry (Lonestar Quarry), Bonny Doon Limestone and Shale Quarry, Wilder Quarry, Quail Hollow Quarry, and Cabrillo Sand and Gravel (Santa Cruz County 2012b).

In addition to these quarries, mineral resource lands have been classified by the State Geologist and designated by the State Mining and Geology Board as containing significant mineral resources (Santa Cruz County 1994). The State-mandated Surface Mining and Reclamation Act of 1975 (SMARA) requires the identification and classification of mineral resources in areas within the State

subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. MRZs are classified by the State Geologist by analyzing associated geologic and economic factors without regard to current land use or ownership. There are four general classifications (MRZ-1 through MRZ-4) based upon the State Geologist's determination of identified mineral resource significance. The major divisions between these four classifications (DOC 2013b) are:

- MRZ-1 "Areas of No Mineral Resource Significance," wherein geologic information indicates no significant mineral deposits are present;
- MRZ-2 "Areas of Identified Mineral Resource Significance," are areas that contain identified mineral resources;
- MRZ-3 "Areas of Undetermined Mineral Resource Significance," are areas of undetermined mineral resource significance; and
- MRZ-4 "Areas of Unknown Mineral Resource Significance," are areas of unknown mineral resource potential.

The Project site corresponds to an unsectioned portion of San Vicinte (Escarrilla) Land Grant within the "Big Basin" and "Davenport, California" 7.5-minute quadrangles (ECORP 2013b). Both Big Basin and Davenport quadrangles are classified as MRZ-2; however, no known mineral resources have been identified at the Project site (Santa Cruz County 2012b; CDMG 1987).

4.11.2 Mineral Resources (XI.) Environmental Checklist and Discussion

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

The Project site has not been mined nor are they zoned for this activity (Santa Cruz County 2013b). As previously mentioned above in Section 4.11.1, Environmental Setting, although the Project site is located in an area classified as MRZ-2, no known mineral resources have been identified. Therefore, no impact would occur.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

The Project site has not been designated in the Santa Cruz County General Plan as having locally important mineral resources, nor will the availability of any such resources be affected by the Proposed Project (Santa Cruz County 2013b). No impact would occur.

4.12 Noise

4.12.1 Environmental Setting

A Noise Assessment was completed for the Proposed Project by j.c. brennan & associates (j.c. brennan 2013; Appendix F). The Noise Assessment evaluated the Proposed Project's potential to produce noise related impacts and the information provided in the assessment is summarized below.

Noise Background

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dBA. The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment (j.c. brennan 2013).

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise (j.c. brennan 2013).

The day/night average level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. Table 5 lists several examples of maximum noise levels associated with common noise sources.

Table 5. Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: j.c. brennan 2013

Effects of Noise on People

The effects of noise on people can be placed in three categories:

1. Subjective effects of annoyance, nuisance, and dissatisfaction,
2. Interference with activities such as speech, sleep, and learning, and
3. Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;

- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise—including stationary mobile sources such as idling vehicles—attenuate (lessen) at a rate of approximately 6 dBA per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate (j.c. brennan 2013).

Santa Cruz County General Plan Noise Element

The Goals and Policies of the Santa Cruz County General Plan Noise Element establish criteria for new commercial or industrial development. The following are the relevant policies from the Noise Element:

- *Policy 6.9.4 Commercial and Industrial Development*:

  For all new commercial and industrial developments which would increase noise levels above the maximum allowable standards of the Land Use Compatibility, the best available control technologies will be used to minimize noise levels. In no case shall the noise levels exceed:

  - hourly Leg of 50 dBA during daytime (7:00 a.m. to 10:00 p.m.) and 45 dBA during nighttime (10:00 p.m. to 7:00 a.m.)
  - maximum level (Lmax) of 70 dBA during daytime and 65 dBA during nighttime, and
  - maximum level of impulsive noise of 65 dBA during daytime and 60 dBA during nighttime (Santa Cruz County 1994).
- *Policy 6.9.7 Construction Noise*:

  Require mitigation of construction noise as a condition of future project approval.

Existing Noise Environment

The existing noise environment in the vicinity of the Project site can be described as a rural area with relatively low ambient noise levels. The primary noise source in the vicinity of the proposed project is roadway traffic on Empire Grade Road, and activities associated with the BLCC. Those noise sources would include parking lot activities and general site maintenance. Typical hourly daytime and nighttime noise levels at the property lines are expected to be in the 45 dBA to 60 dBA range during the daytime hours and between 35 dBA and 45 dBA during the nighttime hours. Daytime hours are defined as 7:00 a.m. to 10:00 p.m., and the nighttime hours are defined as 10:00 p.m. to 7:00 a.m.

4.12.2 Noise (XII.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐

During the construction of the Proposed Project, noise from construction activities would add to the noise environment in the immediate vicinity around the Project site. Activities involved in construction would generate maximum noise levels, as indicated in Table 6, ranging from 78 to 85 dBA at a distance of 50 feet. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours (j.c. brennan 2013).

Table 6. Construction Equipment Noise

Type of Equipment	Maximum Level, dBA at 50 feet
Backhoe	78
Compactor	83
Compactor	80
Dozer	82
Dump Truck	76
Excavator	81
Paver	85
Grader	85
Roller	80
Trencher	81

Source: j.c. brennan 2013

Noise would also be generated during the construction of the Proposed Project by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

The Federal Highway Administration Construction Noise Model was used to determine the construction noise impacts for the Proposed Project. Based upon the results of the Construction Noise Model, the predicted overall noise levels are shown in Table 7 (j.c. brennan 2013).

Table 7. Predicted Construction Noise Levels (Worst-Case Period)

Construction Phase	Equipment List	Hourly Sound Levels @ Nearest Property Line Leq / Lmax (dBA)
(10 months)		
Months 1 to 6	• Excavators (1) • Back hoes (2) • Riding compactors (1)	55 dBA Leq / 59 dBA Lmax 55 dBA Leq / 56 dBA Lmax 55 dBA Leq / 62 dBA Lmax

Construction Phase	Equipment List	Hourly Sound Levels @ Nearest Property Line Leq / Lmax (dBA)
	• Grader (1) • Dump truck (1 per day)	59 dBA Leq / 63 dBA Lmax 51 dBA Leq / 55 dBA Lmax **Cumulative 62.5 dBA Leq - 63.4 dBA Lmax**

Source: j.c. brennan 2013

Construction activities and increased truck traffic in the area roadways during the Proposed Project would produce additional noise in the Project area. A significant project-generated noise source would be associated with truck traffic from the transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and construction at the Project site would occur during daytime hours. Construction would not violate noise standards established for nighttime hours.

Table 7 provides the predicted daytime noise levels based on the construction equipment. As stated above, the Santa Cruz County General Plan has maximum daytime noise standards for hourly Leg of 50 dBA, maximum level (Lmax) of 70 dBA, and maximum level of impulsive noise of 65 dBA. According to the noise levels predicted by the Federal Highway Administration Construction Noise Model (depicted in Table 7), construction activities during the Proposed Project would only exceed the hourly Leq standard. The existing noise environment at the Project site is expected to be in the 45 dBA to 60 dBA range during the daytime hours. The predicted hourly Leq for construction activities does not exceed the existing noise levels at the Project site. In addition, the Santa Cruz County General Plan Noise Element does have a policy (Policy 6.9.7) that requires mitigation of construction noise as a condition of future project approval. Therefore, implementation of Mitigation Measure N-1 would reduce noise levels to a less than significant level at the Project site as required under Policy 6.9.7. A less than significant impact would occur.

Mitigation Measure

N-1 Construction Noise Reduction

A. Construction shall be limited to the hours of 7:00 a.m. and 8:00 p.m. on weekdays.

B. Exceptions to the specified construction hours shall be allowed only for construction emergencies and when requested by the Department of Public Works and approved by the County Planning Department.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Vibration criteria developed by Caltrans indicate that the threshold for damage to structures ranges from 2 to 6 in/sec. One-half this minimum threshold or 1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is notes as 0.1 in/sec p.p.v. Table 8

describes the vibration levels for varying construction equipment that would be used during construction.

Table 8. Vibration Levels for Varying Construction Equipment

Type of Equipment	Peak Particle Velocity @ 25 feet	Approximate Velocity Level @ 25 feet
Large Bulldozer	0.089 (inches/second)	87 (VdB)
Loaded Trucks	0.076 (inches/second)	86 (VdB)
Small Bulldozer	0.003 (inches/second)	58 (VdB)
Auger/drill Rigs	0.089 (inches/second)	87 (VdB)
Jackhammer	0.035 (inches/second)	79 (VdB)
Vibratory Hammer	0.070 (inches/second)	85 (VdB)
Vibratory Compactor/roller	0.210 (inches/second)	94 (VdB)

Source: j.c. brennan 2013

Based upon the distances to the nearest residential receivers (greater than 25 feet), it is not expected that vibration due to construction would result in human annoyance or architectural damage (j.c. brennan 2013). A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Typical noise sources associated with the new auto shop would include pneumatic air wrenches, compressors, impact tools, grinders, and panel cutters. The noise levels associated with the proposed new auto shop were evaluated using noise measurement data collected at an existing auto shop in Grass Valley, California (Appendix F). Based on this data, maximum noise levels could be as high as 40 dBA Lmax, assuming that several pieces of equipment were operating at any given time and the cumulative hourly Leq is predicted to be 34 dBA at the nearest property line. The noise levels would comply with the stationary noise source standards outlined by the Santa Cruz County General Plan Noise Element (j.c. brennan 2013). In addition, a communications system, including external speakers, would be installed at the new auto shop. However, there are no nearby sensitive receptors that would be impacted by noise generated by use of the communications system.

Based upon trip generation levels and existing traffic counts, the existing traffic along Empire Grade Road is 1,094 trips per day (see 4.16 Transportation/Traffic). The new auto shop would increase overall traffic between 20 and 30 trips per day, and the overall increase in roadway traffic is less than 2 percent. The Federal Highway Administration (FHWA RD77-108) traffic noise prediction model was used to determine that there would not be an overall increase in traffic noise along the primary roadway (Empire Grade Road) and noise levels would comply with Santa Cruz County's land use compatibility standards (j.c. brennan 2013). Results of this model are described in Table 9.

Table 9. Predicted Empire Grade Road Traffic Noise Levels

Scenario	ADT	Traffic Noise Level @ 50 feet*	Distance to Traffic Noise Contours*	
			60 dBA Ldn	65 dBA Ldn
Existing Traffic	1,094	57 dBA Ldn	31 feet	15 feet
Existing Plus Project	1,124	57 dBA Ldn	32 feet	15 feet
* Distances to traffic noise levels and contours are relative to the roadway centerline.				

Source: j.c. brennan 2013

The overall increase in ambient noise levels resulting from operations and traffic noise would comply with the Santa Cruz County General Plan Noise Element standards and would not substantially increase ambient noise levels in the Project vicinity above the existing levels. Therefore, a less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐

Construction of the new auto shop would result in a temporary increase in ambient noise levels in the Project vicinity. However, as discussed under item a), construction would be temporary and only occur during daytime hours. Additionally, the implementation of Mitigation Measure N-1 would reduce impacts associated a temporary increase in ambient noise levels to be less than significant.

		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

As stated in 4.8 Hazards and Hazardous Materials item f), the Project site is not located within an airport land use plan within 2 miles of an airport. The Proposed Project would not expose people residing or working in the Project area to excessive noise levels. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

As stated in 4.8 Hazards and Hazardous Materials item e), the Project site is not within the vicinity of a private airstrip. The Proposed Project would not expose people residing or working in the Project area to excessive noise levels. No impact would occur.

4.13 Population and Housing

4.13.1 Environmental Setting

The Proposed Project is located approximately 5 miles northwest of the community of Ben Lomond at 13575 Empire Grade Road and is under the planning jurisdiction of Santa Cruz County. The 127-acre parcel is surrounded by Douglas-fir hardwood forest and there are no residences located adjacent to the property. The BLCC is located on the property, just southeast of the Project site. The BLCC is shared CDCR/CAL FIRE facility, which maintains barracks and campgrounds on-site for approximately 100 minimal security inmates, 5 CDCR staff, and 12 CAL FIRE staff (Gutierrez 2013). As described in 2.3 Operations and Maintenance, the new auto shop would include approximately eight or nine employees on-site for daily operations and could potentially increase to 15 to 20 employees on-site during an emergency situation.

Population and Housing (XIII.) Environmental Checklist and Discussion

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

The Proposed Project does not involve residential development. The Proposed Project would construct a new auto shop and demolish and replace an existing fuel storage facility adjacent to the BLCC, approximately 5 miles northwest of Ben Lomond. As described above, daily operations at the existing auto shop in the unincorporated community of Felton in Santa Cruz County include up to five employees on-site. These employees would be transferred to the new auto shop, as well as an additional four to five CAL FIRE employees (see 2.4 Operations and Maintenance for more detail). No new employees would be hired. Barracks are provided to CAL FIRE and CDCR staff on the BLCC property. The Proposed Project would be built in support of existing CAL FIRE facilities on-site. No new homes or extension of roads or other infrastructure that would induce substantial population are included as part of the Proposed Project. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

The Proposed Project is located on State property adjacent to the BLCC. All components of the Proposed Project would not extend beyond the property boundary. No displacement of existing housing units would occur as a result of implementation of the Proposed Project. No impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

As previously mentioned in item b), all components of the Proposed Project would not extend beyond the property boundary. The Proposed Project would not result in the displacement of people. No impact would occur.

4.14 Public Services

4.14.1 Environmental Setting

The Project site is located at the BLCC, approximately 5 miles northwest of the unincorporated community of Ben Lomond in Santa Cruz County. The BLCC is comprised of approximately 127 acres and is surrounded by Douglas-fir hardwood forest (see 1.3 Surrounding Land Uses/Environmental Setting).

Police Services

The Proposed Project would provide its own security through the presence of on-site personnel at all times. The Project site is located adjacent to the BLCC, which is a shared facility between CDCR and CAL FIRE. If needed, additional security services would be provided by CDCR through a mutual aid agreement and by the Santa Cruz County Sheriff's Department, San Lorenzo Valley Service Center located approximately 8 miles southeast at 6059 Highway 9 in Felton. The Sheriff's Department provides police protection services to County residents and property in the unincorporated areas of Santa Cruz County (Gutierrez 2013; Santa Cruz County 1994).

Fire Services

CAL FIRE provides fire protection services for unincorporated portions of Santa Cruz County. The Proposed Project would be located on property managed by CAL FIRE as a training facility. CAL FIRE would provide fire protection for the Proposed Project and surrounding adjacent facilities, including the BLCC through a mutual aid agreement between CDCR and CAL FIRE as described above. If needed, additional fire protection services would be provided by Ben Lomond Fire Protection District located approximately 5.2 miles southeast at 9430 Highway 9 in Ben Lomond (Gutierrez 2013; Santa Cruz County 1994).

Schools

There are no schools within 2 miles of the Project site (Google Earth 2013; Santa Cruz County 1994)

Parks

The closest public park to the Project site is Big Basin Redwoods State Park located approximately 4.10 miles northwest. No public parks are located in proximity to the Project site; however the BLCC, located south and adjacent to the Project site, maintains a baseball field, basketball court, and tennis courts for CAL FIRE/CDCR staff and inmates on-site (Gutierrez 2013).

Other Public Facilities

Other public facilities within the vicinity of the Project area include Ben Lomond Training Center used for CAL FIRE training purposes and the BLCC. No other public facilities are located in proximity to the Project area.

4.14.2 (XIV.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: • Fire Protection? • Police Protection? • Schools? • Parks? • Other Public Facilities?	☐	☐	☐	☒

Fire Protection

As a CAL FIRE operated facility, fire suppression equipment and staff would be located on-site and no additional fire protection services would be needed for the Proposed Project. Construction, operations, and maintenance of the Proposed Project would not impact the current fire protection services system in Santa Cruz County. No impact would occur.

Police Protection

As previously mentioned in the Section 4.13.1 Environmental Setting, The Proposed Project would provide its own security through the presence of on-site personnel at all times. The Project site is located adjacent to the BLCC, which is a shared facility between CDCR and CAL FIRE. If needed, additional security services would be provided by CDCR through a mutual aid agreement and by the Santa Cruz County Sheriff's Department, San Lorenzo Valley Service Center. No impact would occur.

Schools

The Proposed Project consists of a prototypical five-bay, drive-thru auto shop with a covered vehicle wash rack and water filtration system and the replacement of a fuel storage facility located on the BLCC campus that does not involve residential uses. The Proposed Project would not induce population growth and require an additional need for school expansion. No impact would occur.

Parks

As mentioned above, the Proposed Project does not involve residential uses and would not induce population growth. The Proposed Project would not displace an existing park and would not require the construction of additional park facilities. No impact would occur.

Other Public Facilities

As mentioned above, the Proposed Project does not involve residential uses and would not induce population growth. The Proposed Project would not increase use of existing public facilities in the area because it would not promote an increase in population. No impact would occur.

4.15 Recreation

4.15.1 Environmental Setting

As previously described in Section 4.13.1 Environmental Setting, the Project site is located 5 miles northwest of the community of Ben Lomond and is surrounded by Douglas-fir hardwood forest. The closest public park and recreational facility to the Project site is Big Basin Redwoods State Park located approximately 4.1 miles northwest. No public recreational facilities are located in proximity to the Project site; however, the BLCC, located south and adjacent to the Project site, maintains a baseball field, basketball court, and tennis courts for CAL FIRE/CDCR staff and inmates on-site (Gutierrez 2013).

4.15.2 Recreation (XV.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
shop and associated facilities would occur on ing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

The Proposed Project consists of updating an existing facility and construction of a modern auto shop. The Proposed Project would replace an existing facility located in the community of Felton and would not require hiring additional employees (see Population and Housing (XIII.) Environmental Checklist and Discussion). The Proposed Project does not involve residential uses and would not generate an increase in population; therefore, it would not increase the use of existing neighborhood or regional parks and recreational facilities. No impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

As stated above in item a), the Proposed Project consists of updating an existing facility and construction of a modern auto shop. The Proposed Project would not include recreational facilities, involve residential uses, or generate an increase in population. The Proposed Project occurs on

State-owned property, and is not located within an existing park or recreational facility. Therefore, the Proposed Project would not require the construction or expansion of recreational facilities. No impact would occur.

4.16 Transportation/Traffic

4.16.1 Environmental Setting

A Traffic Assessment was prepared for the Proposed Project by KD Anderson & Associates, Inc. (KD Anderson 2013b; Appendix G). The purpose of the assessment was to collect information on potential traffic impacts that could occur with the implementation of the Proposed Project.

Existing Roadway Network

The Proposed Project consists of a prototypical five-bay drive-thru auto shop with a covered vehicle wash rack and water filtration system and the replacement of a fuel storage facility located on the BLCC campus. The Proposed Project would be developed adjoining the BLCC, and both regional and direct access to the site is provided by Empire Grade Road. Empire Grade Road links the site with SR 1 in Santa Cruz and with SR 9 and SR 17 via Felton Empire Road. Other local roads to the north and east can be used to reach the site, including Jamison Creek Road, which links the area with Big Basin Highway (KD Anderson 2013b).

Empire Grade Road is a two-lane rural Collector highway that originates at the Santa Cruz city limits north of SR 1 and continues north for roughly 15 miles along terrain that would be classified as rolling to mountainous. The most recent traffic volume information available from Santa Cruz County Council of Governments (SC) suggests that Empire Grade Road carries 1,094 vehicles per day (KD Anderson 2013b).

Jamison Creek Road is a two-lane rural road that originates at an intersection on Empire Grade Road roughly 1.5 miles north of the project site and extends east for 2 miles to an intersection on SR 236 (Big Basin Highway). The alignment of Jamison Creek Road is mountainous with numerous tight horizontal curves and narrow pavement sections (KD Anderson 2013b).

Traffic Impact Analysis Methodology

Quantitative Level of Service (LOS) analysis was performed for study area roadway segments based on the methodologies contained in the *2010 Highway Capacity Manual* (2010 HCM) published by the Transportation Research Board (KD Anderson 2013b). LOS analysis is used to identify the relative delay experienced by motorists traveling on two lane rural highways. A grading scale of LOS “A” to LOS “F” is used to describe the quality of traffic flow, with LOS A representing free-flowing conditions along facilities with adequate passing opportunities and LOS F representing conditions where travel speeds are constrained by factors such as truck traffic, limited passing opportunities and roadway alignment. For this analysis the *Generalized Daily Service Volumes for Two-Lane Highways* shown in 2010 HCM Exhibit 15-30 have been employed (KD Anderson 2013b).

This analysis addresses the capacity and LOS on Empire Grade Road in the area from the Project south towards the City of Santa Cruz.

Existing Traffic Operations

The daily traffic volume on Empire Grade Road is reported to be 1,094 vehicles per day in the area south of the Project site, and roughly 10 percent of that volume would be expected during the highest volume hour (i.e., 110 vph). Based on the roadway width (i.e., 11- to 12-foot wide travel lanes), width of paved shoulders (1 to 3 feet), limited passing opportunities (100 percent no passing), and truck percentage (2 to 4 percent) the roadway would operate at LOS B during the peak traffic hour.

Left Turn Lane Channelization

The need for a left turn lane at the new access has been considered based on guidelines published by the American Association of State Highway and Transportation Officials (AASHTO) in *Policy on Geometric Design of Highways and Streets (2004)* (KD Anderson 2013b). In the AASHTO policy document, Exhibit 9-75 introduces the combination of opposing and advancing traffic volumes and turning traffic that would justify a left turn lane based on design speed. In this case, the volume of traffic turning left falls far below the level justifying a left turn lane, and a turn lane is not recommended.

Regulatory Background

The County of Santa Cruz General Plan includes policies that are applicable to circulation and transportation. Policy 3.12.1 Level of Service (LOS) Policy notes that LOS C should be considered the objective, but LOS D is the minimum acceptable where costs, right-of-way requirements or environmental impacts to maintain LOS under policy are excessive capacity enhancement may be considered infeasible. Proposed development projects that would cause LOS on an uninterrupted roadway segment to fall below D during the weekday peak hour will be required to mitigate their traffic impacts. Proposed projects that would add traffic on a segment already at LOS E or F shall also be required to mitigate any traffic volume resulting in a 1% increase in the volume / capacity ratio (KD Anderson 2013b).

4.16.2 Transportation/Traffic (XVI.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

As described above in Section 4.15.1 Environmental Setting, the Proposed Project would be developed adjoining the BLCC, and both regional and direct access to the site is provided by Empire Grade Road. The daily traffic volume on Empire Grade Road is reported to be 1,094 vehicles per day in the area south of the Project site, and roughly 10 percent of that volume would be expected during the highest volume hour. This results in an LOS B during peak traffic hour.

Impacts of the Proposed Project have been assessed based on roadway LOS and safety at the new access driveway. The Traffic Assessment results indicate that the Proposed Project would generate short-term construction-related vehicle trips, approximately 15 to 20 trips to Empire Grade Road during typical commute hours. While this may represent a 13 to 18 percent increase from the current volume (i.e., total 125 to 130 vph), the resulting daily traffic volume would still be indicative of LOS B conditions on this two-lane rural road based on HCM 2010 exhibit 15-30 (KD Anderson 2013b).

The Proposed Project is expected to generate 16 or 17 long-term operational vehicle trips per day with addition of eight or nine employees working on-site. As described previously in Section 2.4 Operations and Maintenance, in the case of an emergency situation the facility would operate 24 hours per day and the number of employees would increase to 15 to 20 on-site. On average, there is one emergency situation per year that would require continuous operation of the auto shop facility for 24 hours a day for the duration of approximately one week. Although there will be an overall increase in the daily traffic volume caused by the long-term operation and maintenance vehicle trips generated by CAL FIRE employees, this would not result in a change to Empire Grade Road's current LOS B conditions, even during an emergency situation based on HCM 2010 exhibit 15-30 (KD Anderson 2013b).

The Proposed Project would not result in any changes to the transportation system and would not impede any transportation improvements or control measures. Implementation of the Proposed Project would not impact Empire Grade Road's current LOS B conditions, and therefore would not conflict with the County of Santa Cruz Policy 3.12.1 Level of Service (LOS). A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐

See discussion for item a). The Proposed Project would not generate enough vehicle trips per day during construction or operations and maintenance to alter Empire Grade Road's existing LOS B conditions. Therefore, the Proposed Project would not affect LOS standards and travel demand measures for designated roads or highways in the project area. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

As previously mentioned in the Hazards and Hazardous Materials (VIII.) Environmental Checklist and Discussion, item e), The Project site is not located within an airport land use plan and there are no

airports located within 2 miles of the Project site. The closest airports are the Bonny Doon Village Airport located approximately 4.8 miles south of the Project site and the Las Trancas Airport located approximately 6.3 miles southwest of the Project site (Google Earth 2013; TollFreeAirline.com 2013). As previously stated in item a), traffic generated by the construction of the Proposed Project would be short-term, construction-related vehicle trips. The Proposed Project is expected to generate 16 to 17 long-term operational vehicle trips per day with the addition of eight or nine employees working on-site. Although there will be an overall increase in the daily traffic volume, long-term vehicle trips generated by CAL FIRE employees, this would not result in a change to Empire Grade Road's current LOS B conditions, even during an emergency situation as specified in HCM 2010 exhibit 15-30 (KD Anderson 2013b). No changes to air traffic patterns would occur. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐

The adequacy of the access driveway for the Proposed Project has been evaluated within the context of sight distance and the need for ancillary improvements to handle the vehicles using this access. Sight distance was observed in the field and compared to applicable minimum standards identified in the Caltrans Highway Design Manual (HDM) (KD Anderson 2013b). The speed limit on Empire Grade Road is 55 mph, and at that speed the minimum safe stopping sight distance is 500 feet (KD Anderson 2013b). While it is clear from field review that the sight distance looking south from the new driveway will satisfy that standard, it is not possible to establish the sight distance looking north due to the existing embankment located near the point of construction. Empire Grade Road curves roughly 600 feet from the new access, and there is a slight embankment in the general area north of the existing access.

Thus, while it is likely that adequate sight distance can be developed, it is not possible to confirm this availability with existing information. When road improvement plans are completed and the exact nature of finished elevations is determined, then sight distance along Empire Grade Road can be determined and confirmed by the Santa Cruz County Department of Public Works. Mitigation Measure T-1 shall be implemented to ensure that road improvement plans meet the minimum site distance requirement established by Santa Cruz County.

Mitigation Measure

T-1 Road Improvement Plans

Prior to construction of the Proposed Project, the road improvement plans must meet the minimum site distance requirement established by Santa Cruz County and shall be confirmed by Santa Cruz County Department of Public Works.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Would the project result in inadequate emergency access?	☐	☐	☒	☐

As previously described in item d), the existing access driveway has constraints for turning movements for some vehicles that would be serviced at this facility; therefore, the current entryway would be realigned near the entrance off Empire Grade Road to accommodate larger vehicles. Construction of the realignment could temporarily impede transportation on Empire Grade Road and access to the Project site; however, the Project site can be accessed by an alternative route through the BLCC campus. The Proposed Project must comply with all applicable transportation standards established by the county congestion management agency for designated roads or highways as described in item a). Therefore, a less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

The Proposed Project would not conflict with public transportation programs, plans, or policies. As previously described in item a), traffic could increase during short-term construction-related activities and operation and maintenance of the Proposed Project. Although there will be an overall increase in the daily traffic volume, this would not result in a change to Empire Grade Road's current LOS B conditions, even during an emergency situation based on HCM 2010 exhibit 15-30 (KD Anderson 2013b). A less than significant impact would occur.

4.17 Utilities and Service Systems

4.17.1 Environmental Setting

The Proposed Project is located approximately 5 miles northwest of the community of Ben Lomond at 13575 Empire Grade Road.

Water Service

The BLCC has a water treatment system that provides water service for the BLCC. The water treatment system is located next to the water storage tanks (labeled in *Figure 2. Project Location*). The water treatment system has a capacity of 150,000 gallons per day. The water originates from two on-site wells and is chemically treated with chlorine and a minimal amount of phosphate at the treatment plant. The BLCC uses approximately 10,000 to 20,000 gallons per day (Namba 2014).

Wastewater

The Project site is within County Service Area (CSA) 12, which provides funding for septic management services in unincorporated areas of Santa Cruz County that are not served by sewer systems. CSA 12 is served by individual septic systems for wastewater disposal (LAFCO 2005). Septic systems are considered Onsite Wastewater Treatment Systems (OWTS) by the SWRCB. OWTS are defined as individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal (SWRCB 2012a). Because The BLCC has an existing OWTS, the OWTS would be classified under Tier 0 Existing Facilities by the SWCRB. An Existing OWTS is described as properly functioning and does not meet the conditions of a failing system or otherwise require corrective action (SWRCB 2012a). According to the SWRCB, the

Project site has no nitrogen-compound impaired waters or pathogen-compound impaired waters within 2,000 feet (SWRCB 2012b).

The BLCC has a Grade 3 wastewater treatment plant on-site located approximately 450 feet southwest of the Project site. The OWTS has the capacity for 15,000 gallons per day and the BLCC disposes of approximately 10,000 to 12,000 gallons of wastewater per day. The wastewater treatment plant separates the solids from the liquids and uses no chemical or sterilizing treatment. The solids are placed into two 80 foot by 400 foot drying beds, located to the south and adjacent to the OWTS building, and left to dry in-situ. The liquids are dispensed into a leach field north and adjacent to the drying beds. (Namba 2014)

Solid Waste

Solid waste (garbage, recyclable materials, and yard trimmings) collection service for unincorporated areas of Santa Cruz County are provided by GreenWaste Recovery. Recyclable materials are collected and brought to the GreenWaste Material Recovery Facility (MRF) in San Jose for processing. All yard trimmings are brought directly to the Buena Vista Landfill. Garbage in the northern part of Santa Cruz County is first brought to the Ben Lomond Transfer Station for consolidation before it is transported to the Buena Vista Landfill. Garbage collected from other unincorporated areas is brought directly to the Buena Vista Landfill (GreenWaste 2013).

The Buena Vista Landfill is located at 1231 Buena Vista Drive in Watsonville, California. The Buena Vista Landfill is a 62-acre class III landfill used for solid waste disposal. As of 2006, the landfill had capacity to provide service until 2021 (Santa Cruz County 2006). Currently, 350 tons of solid waste per day is delivered to the Buena Vista Landfill. The Ben Lomond Transfer Station located at 9835 Newell Creek Road in Ben Lomond also accepts solid waste. The Ben Lomond Transfer Station accepts on average 100 tons of solid waste per day. Construction and demolition waste are accepted at the Buena Vista Landfill and the Ben Lomond Transfer Station (County of Santa Cruz, Department of Public Works 2011).

4.17.2 Utilities and Service Systems (XVII.) Environmental Checklist and Discussion

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	☐	☐	☐	☒

The BLCC maintains an OWTS for wastewater treatment and all wastewater is treated on-site. The new auto shop and associated facilities would not require the installation of a new OWTS. Wastewater generated by the new auto shop and associated facilities would include wastewater from two bathrooms, a kitchen, eyewash and emergency shower, a mop sink, a hand wash sink, and the vehicle wash rack. The vehicle wash rack would have a water recycling system, water clarifier, and power washer, and the water recycling system would periodically release wastewater to the OWTS. The OWTS currently has sufficient capacity and there would be no capacity issues associated with the additional wastewater generated by the new auto shop and associated facilities (CAL FIRE 2013). The Grade 3 OWTS is in compliance with both Santa Cruz Department of Health and State of California standards. (Namba 2014) The Proposed Project would comply with all local and state policies regarding OWTS operation and maintenance. No impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

The Proposed Project would connect to the existing water service at the inmate visitor's center and the sewage system would connect to the existing line serving the BLCC, west of the Project site and east of the sewage treatment facility. The new auto shop is expected to use approximately 2,000 gallons of water per day. And the new auto shop would dispose of 2,000 gallons of wastewater per day (Namba 2014). As discussed the current OWTS and water treatment plant both have sufficient capacity to service the additional water and wastewater demand generated by the new auto shop and associated facilities (CAL FIRE 2013). The increase in needed water service and wastewater treatment service would not exceed the existing facilities capacities and would not result in the need for new water or wastewater treatment facilities. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

The Proposed Project includes the installation of a permanent drainage system with erosion and sedimentation control features. As part of auto shop maintenance, the soil erosion features of the drainage system would be monitored for standing water and debris removal, which would help prevent malfunction of the drainage system. As described in 4.9 Hydrology and Water Quality item a), a SWPPP would be prepared listing BMPs to prevent construction pollutants and products from violating water quality standard or waste discharge requirements. Implementation of BMPs during construction of the new stormwater drainage system would reduce impacts to a less than significant level. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

The BLCC has existing water connections on-site, and trenching would occur to connect the proposed facilities to underground utilities, including water service. Construction activities would require approximately 5,000 gallons of water per day to be pumped from a hydrant on-site. The new auto shop would require water service for operations, two bathrooms, a kitchen, eyewash and emergency shower, a mop sink, a hand wash sink, fire sprinklers throughout the entire building and the vehicle wash rack. Additionally, a fire suppression system would be installed with a separate water tank on-site and the test pit would require a wharf hydrant to fill the pit for use. As stated in

item b) the current water service has sufficient capacity to serve the additional water needs of the Project (CAL FIRE 2013). A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

As described in item b), the BLCC has an OWTS. The system has sufficient capacity to serve the BLCC, the new auto shop and associated facilities and increased flows from the project would not exceed the system capacity (CAL FIRE 2013). A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

Construction waste associated with the new auto shop would be disposed of at the Ben Lomond Transfer Station and brought to the Buena Vista Landfill or brought to the Buena Vista Landfill directly. As described in 4.17.1 Environmental Setting, the Buena Vista Landfill has capacity to serve Santa Cruz County until 2021 and construction and demolition waste are accepted at both locations (Santa Cruz County 2006). A temporary increase in waste would occur during construction-related activities and is not expected to affect the permitted capacity of the Buena Vista Landfill. The new auto shop is replacing an existing facility, and solid waste produced from operations and maintenance would be equivalent to the amount currently produced at the existing auto shop. Therefore, the new auto shop would not result in a new long-term source of solid waste production that would affect the permitted capacity of the Buena Vista Landfill. A less than significant impact would occur.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g)	Would the project comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Waste generated by the Proposed Project would comply with statues and regulations related to solid waste. Please see 4.8 Hazardous and Hazardous Materials about disposal of hazardous waste. No impact would occur.

4.18 Mandatory Findings of Significance

4.18.1 Mandatory Findings of Significance (XVIII.) Environmental Checklist and Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

With mitigation measures described in this Initial Study, the Proposed Project would not have a significant impact on fish and wildlife species or their habitat or eliminate important examples of major periods of California history or prehistory.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐

A search of the CEQAnet Database and consultation with the County of Santa Cruz Planning Department was completed to compile a list of current and proposed projects that are located in the vicinity of the Project area within a 10-mile radius of the Project site (CEQAnet 2013; Hart 2013). Current and proposed projects are summarized in Table 10.

Table 10. Current and Proposed Projects in the Project Area

Project Name	Type of Project	Project Size	Location
170 Belvedere Terrace	Administrative Use Permit for residential home	2,704 square feet	City of Santa Cruz, Sana Cruz County Located at 170 Belvedere Terrace
Operation of Pasatiempo Well 5A	San Lorenzo Valley Water District Well Replacement	N/A	Santa Cruz County Located at Pasatiempo Well 5
Countywide Stormwater Low Impact Development and Best Management Practices	Low Impact Development (LID) BMP implementation effort for stormwater volumes	N/A	Cities of Scotts Valley, Santa Cruz, Soquel and Live Oak, Santa Cruz County
Water Street Bridge Debris Removal Project	Removal of material within San Lorenzo River	1,800 square feet	City of Santa Cruz, Santa Cruz County Located at the Water Street Bridge in the San Lorenzo River

Project Name	Type of Project	Project Size	Location
Granite Rock Wilder Quarry Expansion Project	Quarry expansion	2.8 acres	City of Santa Cruz, Santa Cruz County Located at the Granite Rock Wilder Quarry
Campground Sewer Manholes Replacement	Manhole replacement	10 manholes	Santa Cruz County Located at Henry Cowell Redwood State Park
Big Basin Water Company NTMP-Crossing S30	Installation of a flatcar bridge	N/A	Santa Cruz County, Located at the Big Basin State Park within the Non-industrial Timber Management Plan
Master Permit for Environment Enhancement Projects	Stream restoration activities on Fall Creek	N/A	Santa Cruz County Located along Fall Creek
Juvenile Hall Gym	Recreational facility	6,880 square feet	Unincorporated community of Felton, Santa Cruz County Located at Santa Cruz County Juvenile Hall
Fritch Creek Road Bridge Replacement	Bridge Replacement	40-foot by 18-foot bridge	Unincorporated community of Ben Lomond, Santa Cruz County Located over Love Creek on Fritch Creek Road
MROSD Integrated Pest Management Project	Midpeninsula Regional Open Space District (MROSD) Integrated Pest Management (IPM) Program	Countywide	Santa Cruz County
Highway Maintenance Sediment Removal	Roadway maintenance	N/A	City of Santa Cruz, Santa Cruz County
Arana Gulch Master Plan	Multi-use bicycle and pedestrian bridges in riparian zones	N/A	City of Santa Cruz, Santa Cruz County Located over Hagemenn Gulch ad Arana Gulch Creek
Los Altos Rod and Gun Sediment Basin Routine Maintenance	Debris and sediment removal behind instream weirs	20 feet by 10 feet in 1-foot deep stream	Santa Cruz County Located at the Los Altos Rod and Fun Club
Nearly Lagoon Storm Drain Improvement	Storm drain culvert upgrades	48-inch storm drain culverts	City of Santa Cruz, Santa Cruz County Located underneath the SCCRTC branch Rail Line
La Bahia Hotel	Conversion of apartment complex to hotel	165 room hotel	City of Santa Cruz, Santa Cruz County Located at 215 Beach Street
Infill Apartments Repairs	Apartment Repairs	17 buildings	Santa Cruz County Located at the University of California, Santa Cruz
Telecommunication Infrastructure Improvements Phase A	Upgrades to interior communications infrastructure	28 buildings	Santa Cruz County Located at the University of California, Santa Cruz
DeLaveaga Park Homes	Bank stabilization structure and stormwater runoff structure	1.79 acre parcel	City of Santa Cruz, Santa Cruz County Located adjacent o Arana Gulch Creek
Widen Shoulder and Improve Drainage; EA 05-1F000: P1 0513000031	Replacement of drainage piping	300-foot section	City of Scotts Valley, Santa Cruz County
Bridge Deck Maintenance: EA 05-1C910: P1 0513000011	Routine maintenance on 13 bridges	13 bridges	Monterey and Santa Cruz Counties
Water Pipeline Extension	Water pipeline extension	N/A	Santa Cruz County Located within Big Basin State Park

Based on the list of current and proposed projects above, it is unlikely that incremental effects of the Proposed Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

None of the current and proposed projects are located within the vicinity of the Proposed Project. Environmental factors that have been identified as potentially significant including biological resources, cultural resources, and hazards and hazardous materials, are limited to the Project site and would not contribute to cumulative effects. Although noise and traffic has been identified as potentially significant, noise and traffic generated from the Proposed Project are short-term in nature and limited to the duration of construction-related activities. Noise and traffic would not contribute to cumulative impacts.

Other environmental factors that have a potential to contribute to cumulative effects are air quality and greenhouse gases. As discussed in 4.3 Air Quality, construction-related impacts would not exceed MBUAPCD significance thresholds and long-term operation impacts would not change the amount of operational emissions over current conditions because the Proposed Project represents a relocation of the existing facility within the air basin.

As discussed in 4.7 Greenhouse Gases, neither the MVUAPCD nor Santa Cruz County has established a quantified threshold for determining the significance of GHG emissions; therefore the BAAQMD *Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010* significance threshold was applied. The Proposed Project would solely generate construction-related emissions, which would be temporary and only occur once. The Proposed Project would not have an effect on long-term operational emissions.

Implementation of mitigation measures listed in this initial study would reduce potentially adverse impacts to a less than significant level.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	☐	☒	☐	☐

Direct and indirect impacts to human beings would be less than significant with the implementation of mitigation measures listed in this Initial Study.

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APPENDIX A

Air Quality/Climate Change Technical Report

AIR QUALITY STUDY

for the
Santa Cruz Auto Shop New Construction Project

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Project #2610-11

December 11, 2013

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EXECUTIVE SUMMARY

This *Executive Summary* is a brief overview of the analysis presented in this Air Quality Study. It is not intended to be a comprehensive description of the analysis. For more details, the reader is referred to the full description presented in the Air Quality Study.

The proposed project is the Santa Cruz Auto Shop New Construction Project. The project is proposed by the State of California Department of Forestry and Fire Protection (CAL FIRE). The project would involve construction of a new auto shop facility northwest of the Ben Lomond area in Santa Cruz County.

This Air Quality Study presents an evaluation of the construction-related and operational impacts of the proposed project on the air quality environment.

The Proposed Project would be located within the North Central Coast Air Basin (NCCAB). The project site is designated a state nonattainment area for ozone, and a federal unclassified/attainment area for ozone. The area is a state nonattainment area for inhalable particulate matter smaller than 10 microns in diameter (designated PM_{10}). The project site is in an attainment area for federal and state standards for fine particulate matter smaller than 2.5 microns in diameter ($PM_{2.5}$). The area is designated attainment or unclassified for carbon monoxide (CO).

Implementation of the Auto Shop New Construction Project would result in the generation of short-term construction-related air pollutant emissions. The project is considered to have a less-than-significant construction-related impact on PM_{10}. The project is considered to have a less-than-significant impact on naturally occurring asbestos (NOA). For architectural asbestos, compliance with existing regulations would reduce the impact to a less-than-significant level.

The project would not result in a change in the amount of long-term operational activity. Therefore, operation of the project is considered to have a less-than-significant long-term operational impact on air quality.

Screening-level analyses were performed to assess the project-related effect on CO concentrations. These analyses concluded that the project would not result in violations of the federal and state CO standards and, therefore, would have a less-than-significant impact on CO levels.

An assessment of the effects of the Proposed Project on global climate change and greenhouse gas (GHG) emissions was conducted. The project-related change in GHG emissions was

quantified. The Auto Shop New Construction Project is determined to have a less-than-significant impact on global climate change.

The consistency of the Auto Shop New Construction Project with the *Air Quality Management Plan* was assessed. The Proposed Project is considered to be consistent with the Plan, resulting in a less-than-significant impact.

SECTION 1
INTRODUCTION

This Air Quality Study has been prepared to assess the air quality impacts of the proposed Santa Cruz Auto Shop New Construction Project. The State of California Department of Forestry and Fire Protection (CAL FIRE) is the California Environmental Quality Act (CEQA) Lead Agency for an Initial Study (IS) of the Auto Shop New Construction Project. This study contains information that will be used by CAL FIRE in the preparation of the IS.

The purpose of this Air Quality Study is to provide documentation of the air quality resources in the project area, and an assessment of the impacts of the Proposed Project on the air quality environment.

This study assesses the localized air quality impacts of the Proposed Project, the impacts of the project on regional air quality, and construction-related impacts of the project.

Following this *Introduction* section, this Air Quality Study presents a description of:

- the Proposed Project,
- air quality standards and existing air quality conditions,
- short-term construction-related impacts,
- long-term operational impacts,
- local CO impacts,
- impacts on global climate change and GHG emissions, and
- consistency with the *Air Quality Management Plan*.

SECTION 2
PROJECT DESCRIPTION

The following is a description of the Santa Cruz Auto Shop New Construction Project.

2.1 SURROUNDING LAND USES AND ENVIRONMENTAL SETTING

The Proposed Project is located in Santa Cruz County, California (see **Figure 1**). The Proposed Project consists of the construction of a new auto shop and replacement of an existing fuel storage facility adjacent to the Ben Lomond Conservation Camp (BLCC).
The new auto shop would be located adjacent to the California Department of Corrections and Rehabilitation (CDCR) BLCC, located approximately five miles northwest of the unincorporated Town of Ben Lomond. The Town of Ben Lomond is located approximately three miles north of the Town of Felton in the San Lorenzo Valley in Santa Cruz County. The BLCC is located approximately two miles west of State Route (SR) 9, approximately 13 miles north of the City of Santa Cruz, and approximately 20 miles southwest of the City of San Jose.

The BLCC is located at 13575 Empire Grade Road, Santa Cruz County, California 95060 (see **Figure 2**). The BLCC facilities operated by CDCR are located south of the project site. The existing fuel storage facility to be replaced as part of the Proposed Project is located southeast of the proposed auto shop and adjacent to a large storage shed within the CDCR BLCC facilities.

2.2 PROJECT BACKGROUND

CAL FIRE is proposing to construct a new automotive repair shop and associated facilities and replace an existing fuel storage facility. The Proposed Project would consolidate facilities, improve capacity and useable space, provide a safer environment for employees and local residents, and bring this facility into compliance with state and federal regulations.

The new auto shop would be constructed at the BLCC and Training Facility, and also includes an upgrade of the existing fuel storage facility. The BLCC is operated by the CDCR and CAL FIRE. The BLCC is part of the CDCR Conservation Camp Program which provides cooperative agencies with an able-bodied, trained work force for fire suppression and response to other emergencies such as floods and earthquakes. The Proposed Project would provide auto body and mechanical vocational training to the inmates and consolidate related facilities and uses. The project site is currently undeveloped; however, between the 1950's and the 1990's, it was used as a plant nursery.

2.3 PROJECT CHARACTERISTICS

The following is a description of the characteristics of the Proposed Project.

The Proposed Project would be located southeast of the Ben Lomond Training Center and includes updating an existing facility and construction of a modern auto shop. The primary structure would be a proto-typical five-bay drive-thru auto shop with a covered vehicle wash rack and water filtration system.

Other facilities to be constructed as part of the Proposed Project include construction of an asphalt driveway and parking area for the Ben Lomond Training Center, pavement around the new auto shop (sidewalks and parking apron), a ten-foot high perimeter fence with two locking gates at the egress/ingress points, a generator building to house an emergency propane powered generator to serve the auto shop with a 1,000 gallon propane tank, footings and raceways for a new radio tower, and a fire engine water pump test pit.

The existing driveway has constraints for turning movements for some vehicles that would be serviced at this facility; therefore, the current entryway would be realigned near the entrance to accommodate larger vehicles (see **Figure 2**). The new Ben Lomond Training Center parking lot and fire engine water pump test pit would be constructed north of the existing access road and new ingress and egress locking gates would be installed along the south side of the existing access road. Pavement would surround the new auto shop and extend to the proposed six-foot chain-link perimeter fence. As part of the Proposed Project, a new radio tower, a generator building, and a water tank for the fire suppression system would be located between the new perimeter fence and the existing eight-foot chain-link fence on the northern boundary of the existing BLCC facilities.

This facility would be built to comply with the 2013 California Green Building Standards Code.

2.4 PROJECT TIMING

The Proposed Project duration, is anticipated to be 10 months; however an additional three months may be needed. **Table 1** describes the anticipated schedule, and presents estimates of construction equipment, employees, and vehicle trips.

The Proposed Project would take approximately 10 months, and include:

- Demolition and replacement of existing fuel storage facility.
- Construct new auto shop and associated facilities.

Table 1. Construction Schedule

Anticipated Construction Start Date: July 15th 2015			
	Equipment	**Number of Construction Employees**	**Number of Vehicle trips per day**
(10 months)			
Months 1 to 6	• Excavators (1) • Back hoes (2) • Riding compactors (1) • Hand held portable compactors (2) • Grader (1) • Dump truck (1 per day for 7 months) • Water truck (1) Approximately 5,000 gallons of water from hydrant on-site.	10-20	2 per worker (coming and going)
Months 6 to 8	• Paving machine • Roller	8-14	2 per worker (coming and going)
Months 8 to 10	• Landscape trencher	6-8	2 per worker (coming and going)
**Construction Schedule could be extended up to 3 months if needed.*			

Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Location_Vicinity\CEQA_Vicinity_v2.mxd (KO)-JSwager 3/5/2014

Map Date: 3/5/2014

Service Layer Credits: Sources: USGS, ESRI, TANA, AND

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2013-116 RESD San Mateo-Santa Cruz Auto Shop

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Map Date: 11/25/2013
Photo Source: NAIP 2012

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ENVIRONMENTAL CONSULTANTS

Figure 2. Project Location
Phase I - New Auto Shop Location
2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop

PROJECT LOCATION
PHASE I – NEW AUTO SHOP LOCATION

KD Anderson & Associates, Inc.
Transportation Engineers

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SECTION 3
AIR QUALITY STANDARDS AND EXISTING CONDITIONS

The following is a description of ambient air quality standards and existing air quality conditions in the Santa Cruz Auto Shop New Construction Project study area.

3.1 AIR POLLUTANTS AND AMBIENT STANDARDS

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) have established ambient air quality standards for common pollutants. These ambient air quality standards indicate levels of contaminants that represent safe levels, to avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The federal and state ambient air quality standards are presented in **Table 2**. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent, as is the case for ozone, PM_{10}, and $PM_{2.5}$.

There are three basic designation categories: nonattainment, attainment, and unclassified. A "nonattainment" designation indicates that the air quality violates an ambient air quality standard. Although a number of areas may be designated as nonattainment for a particular pollutant, the severity of the problem can vary greatly. To identify the severity of the problem and the extent of planning required, nonattainment areas are assigned a classification that is commensurate with the severity of their air quality problem (e.g., moderate, serious, severe). In contrast to nonattainment, an "attainment" designation indicates that the air quality does not violate the established standard. Finally, an "unclassified" designation indicates that there are insufficient data for determining attainment or nonattainment. EPA combines unclassified and attainment into one designation for ozone, CO, PM_{10} and $PM_{2.5}$.

3.2 POLLUTANTS OF CONCERN

Criteria pollutants that are of greatest concern for the Proposed Project are CO, ozone, and particulate matter. Ozone is a pollutant created in the atmosphere through the combination of two "precursors", reactive organic gases (ROG) and nitrogen oxides (NO_x), in the presence of sunlight.

In addition, this Air Quality Study addresses asbestos and the effects of GHG emissions on global climate change.

Table 2. Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM10)[8]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[8]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[9]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[11,12]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[13]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (6/4/13)**

Table 2. Ambient Air Quality Standards (Continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

9. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

10. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

11. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

12. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

13. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (6/4/13)**

3.2.1 Carbon Monoxide

State and federal CO standards have been set for both one-hour and eight-hour averaging times. The state one-hour standard is 20 parts per million (ppm) by volume, while the federal one-hour standard is 35 ppm. Both state and federal standards are 9 ppm for the eight-hour averaging period. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream.

Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

3.2.2 Ozone

Prior to 2005, both state and federal standards for ozone were set for a one-hour averaging time. The state ozone standard is 0.09 ppm, not to be exceeded. The federal one-hour standard was 0.12 ppm and was not to be exceeded more than three times in any three-year period. A federal eight-hour standard for ozone was issued in July 1997 by Executive Order of the President. The eight-hour ozone standard has been set at a concentration of 0.075 ppm ozone measured over eight hours.

As of June 15, 2005, the federal one-hour ozone standard was revoked. In setting the eight-hour ozone standard, EPA concluded that replacing the existing one-hour standard with an eight-hour standard was appropriate to provide adequate and more uniform protection of public health from both short-term (one to three hours) and prolonged (six to eight hours) exposures to ozone.

Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include ROG and NO_x, react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Once formed, ozone remains in the atmosphere for one or two days. It is then eliminated through chemical reaction with plants and by rainout and washout.

3.2.3 Particulate Matter

State and federal standards for particulate matter are based on micrograms per cubic meter ($\mu g/m^3$) for a 24-hour average and as an annual geometric mean.

PM_{10} is sometimes referred to as “inhalable particulate matter” or “respirable particulate matter”. The state standards for PM_{10} are 50 $\mu g/m^3$ 24-hour average, and 20 $\mu g/m^3$ annual geometric mean. The federal PM_{10} standard is a 24-hour average of 150 $\mu g/m^3$.

A federal standard for particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) was issued in July 1997 by Executive Order of the President. $PM_{2.5}$ is sometimes referred to as "fine particulate matter". The $PM_{2.5}$ standard has been set at a concentration of 15 $\mu g/m^3$ annually and 35 $\mu g/m^3$ daily. The federal standards for PM_{10} are being maintained so that relatively larger, courser particulate matter continues to be regulated.

The state $PM_{2.5}$ standard is an annual average of 12 $\mu g/m^3$.

PM_{10} and $PM_{2.5}$ can reach the lungs when inhaled, resulting in health concerns related to respiratory disease. Suspended particulate matter can also affect vision or contribute to eye irritation. PM_{10} can remain in the atmosphere for up to seven days before removal by gravitational settling, rainout and washout.

3.2.4 Asbestos

In addition to criteria pollutants, a pollutant of concern for the project is asbestos. Asbestos is a term used for several types of naturally occurring fibrous minerals. Naturally occurring asbestos (NOA) is found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California.

When rock containing asbestos is broken or crushed, asbestos fibers may be released and become airborne. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs). Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

In the past, asbestos was used as a fire retardant and insulation in some structures. As a result, demolition of older structures can result in the release and entrainment of asbestos fibers.

3.2.5 Greenhouse Gases

Relatively recently, global climate change, also known as global warming, has been recognized as an important environmental issue. Documented impacts of climate change include rising sea levels, glacier retreat, shortening of frost seasons, and increases in precipitation, among other events. Climate change is considered to be heavily influenced by the rising concentration of greenhouse gases (GHG), primarily atmospheric carbon dioxide (CO_2). Burning of fossil fuels, including oil, natural gas, gasoline and coal, is a major contributor to rising GHG levels.

3.3 AIR QUALITY MONITORING

The following tables present air quality monitoring data for four pollutants: ozone, CO, PM_{10}, and $PM_{2.5}$. **Table 3** presents monitoring data for ozone and CO. **Table 4** presents monitoring data for PM_{10} and $PM_{2.5}$. Data for the latest three-year period (2010 through 2012) are presented.

Table 3. Ozone and Carbon Monoxide Air Quality Monitoring Results

Pollutant Type, Station and Measurement	Air Quality Standard	Pollutant Concentration by Year 2010	2011	2012
Ozone at Santa Cruz Monitoring Station				
Highest 1-Hour Average (parts per million)	0.09	0.077	0.071	0.071
Second Highest 1-Hour Average (parts per million)	(State)	0.076	0.067	0.066
Highest 8-Hour Average (parts per million)	0.070	0.059	0.065	0.053
Second Highest 8-Hour Average (parts per million)	(State)	0.055	0.060	0.052
Ozone at Scotts Valley Monitoring Station				
Highest 1-Hour Average (parts per million)	0.09	- -	- -	0.076
Second Highest 1-Hour Average (parts per million)	(State)	- -	- -	0.073
Highest 8-Hour Average (parts per million)	0.070	- -	- -	0.072
Second Highest 8-Hour Average (parts per million)	(State)	- -	- -	0.064
Carbon Monoxide at Cupertino Monitoring Station				
Highest 8-Hour Average (parts per million)	9.0	0.93	0.95	0.73
Second Highest 8-Hour Average (parts per million)	(State)	0.93	0.95	0.71
Carbon Monoxide at Davenport Monitoring Station				
Highest 8-Hour Average (parts per million)	9.0	0.64	- -	- -
Second Highest 8-Hour Average (parts per million)	(State)	0.60	- -	- -

Source: California Air Resources Board website: http://www.arb.ca.gov/

Notes: Santa Cruz is the station closest to the project site with three years of ozone data for 2010-2012.
Scotts Valley is the station closest to the project site with ozone data in the period 2010-2012.
Cupertino is the station closest to the project site with three years of carbon monoxide data for 2010-2012.
Davenport is the station closest to the project site with carbon monoxide data in the period 2010-2012.
Dashes (" - - ") indicate insufficient data available to determine the value.

Table 4. Particulate Matter Air Quality Monitoring Results

Pollutant Type, Station and Measurement	Air Quality Standard	Pollutant Concentration by Year 2010	2011	2012
Inhalable Particulate Matter (PM_{10}) at Santa Cruz Monitoring Station				
Highest 24-Hour Average (micrograms/cubic meter)	50	31.0	22.0	- -
Second Highest 24-Hour Average (micrograms/cubic meter)	(State)	31.0	20.0	- -
Annual Average (micrograms/cubic meter)	20 (State)	14.1	5.3	- -
Fine Particulate Matter ($PM_{2.5}$) at Santa Cruz Monitoring Station				
Highest 24-Hour Average (micrograms/cubic meter)	35	32.8	17.2	13.8
Second Highest 24-Hour Average (micrograms/cubic meter)	(Federal)	15.7	17.1	12.5
Annual Average (micrograms/cubic meter)	12 (State)	6.5	6.5	5.8

Source: California Air Resources Board website: http://www.arb.ca.gov/

Note: Data are for monitoring station closest to the project site.
Dashes (" - - ") indicate insufficient data available to determine the value.

With the exception of CO, the data presented in these tables are for monitoring stations in Santa Cruz County. Because no CO monitoring data are available for stations in Santa Cruz County in 2011 and 2012, data for the nearest station (Cupertino) are shown.

3.4 ATTAINMENT DESIGNATIONS

The current air quality attainment designations for the Santa Cruz County are summarized in **Table 5**. As shown in **Table 5**, Santa Cruz County is designated nonattainment for the state ozone standard. The County is designated attainment/unclassified for the national ozone standard.

Santa Cruz County is designated nonattainment for the state PM_{10} standard, and designated attainment for the national PM_{10} standard. Santa Cruz County is designated either attainment or unclassified for the remaining national and state air quality standards.

3.5 EMISSIONS INVENTORY

Table 6 presents estimates of emissions generated in Santa Cruz County in 2008. These estimates are for the base year currently presented by ARB. The information presented in **Table 6** is divided into emission source categories.

The major source category that generates the largest amounts of ROG, CO, and NO_x emissions in Santa Cruz County in 2008 is On-Road Motor Vehicles.

The major source category that generates the largest amounts of PM_{10}, and $PM_{2.5}$ emissions in Santa Cruz County in 2008 is Miscellaneous Processes. For PM_{10}, the largest subcategory is Unpaved Road Dust. For $PM_{2.5}$, the largest subcategory is Residential Fuel Combustion.

Table 7 presents forecasts of emissions generated in Santa Cruz County in the year 2020. This forecast is the most distant future forecast available from the ARB.

The major source category that generates the largest amounts of ROG emissions in Santa Cruz County in 2020 is Solvent Evaporation. The largest subcategory is Consumer Products.

The major source category that generates the largest amounts of CO emissions in Santa Cruz County in 2020 is On-Road Motor Vehicles.

The major source category that generates the largest amounts of NO_x emissions in Santa Cruz County in 2020 is Other Mobile Sources. The largest subcategory is Ocean Going Vessels.

The major source category that generates the largest amounts of PM_{10}, and $PM_{2.5}$ emissions in Santa Cruz County in 2020 is Miscellaneous Processes. For PM_{10}, the largest subcategory is Unpaved Road Dust. For $PM_{2.5}$, the largest subcategory is Residential Fuel Combustion.

Table 5. Air Quality Attainment Status Designations for Santa Cruz County

Pollutant	State Standard	National Standard
Ozone	Nonattainment	Attainment/Unclassified
Inhalable Particulate Matter (PM_{10})	Nonattainment	Attainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment	Attainment/Unclassified
Carbon Monoxide	Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment/Unclassified

Source: Monterey Bay Unified Air Pollution Control District 2013

Table 6. Santa Cruz County Emissions Inventory for 2008

Emission Category	Reactive Organic Gases	Carbon Monoxide	Nitrogen Oxides	Inhalable Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Fuel Combustion					
Electric Utilities	0.01	0.07	0.07	0.00	0.00
Cogeneration	0.25	0.18	0.24	0.01	0.00
Manufacturing and Industrial	0.06	0.38	1.44	0.08	0.08
Food and Agricultural Processing	0.01	0.03	0.09	0.00	0.00
Service and Commercial	0.50	0.24	0.44	0.04	0.04
Other (Fuel Combustion)	0.02	0.15	0.13	0.01	0.00
Subtotal	**0.85**	**1.05**	**2.41**	**0.14**	**0.12**
Waste Disposal					
Landfills	0.60	0.16	0.01	- -	- -
Incinerators	0.00	0.01	0.00	0.00	0.00
Subtotal	**0.60**	**0.17**	**0.01**	**0.00**	**0.00**
Cleaning and Surface Coatings					
Laundering	0.04	- -	- -	- -	- -
Degreasing	0.66	- -	- -	- -	- -
Coatings and Related Process Solvents	0.46	- -	- -	- -	- -
Printing	0.16	- -	- -	- -	- -
Adhesives and Sealants	0.30	- -	- -	- -	- -
Subtotal	**1.62**	**- -**	**- -**	**- -**	**- -**
Petroleum Production and Marketing					
Petroleum Marketing	0.51	- -	- -	- -	- -
Other (Petroleum Production and Marketing)	- -	- -	- -	- -	- -
Subtotal	**0.51**	**- -**	**- -**	**- -**	**- -**
Industrial Processes					
Chemical	0.00	- -	- -	0.00	0.00
Food and Agriculture	0.01	- -	- -	- -	- -
Mineral Processes	0.04	13.65	2.66	1.07	0.50
Wood and Paper	- -	- -	- -	0.04	0.02
Other (Industrial Processes)	0.00	- -	- -	0.00	0.00
Subtotal	**0.05**	**13.65**	**2.66**	**1.11**	**0.52**
Solvent Evaporation					
Consumer Products	1.71	- -	- -	- -	- -
Architectural Coatings & Related Process Solvents	0.77	- -	- -	- -	- -
Pesticides/Fertilizers	1.23	- -	- -	- -	- -
Asphalt Paving / Roofing	0.61	- -	- -	- -	- -
Subtotal	**4.32**	**- -**	**- -**	**- -**	**- -**

Table 6. Santa Cruz County Emissions Inventory for 2008 (Continued)

Emission Category		Reactive Organic Gases	Carbon Monoxide	Nitrogen Oxides	Inhalable Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Miscellaneous Processes						
Residential Fuel Combustion		1.02	15.48	0.75	2.25	2.17
Farming Operations		0.14	- -	- -	0.39	0.06
Construction and Demolition		- -	- -	- -	1.92	0.19
Paved Road Dust		- -	- -	- -	3.02	0.45
Unpaved Road Dust		- -	- -	- -	4.57	0.46
Fugitive Windblown Dust		- -	- -	- -	0.08	0.01
Fires		0.00	0.05	0.00	0.01	0.01
Managed Burning and Disposal		0.01	0.20	0.01	0.02	0.02
Cooking		0.05	- -	- -	0.14	0.09
	Subtotal	**1.22**	**15.73**	**0.76**	**12.40**	**3.46**
On-Road Motor Vehicles						
Light Duty Vehicles		4.99	47.51	4.76	0.24	0.15
Medium Duty Trucks		0.33	3.93	0.58	0.03	0.02
Heavy Duty Trucks		0.67	5.71	2.62	0.06	0.05
Motorcycles		0.46	3.29	0.12	0.00	0.00
Buses		0.04	0.48	0.54	0.01	0.01
Motor Homes		0.03	0.84	0.10	0.00	0.00
	Subtotal	**6.52**	**61.76**	**8.72**	**0.34**	**0.23**
Other Mobile Sources						
Aircraft		0.05	1.77	0.01	0.00	0.00
Trains		0.00	0.00	0.02	0.00	0.00
Ocean Going Vessels		0.21	0.42	5.48	0.44	0.43
Commercial Harbor Craft		0.11	0.45	1.46	0.06	0.06
Recreational Boats		0.28	1.03	0.05	0.01	0.01
Off-Road Recreational Vehicles		0.12	1.78	0.03	0.00	0.00
Off-Road Equipment		1.32	11.34	3.02	0.20	0.18
Farm Equipment		0.20	1.12	0.98	0.06	0.05
Fuel Storage and Handling		0.17	- -	- -	- -	- -
	Subtotal	**2.46**	**17.91**	**11.05**	**0.77**	**0.73**
	COUNTY TOTAL	**18.16**	**110.25**	**25.59**	**14.79**	**5.08**

Notes: 2008 is the latest inventory available from the California Air Resources Board (CARB).
All values are in tons per day. Dashes ("- -") indicate no data are available.
The sum of values may not equal total shown due to rounding.
Source: CARB website: http://arb.ca.gov

Table 7. Santa Cruz County Emissions Inventory for 2020

Emission Category	Reactive Organic Gases	Carbon Monoxide	Nitrogen Oxides	Inhalable Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Fuel Combustion					
Electric Utilities	0.01	0.08	0.08	0.00	0.00
Cogeneration	0.27	0.18	0.25	0.01	0.00
Manufacturing and Industrial	0.07	0.44	1.78	0.09	0.09
Food and Agricultural Processing	0.00	0.02	0.03	0.00	0.00
Service and Commercial	0.58	0.29	0.47	0.04	0.04
Other (Fuel Combustion)	0.02	0.17	0.10	0.00	0.00
Subtotal	**0.95**	**1.18**	**2.71**	**0.14**	**0.13**
Waste Disposal					
Landfills	0.73	0.21	0.02	- -	- -
Incinerators	0.00	0.01	0.00	0.00	0.00
Subtotal	**0.73**	**0.22**	**0.02**	**0.00**	**0.00**
Cleaning and Surface Coatings					
Laundering	0.04	- -	- -	- -	- -
Degreasing	0.74	- -	- -	- -	- -
Coatings and Related Process Solvents	0.60	- -	- -	- -	- -
Printing	0.20	- -	- -	- -	- -
Adhesives and Sealants	0.24	- -	- -	- -	- -
Subtotal	**1.82**	**- -**	**- -**	**- -**	**- -**
Petroleum Production and Marketing					
Petroleum Marketing	0.60	- -	- -	- -	- -
Other (Petroleum Production and Marketing)	- -	- -	- -	- -	- -
Subtotal	**0.60**	**- -**	**- -**	**- -**	**- -**
Industrial Processes					
Chemical	0.00	- -	- -	0.00	0.00
Food and Agriculture	0.01	- -	- -	- -	- -
Mineral Processes	0.05	16.75	3.28	1.28	0.59
Wood and Paper	- -	- -	- -	0.04	0.02
Other (Industrial Processes)	0.00	- -	- -	0.00	0.00
Subtotal	**0.06**	**16.75**	**3.28**	**1.32**	**0.61**
Solvent Evaporation					
Consumer Products	1.83	- -	- -	- -	- -
Architectural Coatings & Related Process Solvents	0.83	- -	- -	- -	- -
Pesticides/Fertilizers	1.08	- -	- -	- -	- -
Asphalt Paving / Roofing	0.65	- -	- -	- -	- -
Subtotal	**4.39**	**- -**	**- -**	**- -**	**- -**

Table 7. Santa Cruz County Emissions Inventory for 2020 (Continued)

Emission Category		Reactive Organic Gases	Carbon Monoxide	Nitrogen Oxides	Inhalable Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Miscellaneous Processes						
Residential Fuel Combustion		1.03	15.74	0.75	2.28	2.20
Farming Operations		0.14	- -	- -	0.39	0.06
Construction and Demolition		- -	- -	- -	2.09	0.21
Paved Road Dust		- -	- -	- -	3.61	0.54
Unpaved Road Dust		- -	- -	- -	4.74	0.47
Fugitive Windblown Dust		- -	- -	- -	0.08	0.01
Fires		0.00	0.06	0.00	0.01	0.01
Managed Burning and Disposal		0.01	0.21	0.01	0.02	0.02
Cooking		0.06	- -	- -	0.18	0.11
	Subtotal	**1.24**	**16.01**	**0.76**	**13.40**	**3.63**
On-Road Motor Vehicles						
Light Duty Vehicles		2.16	18.22	1.81	0.28	0.16
Medium Duty Trucks		0.22	2.17	0.28	0.03	0.02
Heavy Duty Trucks		0.26	1.90	1.07	0.03	0.03
Motorcycles		0.36	2.31	0.12	0.00	0.00
Buses		0.03	0.31	0.49	0.01	0.01
Motor Homes		0.01	0.11	0.04	0.00	0.00
	Subtotal	**3.04**	**25.02**	**3.81**	**0.35**	**0.22**
Other Mobile Sources						
Aircraft		0.05	1.77	0.01	0.00	0.00
Trains		0.00	0.00	0.03	0.00	0.00
Ocean Going Vessels		0.34	0.70	8.97	0.72	0.71
Commercial Harbor Craft		0.08	0.51	0.72	0.02	0.02
Recreational Boats		0.28	1.10	0.05	0.02	0.02
Off-Road Recreational Vehicles		0.12	2.50	0.03	0.00	0.00
Off-Road Equipment		0.79	10.50	1.59	0.08	0.07
Farm Equipment		0.08	1.00	0.43	0.02	0.02
Fuel Storage and Handling		0.08	- -	- -	- -	- -
	Subtotal	**1.82**	**18.08**	**11.83**	**0.86**	**0.84**
	COUNTY TOTAL	**14.66**	**77.26**	**22.41**	**16.11**	**5.47**

Notes: 2020 is the furthest horizon year available from the California Air Resources Board (CARB).
All values are in tons per day. Dashes ("- -") indicate no data are available.
The sum of values may not equal total shown due to rounding.
Source: CARB website: http://arb.ca.gov

Table 8 presents estimates of GHG emissions generated in California during the years 2000 through 2008. The data are expressed as "million tonnes of CO_2 equivalent" per year. One tonne is sometimes referred to as a "metric ton", and is equal to 2,204.6 pounds.

While CO_2 is the most common component of GHG, several different compounds are components of overall GHG. The different compounds contribute to climate change with varying intensities. The term "CO_2 equivalent" refers to a weighted composite of these several compounds, expressed as the equivalent amount of CO_2.

As shown in **Table 8**, Transportation, Electric Power, and Industrial activities are the largest sources of GHG emissions in California.

Table 9 presents estimates of GHG emissions generated in California during the years 2008 through 2020. These data are also expressed as "million tonnes of CO_2 equivalent" per year.

Table 10 presents estimates of GHG emissions in Santa Cruz County. These data show 2005 and 2009 inventory years, and 2020 and 2035 forecast years. **Table 10** presents GHG emissions estimate disaggregated to four different sectors.

As shown in **Table 10**, GHG emissions from the Commercial / Industrial sector decrease substantially from 2005 to 2009 due to the closure of a cement plant in the Davenport area. Except for the Commercial / Industrial sector in 2005, the Transportation sector generates the largest amount of GHG emissions in Santa Cruz County.

Table 8. California Greenhouse Gas Inventory for 2000 - 2008

California Greenhouse Gas Inventory for 2000-2008
— by Category as Defined in the Scoping Plan
million tonnes of CO2 equivalent - (based upon IPCC Second Assessement Report's Global Warming Potentials)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Transportation	**171.13**	**173.71**	**180.36**	**178.03**	**181.71**	**184.32**	**184.11**	**183.84**	**174.99**
On Road	***159.40***	***161.69***	***168.40***	***166.17***	***169.22***	***170.82***	***170.49***	***170.79***	***163.30***
Passenger Vehicles	126.91	129.25	135.43	132.83	134.24	134.51	133.80	133.34	128.51
Heavy Duty Trucks	32.49	32.45	32.97	33.34	34.98	36.31	36.68	37.45	34.79
Ships & Commercial Boats	***3.77***	***3.56***	***3.87***	***4.04***	***4.06***	***4.36***	***4.45***	***4.38***	***4.32***
Aviation (Intrastate)	***2.68***	***2.50***	***2.66***	***2.59***	***2.64***	***2.70***	***2.68***	***2.96***	***2.42***
Rail	***1.86***	***1.87***	***2.48***	***2.41***	***2.89***	***3.32***	***3.50***	***3.15***	***2.52***
Unspecified	***3.41***	***4.08***	***2.94***	***2.81***	***2.90***	***3.11***	***3.00***	***2.56***	***2.44***
Electric Power	**103.92**	**120.62**	**106.49**	**109.89**	**119.96**	**110.98**	**107.66**	**111.10**	**116.35**
In-State Generation	***59.93***	***63.86***	***50.87***	***49.08***	***57.40***	***51.75***	***56.28***	***55.16***	***55.12***
Natural Gas	51.06	55.55	42.42	41.01	48.66	43.21	47.62	47.20	48.07
Other Fuels	8.87	8.31	8.45	8.07	8.74	8.54	8.67	7.96	7.05
Imported Electricity	***43.99***	***56.76***	***55.62***	***60.81***	***62.56***	***59.22***	***51.38***	***55.94***	***61.24***
Unspecified Imports	13.83	24.69	25.42	30.21	31.32	28.44	26.40	30.57	35.19
Specified Imports	30.16	32.07	30.19	30.60	31.24	30.78	24.98	25.37	26.05
Commercial and Residential	**42.93**	**41.02**	**43.79**	**41.38**	**42.54**	**40.79**	**41.47**	**41.83**	**43.13**
Residential Fuel Use	***30.13***	***28.62***	***29.35***	***28.31***	***29.34***	***28.08***	***28.46***	***28.61***	***28.45***
Natural Gas	28.52	27.34	28.03	26.59	27.30	25.89	26.52	26.65	26.10
Other Fuels	1.61	1.27	1.32	1.72	2.04	2.19	1.93	1.96	2.35
Commercial Fuel Use	***11.69***	***11.32***	***13.37***	***12.81***	***12.71***	***12.56***	***12.84***	***12.73***	***14.31***
Natural Gas	10.24	10.07	12.11	11.34	11.13	10.90	11.58	11.35	12.51
Other Fuels	1.45	1.25	1.26	1.46	1.59	1.66	1.26	1.38	1.80
Commercial Cogeneration Heat Output	***1.11***	***1.07***	***1.08***	***0.26***	***0.49***	***0.15***	***0.17***	***0.49***	***0.37***
Industrial	**97.27**	**94.70**	**96.73**	**96.14**	**90.87**	**90.72**	**90.47**	**93.82**	**92.66**
Refineries	***33.25***	***33.07***	***33.87***	***34.80***	***34.06***	***35.31***	***36.09***	***36.07***	***35.65***
General Fuel Use	***18.76***	***17.87***	***19.53***	***16.39***	***16.28***	***14.80***	***15.17***	***14.78***	***14.82***
Natural Gas	13.82	11.92	12.80	10.26	10.53	9.86	9.90	9.76	9.14
Other Fuels	4.94	5.94	6.73	6.13	5.76	4.93	5.27	5.02	5.69
Oil & Gas Extraction [1]	***18.41***	***18.45***	***17.37***	***19.51***	***19.31***	***18.01***	***16.48***	***16.52***	***17.04***
Fuel Use	17.72	17.62	16.64	18.78	18.94	17.66	15.72	15.75	16.27
Fugitive Emissions	0.69	0.83	0.73	0.74	0.37	0.35	0.77	0.77	0.78
Cement Plants	***9.41***	***9.51***	***9.61***	***9.72***	***9.82***	***9.92***	***9.75***	***9.17***	***8.61***
Clinker Production	5.43	5.52	5.60	5.68	5.77	5.85	5.80	5.55	5.31
Fuel Use	3.97	4.00	4.01	4.03	4.05	4.07	3.95	3.62	3.30
Cogeneration Heat Output	***11.96***	***10.69***	***10.84***	***10.79***	***6.19***	***6.91***	***6.90***	***11.22***	***10.47***
Other Process Emissions	***5.49***	***5.11***	***5.50***	***4.94***	***5.22***	***5.78***	***6.08***	***6.07***	***6.06***
Recycling and Waste	**6.20**	**6.28**	**6.21**	**6.29**	**6.23**	**6.52**	**6.59**	**6.53**	**6.71**
Landfills [2]	***6.20***	***6.28***	***6.21***	***6.29***	***6.23***	***6.52***	***6.59***	***6.53***	***6.71***

Last Updated: Wednesday, May 12, 2010

Table 8. California Greenhouse Gas Inventory for 2000 – 2008 (Continued)

California Greenhouse Gas Inventory for 2000-2008
— by Category as Defined in the Scoping Plan
million tonnes of CO2 equivalent - (based upon IPCC Second Assessement Report's Global Warming Potentials)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
High GWP	**10.95**	**11.34**	**11.97**	**12.75**	**13.57**	**14.23**	**14.92**	**15.27**	**15.65**
Ozone Depleting Substance (ODS) Substitutes	***8.55***	***9.30***	***10.12***	***10.92***	***11.74***	***12.41***	***13.05***	***13.47***	***13.89***
Electricity Grid SF6 Losses [3]	***1.14***	***1.15***	***1.07***	***1.05***	***1.05***	***1.04***	***1.00***	***0.97***	***0.96***
Semiconductor Manufacturing [2]	***1.26***	***0.89***	***0.78***	***0.78***	***0.78***	***0.78***	***0.87***	***0.84***	***0.80***
Agriculture [4]	**25.44**	**25.37**	**28.42**	**28.49**	**28.82**	**28.99**	**29.90**	**28.26**	**28.06**
Livestock	***13.61***	***14.10***	***14.56***	***14.88***	***14.81***	***15.36***	***15.63***	***15.96***	***16.28***
Enteric Fermentation (Digestive Process)	7.49	7.64	7.86	7.97	7.97	8.26	8.33	8.52	8.70
Manure Management	6.12	6.47	6.70	6.91	6.84	7.10	7.30	7.44	7.58
Crop Growing & Harvesting	***8.01***	***7.46***	***9.48***	***9.41***	***9.51***	***9.03***	***9.08***	***8.53***	***7.95***
Fertilizers	6.55	6.21	8.06	8.02	8.03	7.58	7.44	7.08	6.72
Soil Preparation and Disturbances	1.37	1.18	1.34	1.31	1.41	1.37	1.56	1.36	1.15
Crop Residue Burning	0.09	0.07	0.07	0.08	0.07	0.08	0.08	0.09	0.09
General Fuel Use	***3.82***	***3.81***	***4.39***	***4.20***	***4.50***	***4.60***	***5.19***	***3.78***	***3.82***
Diesel	2.51	2.68	3.02	2.94	3.15	3.38	3.85	2.66	2.93
Natural Gas	1.00	0.75	0.95	0.85	0.82	0.69	0.77	0.79	0.72
Gasoline	0.31	0.38	0.40	0.41	0.52	0.52	0.57	0.32	0.17
Other Fuels	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Forestry	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**	**0.19**
Wildfire (CH4 & N2O Emissions)	***0.19***	***0.19***	***0.19***	***0.19***	***0.19***	***0.19***	***0.19***	***0.19***	***0.19***
Total Gross Emissions	***458.03***	***473.23***	***474.15***	***473.15***	***483.88***	***476.73***	***475.31***	***480.85***	***477.74***
Forestry Net Emissions	***-4.72***	***-4.53***	***-4.40***	***-4.33***	***-4.32***	***-4.17***	***-4.04***	***-4.07***	***-3.98***
Total Net Emissions	***453.31***	***468.69***	***469.75***	***468.82***	***479.56***	***472.56***	***471.27***	***476.77***	***473.76***

[1] Reflects emissions from combustion of natural gas, diesel, and lease fuel plus fugitive emissions
[2] These categories are listed in the Industrial sector of ARB's GHG Emission Inventory sectors
[3] This category is listed in the Electric Power sector of ARB's GHG Emission Inventory sectors
[4] Reflects use of updated USEPA models for determining emissions from livestock and fertilizers

Last Updated: Wednesday, May 12, 2010

Source: California Air Resources Board website http://www.arb.ca.gov

Last Updated: 10/28/2010

Table 9. California GHG Emissions - Forecast (2008-2020)

Million tonnes of CO2 equivalent

Category	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Grand Total	**474.64**	**457.65**	**462.04**	**463.23**	**470.37**	**480.40**	**487.35**	**492.01**	**494.66**	**497.88**	**500.76**	**503.76**	**506.78**
Total (Capped)	**403.15**	**387.60**	**389.18**	**387.94**	**392.58**	**400.14**	**404.56**	**406.71**	**406.89**	**407.61**	**407.99**	**408.41**	**408.84**
Total Narrow Scope (Capped)	***174.54***	***168.54***	***166.26***	***165.84***	***165.85***	***167.26***	***168.07***	***168.84***	***169.63***	***170.40***	***171.10***	***171.82***	***172.57***
Electricity Generation (Capped)	***43.82***	***40.85***	***39.47***	***38.89***	***38.65***	***39.70***	***40.44***	***41.18***	***41.93***	***42.67***	***43.37***	***44.08***	***44.82***
Electricity Generation (In-State)	43.82	40.85	39.47	38.89	38.65	39.70	40.44	41.18	41.93	42.67	43.37	44.08	44.82
Imported Electricity (Capped)	***55.03***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***	***53.53***
AZ	6.62	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90
CO	3.20	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
NM	4.70	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67	4.67
NV	3.18	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
UT	13.57	13.52	13.52	13.52	13.52	13.52	13.52	13.52	13.52	13.52	13.52	13.52	13.52
ID	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
MT	1.29	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
OR	3.19	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01	3.01
WA	4.74	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
Tribal	8.80	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07	9.07
MEX	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
CAN	2.69	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61
Industrial (Capped)	***75.69***	***74.15***	***73.26***	***73.42***	***73.66***	***74.03***	***74.10***	***74.12***	***74.17***	***74.20***	***74.20***	***74.21***	***74.21***
Cement Plants	8.64	8.64	8.64	8.64	8.64	8.64	8.64	8.63	8.63	8.63	8.63	8.63	8.63
Cogeneration Facilities	11.13	10.37	10.02	9.87	9.81	10.08	10.27	10.46	10.65	10.83	11.01	11.19	11.38
Hydrogen Plants	2.22	2.20	2.18	2.18	2.18	2.18	2.18	2.17	2.17	2.17	2.17	2.17	2.17
Petroleum Refining	34.58	34.24	33.89	33.89	33.87	33.85	33.82	33.80	33.77	33.75	33.72	33.69	33.66
Other	0.21	0.20	0.20	0.21	0.22	0.23	0.23	0.23	0.24	0.24	0.24	0.25	0.25
General Stationary Combustion	18.91	18.50	18.32	18.63	18.94	19.06	18.97	18.83	18.70	18.57	18.43	18.28	18.13
Added Broad Scope Fuels (Capped)	***228.61***	***219.07***	***222.92***	***222.10***	***226.73***	***232.87***	***236.49***	***237.87***	***237.26***	***237.21***	***236.88***	***236.59***	***236.28***
Gasoline	130.62	128.83	131.88	130.56	133.43	137.41	139.50	138.98	137.51	135.64	133.47	131.48	129.33
Distillate	38.59	36.57	37.95	37.89	38.88	40.07	40.99	42.28	42.48	43.63	44.88	45.99	47.06
Propane	4.29	3.44	3.45	3.46	3.45	3.45	3.45	3.45	3.45	3.45	3.44	3.44	3.44
Natural Gas	55.11	50.23	49.65	50.20	50.97	51.94	52.55	53.16	53.82	54.49	55.09	55.69	56.44
Ethanol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (Uncapped)	**71.49**	**70.05**	**72.86**	**75.29**	**77.80**	**80.26**	**82.79**	**85.30**	**87.77**	**90.28**	**92.78**	**95.35**	**97.94**
Electricity Generation & Industrial	25.83	21.22	21.84	22.06	22.24	22.29	22.44	22.59	22.74	22.91	23.10	23.29	23.50
Transportation	5.58	5.27	5.54	5.85	6.02	6.18	6.37	6.61	6.83	7.07	7.28	7.54	7.73
Ag & Forestry	20.44	21.15	21.20	21.41	21.71	22.06	22.43	22.82	23.23	23.67	24.11	24.57	25.11
Commercial	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Residential	0.25	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
High GWP Gases	13.89	16.95	18.69	20.44	22.18	23.92	25.66	27.40	29.15	30.89	32.63	34.37	36.11
Ethanol	5.46	5.15	5.27	5.22	5.34	5.50	5.58	5.56	5.50	5.42	5.34	5.26	5.17

Notes:

The emission factor used for unspecified imported electricity in this forecast is WCI's preliminary factor of 959.7 lbs/MWh. This factor was recently updated and may be obtained from the Western Climate Initiative (WCI) website: http://www.westernclimateinitiative.org/component/remository/Electricity-Team-Documents/Default-Emission-Factor-Calculators/

Because of the difference in emission factors for unspecified imported electricity, the emissions total for 2008 in this forecast differs from the 2008 emissions total in the statewide GHG inventory: http://www.arb.ca.gov/cc/inventory/data/data.htm

Table 10. Santa Cruz County Greenhouse Gas Emissions by Sector

	Inventory Years		Forecast from 2009 Data	
Sector	**2005**	**2009**	**2020**	**2035**
Transportation	555,458	481,787	500,664	527,603
Residential	173,336	189,658	197,089	207,694
Commercial / Industrial	1,158,119	101,588	110,652	124,330
Solid Waste	20,124	18,245	18,671	19,268
Total	1,907,037	791,278	827,076	878,894

Notes: All values are in metric tons of carbon dioxide equivalent (CO_2e) per year.
Sum of components may not equal total due to rounding.

Source: County of Santa Cruz 2013

3.6 REGULATORY SETTING

Air quality within the NCCAB is regulated by such agencies as the Monterey Bay Unified Air Pollution Control District (MBUAPCD), ARB, and EPA. Each of these agencies develops rules, regulations, policies, and/or goals to attain the goals or directives imposed through legislation. Although the EPA regulations may not be superseded, both state and local regulations may be more stringent.

3.6.1 Federal Air Quality Regulations

At the federal level, EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required EPA to establish primary and secondary NAAQS, which are shown in **Table 2**. The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all state SIPs to determine conformation to the mandates of the FCAAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

3.6.2 State Air Quality Regulations

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), which was adopted in 1988. The CCAA requires that all air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

ARB is primarily responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. The ARB is primarily responsibility for statewide pollution sources and produces a major part of the SIP. Local air districts are still relied upon to provide additional strategies for sources under their jurisdiction. The ARB combines these data and submits the completed SIP to EPA.

Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which in many cases are more stringent than the NAAQS), determining and updating area

designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, and off-road vehicles.

The California Clean Air Act, Section 39610(a), directs the ARB to "identify each district in which transported air pollutants from upwind areas outside the district cause or contribute to a violation of the ozone standard and to identify the district of origin of transported pollutants." The information regarding the transport of air pollutants from one basin to another was to be quantified to assist interrelated basins in the preparation of plans for the attainment of State ambient air quality standards. Numerous studies conducted by the ARB have identified air basins that are impacted by pollutants transported from other air basins (as of 1993). Among the air basins affected by air pollution transport from the San Francisco Bay Area Air Basin (SFBAAB) are the NCCAB, the Mountain Counties Air Basin, the San Joaquin Valley Air Basin, and the Sacramento Valley Air Basin. The SFBAAB was also identified as an area impacted by the transport of air pollutants from the Sacramento region.

3.6.3 Local Air Quality Management

The MBUAPCD is the primary local agency responsible for protecting human health and property from the harmful effects of air pollution in the County. MBUAPCD is required to establish and enforce air pollution control rules and regulations to attain and maintain all state and federal ambient air quality standards. The MBUAPCD regulates, permits, and inspects stationary sources of air pollution. Among these sources are industrial facilities, gasoline stations, auto body shops, and dry cleaners.

As required by the CCAA, the MBUAPCD adopted the *1991 Air Quality Management Plan (AQMP) for the Monterey Bay Region*. The 1991 AQMP addressed planning requirements to meet the ozone standard mandated by the CCAA and included measures to control emissions of volatile organic compounds (VOC) from stationary and mobile sources. Since the 1991 AQMP was adopted, control requirements have been reduced. The AQMP was most recently updated in 2008. In 2013, the *Triennial Plan Revision 2009-2011* was adopted by the MDUAPCD Board of Directors. The Triennial Plan Revision addresses attainment of the State ozone standard.

In December 1995, the MBUAPCD also prepared the *1995 Report on Attainment of the California Fine Particulate Standard in the Monterey Bay Region*. This report was most recently updated in 2005. The updated report identifies implementation measures to achieve ambient air quality standards and to reduce public exposure to particulate matter.

In accordance with federal CAA requirements, the MBUAPCD adopted the *2007 Federal Maintenance Plan for Maintaining the National Ozone Standard in the Monterey Bay Region*. The maintenance plan includes strategies for maintaining the NAAQS for ozone within the NCCAB. The federal CAA requires that projects receiving federal funds demonstrate conformity to the local AQMP. Consistency guidelines for the AQMP extend these requirements to all regionally significant projects, regardless of whether federal funding is being sought. Emission forecasts contained in the AQMP are based, in part, on population forecasts adopted by the Association of Monterey Bay Area Governments (AMBAG).

3.6.4 Global Climate Change and Greenhouse Gas Emissions

Federal Regulations. The following describes Federal regulations related to global climate change and GHG emissions.

Supreme Court Ruling. The EPA is the Federal agency responsible for implementing the FCAA. The U.S. Supreme Court ruled in its decision in Massachusetts et al. v. Environmental Protection Agency et al. ([2007] 549 U.S. 05-1120), issued on April 2, 2007, that CO_2 is an air pollutant as defined under the FCAA, and that EPA has the authority to regulate emissions of GHGs.

In response to the mounting issue of climate change, EPA has taken actions to regulate, monitor, and potentially reduce GHG emissions.

Mandatory Greenhouse Gas Reporting Rule. On September 22, 2009, EPA issued a final rule for mandatory reporting of GHGs from large GHG emissions sources in the United States. In general, this national reporting requirement will provide EPA with accurate and timely GHG emissions data from facilities that emit 25,000 metric tons or more of CO_2 per year. This publicly available data will allow the reporters to track their own emissions, compare them to similar facilities, and aid in identifying cost effective opportunities to reduce emissions in the future. Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers will report at the corporate level. An estimated 85 percent of the total U.S. GHG emissions, from approximately 10,000 facilities, are covered by this final rule.

Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act. On April 23, 2009, EPA published their Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the FCCA (Endangerment Finding) in the Federal Register. The Endangerment Finding is based on Section 202(a) of the FCAA, which states that the Administrator (of EPA) should regulate and develop standards for "emission[s] of air pollution from any class of classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." The proposed rule addresses Section 202(a) in two distinct findings. The first addresses whether or not the concentrations of the six key GHGs (i.e., CO_2, methane [CH_4], nitrous oxide [N_2O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) in the atmosphere threaten the public health and welfare of current and future generations. The second addresses whether or not the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and to the threat of climate change.

The Administrator proposed the finding that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the FCCA. The evidence supporting this finding consists of human activity resulting in "high atmospheric levels" of GHG emissions, which are very likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wild fires, droughts, sea level rise, higher intensity storms) are a threat to the public health and welfare. Therefore, GHGs were found to endanger the public health and welfare of current and future generations.

The Administrator also proposed the finding that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. The proposed finding cites that in 2006, motor vehicles were the second largest contributor to domestic GHG emissions (24 percent of total) behind electricity generation. Furthermore, in 2005, the U.S. was responsible for 18 percent of global GHG emissions. Therefore, GHG emissions from motor vehicles and motor vehicle engines were found to contribute to air pollution that endangers public health and welfare.

State Greenhouse Gas Regulations. The following describes State regulations related to global climate change and GHG emissions.

Assembly Bill 1493 (2002). In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires that ARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37 percent lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle weight (GVW) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions would be reduced approximately 24 percent between 2009 and 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1 (Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.). The auto-makers' suit in the U.S. District Court for the Eastern District of California, contended California's implementation of regulations that, in effect, regulate vehicle fuel economy violates various federal laws, regulations, and policies.

On December 12, 2007, the Court found that if California receives appropriate authorization from EPA (the last remaining factor in enforcing the standard), these regulations would be consistent with and have the force of federal law, thus, rejecting the automakers' claim. This authorization to implement more stringent standards in California was requested in the form of a FCAA Section 209, subsection (b) waiver in 2005. Since that time, EPA failed to act on granting California authorization to implement the standards. Governor Schwarzenegger and Attorney General Edmund G. Brown filed suit against EPA for the delay. In December 2007, EPA Administrator Stephen Johnson denied California's request for the waiver to implement AB 1493. Johnson cited the need for a national approach to reducing GHG emissions, the lack of a "need to meet compelling and extraordinary conditions", and the emissions reductions that would be achieved through the Energy Independence and Security Act of 2007 as the reasoning for the denial.

The State of California filed suit against EPA for its decision to deny the FCAA waiver. A change in presidential administration directed EPA to reexamine its position for denial of California's CAA waiver and for its past opposition to GHG emissions regulation. California received the waiver, notwithstanding the previous denial by EPA, on June 30, 2009.

<u>Assembly Bill 32 (2006), California Global Warming Solutions Act.</u> In September 2006, the governor of California signed AB 32 (Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006, which enacted Sections 38500–38599 of the California Health and Safety Code. AB 32 requires the reduction of statewide GHG emissions to 1990 levels by 2020. This equates to an approximate 15 percent reduction compared to existing statewide GHG emission levels or a 30 percent reduction from projected 2020 "business as usual" emission levels. The required reduction will be accomplished through an enforceable statewide cap on GHG emissions beginning in 2012.

To effectively implement the statewide cap on GHG emissions, AB 32 directs ARB to develop and implement regulations that reduce statewide GHG emissions generated by stationary sources. Specific actions required of ARB under AB 32 include adoption of a quantified cap on GHG emissions that represent 1990 emissions levels along with disclosing how the cap was quantified, institution of a

schedule to meet the emissions cap, and development of tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions needed to meet the cap.

In addition, AB 32 states that if any regulations established under AB 1493 (2002) cannot be implemented then ARB is required to develop additional, new regulations to control GHG emissions from vehicles as part of AB 32.

AB 32 Climate Change Scoping Plan. In December 2008, ARB adopted its *Climate Change Scoping Plan* (California Air Resources Board 2008), which contains the main strategies California will implement to achieve reduction of approximately 169 million metric tons (MMT) of carbon dioxide equivalent (CO_2e), or approximately 30 percent from the state's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002-2004 average emissions). The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- the Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- a renewable portfolio standard for electricity production (21.3 MMT CO_2e).

ARB has not yet determined what amount of GHG reductions it recommends from local government operations; however, the Scoping Plan does state that land use planning and urban growth decisions will play an important role in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions(meanwhile, ARB is also developing an additional protocol for community emissions). ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects approximately 5.0 MMT CO_2e will be achieved associated with implementation of SB 375, which is discussed further below.

Senate Bills 1078 and 107 and Executive Order S-14-08. SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33 percent renewable power by 2020.

Senate Bill 1368 (2006). SB 1368 is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 requires the California Public Utilities Commission (PUC) to establish a greenhouse gas emission performance standard for baseload generation from investor owned utilities by February 1, 2007. The California Energy Commission (CEC) must establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural gas fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the PUC and CEC.

Senate Bill 97 (2007). SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency by July 1, 2009 guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA. The California Resources Agency is required to certify and adopt these guidelines by January 1, 2010.

This bill also removes, both retroactively and prospectively, as legitimate causes of action in litigation any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 (Proposition 1B) or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1E). This provision will be repealed by provision of law on January 1, 2010 at that time such projects, if any remain unapproved, will no longer enjoy protection against litigation claims based on failure to adequately address issues related to GHG emissions.

Senate Bill 375 (2008). SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. As part of the alignment, SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) which prescribes land use allocation in that MPO's Regional Transportation Plan (RTP). The ARB, in consultation with MPOs, is required to provide each affected region with

reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. The ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned GHG emission reduction targets. If MPOs do not meet the GHG reduction targets, transportation projects located in the MPO boundaries would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation (RNHA) cycle from five years to eight years for local governments located in an MPO that meets certain requirements. City or County land use policies (e.g., General Plans) are not required to be consistent with the RTP including associated SCSs or APSs. Projects consistent with an approved SCS or APS and categorized as "transit priority projects" would receive incentives under new provisions of CEQA.

Executive Order S-3-05 (2005). Governor Schwarzenegger signed Executive Order S-3-05 on June 1, 2005 which proclaimed California is vulnerable to the impacts of climate change. The executive order declared increased temperatures could reduce snowpack in the Sierra Nevada Mountains, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the executive order established targets for total GHG emissions which include reducing GHG emissions to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The executive order also directed the secretary of the California Environmental Protection Agency to coordinate a multiagency effort to reduce GHG emissions to the target levels. The secretary will submit biannual reports to the governor and legislature describing progress made toward reaching the emission targets; impacts of global warming on California's resources; and mitigation and adaptation plans to combat impacts of global warming.

To comply with the executive order, the Secretary of the California Environmental Protection Agency created the California Climate Action Team which is made up of members from various state agencies and commissions. The California Climate Action Team released its first report in March 2006 of which proposed achieving the GHG emissions targets by building on voluntary actions of California businesses and actions by local governments and communities along with continued implementation of state incentive and regulatory programs.

Executive Order S-13-08. Governor Schwarzenegger signed Executive Order S-13-08 on November 14, 2008 which directs California to develop methods for adapting to climate change through preparation of a statewide plan. The executive order directs OPR, in cooperation with the California Resources Agency (CRA), to provide land use planning guidance related to sea level rise and

other climate change impacts by May 30, 2009. The order also directs the CRA to develop a state Climate Adaptation Strategy by June 30, 2009 and to convene an independent panel to complete the first California Sea Level Rise Assessment Report. The assessment report is required to be completed by December 1, 2010 and required to include the following four items:

1. project the relative sea level rise specific to California by taking into account issues such as coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates;

2. identify the range of uncertainty in selected sea level rise projections;

3. synthesize existing information on projected sea level rise impacts to state infrastructure (e.g., roads, public facilities, beaches), natural areas, and coastal and marine ecosystems; and

4. discuss future research needs relating to sea level rise in California.

Executive Order S-1-07. Governor Schwarzenegger signed Executive Order S-1-07 in 2007 which proclaimed the transportation sector as the main source of GHG emissions in California. The executive order proclaims the transportation sector accounts for over 40 percent of statewide GHG emissions. The executive order also establishes a goal to reduce the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020.

In particular, the executive order established a Low-Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the CEC, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by CEC on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the LCFS on April 23, 2009.

Local Greenhouse Gas Planning. The following describes local regulations related to global climate change and GHG emissions.

The Santa Cruz County Board of Supervisors approved the Climate Action Strategy (CAS) (County of Santa Cruz 2013) on February 26, 2013. The following description of the CAS is from the County of Santa Cruz internet website (http://www.sccoplanning.com).

The CAS outlines a course of action to reduce GHG emissions produced by governmental operations and community activities within unincorporated Santa Cruz County. Implementation of the CAS will build on the fact that Santa Cruz County has already met the 2020 emissions

reduction target recommended by the state and will set the County on a path toward reducing emissions to 59 percent below 2009 levels by 2050.

The CAS articulates a broad strategy for reaching emission reduction goals, and then goes further to identify the individual programs, policies, and initiatives that, together, will move County operations and the community toward the goals. Strategies are included to reduce emissions in the major focus areas of transportation, energy, and solid waste. These strategies represent current thinking, and there are many more possible actions and ways in which the community may choose to respond to climate change. It is expected that this document will be updated regularly, and that the strategies section of this document will evolve as the strategies are tested and additional ideas are suggested.

The CAS identifies the parties that would carry out the various emissions reduction and adaptation strategies, with performance indicators for most strategies. The GHG inventories will be updated periodically in order to measure whether strategies are on track to produce the reductions that have been forecast. As data are collected and community partnerships are expanded, the County will work with the responsible parties and the public to add, subtract, and modify the strategies as needed to meet emissions reduction goals.

3.7 TOPOGRAPHY AND METEOROLOGY

Topography and meteorology heavily influence air quality, and are described in this section of this Air Quality Study. The following description of topography and meteorology in the Monterey area is from the MBUAPCD document *CEQA Air Quality Guidelines* (Monterey Bay Unified Air Pollution Control District 2008).

The Santa Cruz Auto Shop New Construction Project site is located in the North Central Coast Air Basin (NCCAB). The NCCAB include Monterey, Santa Cruz and San Benito Counties. The basin lies along the central coast of California and covers an area of 5,159 square miles. The northwest sector of the basin is dominated by the Santa Cruz Mountains. The Diablo Range marks the northeastern boundary, and together with the southern extent of the Santa Cruz Mountains forms the Santa Clara Valley which extends into the northeastern tip of the Basin. Farther south, the Santa Clara Valley evolves into the San Benito Valley which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at its northwestern end to King City at its southeastern end. The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley. The coastal Santa Lucia Range defines the western side of the Carmel Valley.

The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the air basin. In the summer, the high pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air aloft acts as a lid to inhibit vertical air movement.

The generally northwest-southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure which intensifies the onshore air flow during the afternoon and evening.

In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The air flow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific High pressure cell, which allows pollutants to build up over a period of a few days. It is most often during this season that the north or east winds develop to transport pollutants from either the San Francisco Bay area or the Central Valley into the NCCAB.

During the winter, the Pacific High migrates southward and has less influence on the air basin. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually result in good air quality for the basin as a whole in winter and early spring.

In Santa Cruz County, coastal mountains exert a strong influence on atmospheric circulation, which results in generally good air quality. Small inland valleys such as Scotts Valley with low mountains on two sides have poorer circulation than at Santa Cruz on the coastal plain. In addition, Scotts Valley is downwind of major pollutant generating centers, and these pollutants have time to form oxidants during transit to Scotts Valley. Consequently, air pollutants tend to build up more at Scotts Valley than at Santa Cruz.

Monterey Bay is a 25-mile wide inlet, which allows marine air at low levels to penetrate the interior. The Salinas Valley is a steep-sloped coastal valley which opens out on Monterey Bay and extends southeastward with mountain ranges of two to three thousand feet elevation on either side. The broad area of the valley floor near the mouth is 25 miles wide, narrowing to about six miles at Soledad, which is 40 miles inland, and to three miles wide at King City, which is about 60 miles from the coast. At Salinas, near the northern end of the Valley, west and northwest winds occur about one-half the time during the entire year. Although the summer coastal stratus rarely extends beyond Soledad, the extended sea breeze, which consists of warmer and drier air currents, frequently reaches far down the Salinas Valley. In the southern end of the Valley, which extends into the South Central Coast Air Basin to Paso Robles, winds are generally weaker most of the year except during storm periods.

SECTION 4
SHORT-TERM CONSTRUCTION IMPACTS

Implementation of the Santa Cruz Auto Shop New Construction Project would result in construction activity, which would generate air pollutant emissions. Construction activities such as grading, excavation and travel on unpaved surfaces would generate dust, and can lead to elevated concentrations of PM_{10} and $PM_{2.5}$. The operation of construction equipment results in exhaust emissions, which include ROG and NO_x. Construction activity could also potentially entrain asbestos, if present in the soil or structures that would be demolished.

4.1 SIGNIFICANCE THRESHOLDS

The following describes short-term construction-related significance thresholds applied in this Air Quality Study.

4.1.1 Particulate Matter Emissions

Significance thresholds applied to construction-related emissions are from the MBUAPCD document *CEQA Air Quality Guidelines* (Monterey Bay Unified Air Pollution Control District 2008). Consistent with Table 5-1 of the guidelines, construction-related PM_{10} emissions are considered a significant impact in this Air Quality Study if implementation of the proposed project would generate PM_{10} emissions exceeding 82 pounds per day (ppd).

As noted in Section 5.3 of the *CEQA Air Quality Guidelines*, ozone precursor emissions (i.e., ROG and NO_x) "are accommodated in the emission inventories of State- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS." Therefore, construction-related ROG and NO_x emissions are not addressed in this Air Quality Study.

4.1.2 Asbestos

Naturally occurring asbestos has been identified as a toxic air contaminant (TAC) by the ARB. No quantitative significance thresholds have been set for NOA. However, the California Department of Conservation provides a map that may be used as a screening-level indicator of the likelihood of NOA being present on the project site. The map, *A General Location Guide For Ultramafic Rocks In California - Areas More Likely To Contain Naturally Occurring Asbestos* (California Department Of Conservation 2000) is available at the Department website (http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/index.aspx).

The asbestos screening map,

> "shows the areas more likely to contain natural occurrences of asbestos in California. Its purpose is to inform government agencies, private industry and the public of the areas in the State where natural occurrences of asbestos may be an issue. In these areas, consideration of the implications of the presence or absence of asbestos through examination of more detailed maps and site-specific investigations could be warranted as part of public or private decision making." (California Department of Conservation 2000)

If a project site is located outside of all the areas considered to be more likely to contain NOA, it may be considered to have a relatively lower probability of containing NOA and, in this Air Quality Study, will be considered to have a less-than-significant impact.

If a project site is located within an area considered more likely to contain NOA, it may be considered to have an elevated probability of containing NOA and, in this Air Quality Study, will be considered to have a significant impact. On-site soil sampling, and the implementation of mitigation measures may be required to reduce the impact to a less-than-significant level.

4.2 METHODOLOGY

Implementation of the Auto Shop New Construction Project would contribute to increases of ROG, NO_x, PM_{10}, and CO emissions in the study area. Short-term construction-related and long-term operational emissions associated with the project were estimated using the CalEEMod emissions modeling program (South Coast Air Quality Management District 2013). CalEEMod is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The CalEEMod program was applied to estimate emissions associated with construction-related activities at the Project site in the Ben Lomond area.

More detailed information on the CalEEMod model is available at the internet website http://caleemod.com/. Output files from the CalEEMod model, as applied to the Auto Shop New Construction Project, are presented in the *Technical Appendix* of this Air Quality Study.

4.3 IMPACTS

The following is a description of construction-related impacts of the Auto Shop New Construction Project.

4.3.1 Particulate Matter Emissions

Based on application of the CalEEMod model, construction of the Auto Shop New Construction Project would be expected to generate the following amounts of PM_{10} emissions.

- During a summer day, construction activities of the Proposed Project would generate 7.43 ppd of PM_{10} emissions.

- During a winter day, construction activities of the Proposed Project would generate 7.43 ppd of PM_{10} emissions.

The amounts described above would be less than the MBUAPCD significance threshold of 82 ppd of construction-related PM_{10} emissions. Therefore, this impact is considered to be less than significant. No mitigation measures would be needed.

4.3.2 Naturally Occurring Asbestos

The map, *A General Location Guide For Ultramafic Rocks In California - Areas More Likely To Contain Naturally Occurring Asbestos* (California Department Of Conservation 2000) shows areas more likely to contain NOA. Soil-disturbing construction activity in these areas would result in an elevated risk of entraining NOA.

The asbestos map shows there are no areas more likely to contain NOA in the vicinity of the Auto Shop New Construction Project site. The area more likely to contain NOA that is nearest to the Auto Shop New Construction Project site is approximately nine miles away, along Los Gatos Creek near the Santa Cruz / Santa Clara county line. Therefore, the project site is considered to have a low probability of containing NOA, and this impact is considered less-than-significant. No mitigation measures are required.

SECTION 5
LONG-TERM OPERATIONAL IMPACTS

This section of this Air Quality Study presents an assessment of the long-term operational impacts of the Santa Cruz Auto Shop New Construction Project.

The Proposed Project would result in the relocation of auto shop operations from the Felton area to the Ben Lomond area. This would result in relocation of emissions associated with operation of the facility. However, the Proposed Project would not change the amount of operational emissions – the generation of emissions would geographically shift between areas within Santa Cruz County. The existing auto shop in Felton would be dismantled and retained for CAL FIRE storage. There would be no environmental impacts associated with the reuse of the Felton auto shop building and reuse would not generate vehicle trips. Overall, the Proposed Project would not change the amount of operational emissions generated by the auto shop. Because the Proposed Project would not change the amount of operational emissions generated by the existing Auto Shop, operational emissions have not been quantified for this Air Quality Study.

Because the Auto Shop New Construction Project would not increase long-term operational emissions, the impact of the Proposed Project on long-term operational emissions is considered to be less than significant. No mitigation measures are required.

SECTION 6
LOCAL CARBON MONOXIDE IMPACT ANALYSIS

The potential impact of the Santa Cruz Auto Shop New Construction Project on local CO levels was assessed by applying screening procedures described in the *CEQA Air Quality Guidelines* (Monterey Bay Unified Air Pollution Control District 2008) and then, if indicated by the screening procedures, conducting detailed microscale air quality dispersion modeling.

6.1 SIGNIFICANCE THRESHOLDS

The following is a description of significance thresholds applied in this Air Quality Study in the analysis of the impact of the proposed project on CO concentrations.

The screening procedure applied in this Air Quality Study focuses on the effects of the Auto Shop New Construction Project on traffic congestion, expressed as intersection level of service (LOS). Since elevated CO concentrations are associated with traffic congestion, a project is considered to have no potential for significant impacts on CO concentrations if it does not substantially contribute to excessive traffic congestion.

As specified in Section 5.4 of the *CEQA Air Quality Guidelines*, "The following would represent a potentially significant impact to intersections or road segments after mitigation (references are to peak-hour LOS):

- "Intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic, or
- "Intersections or road segments that operate at LOS E or F where the volume-to-capacity (V/C) ratio would increase 0.05 or more with the project's traffic, or
- "Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic, or
- "Unsignalized intersections which operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic. This criterion is based on the turning movement with the worst reserve capacity or
- "Project would generate substantial heavy duty truck traffic or generate substantial traffic along urban street canyons or near a major stationary source of CO.

"If any of these scenarios would occur, carbon monoxide modeling should be undertaken to determine if indirect source emissions would cause an exceedance of State or national AAQS at existing or reasonably foreseeable receptors."

Projects that would meet these criteria are considered to have the potential for resulting in a significant CO air quality impact. According to the *CEQA Air Quality Guidelines*, detailed dispersion modeling is not needed for projects that do not meet these criteria and, in this Air Quality Study, projects that do not meet these criteria are considered to have a less-than-significant CO air quality impact.

6.2 METHODOLOGY

The *CEQA Air Quality Guidelines* CO screening procedures described above were applied to the traffic analysis of the Auto Shop New Construction Project to assess the impacts of the project on CO concentrations. The traffic study (KD Anderson & Associates 2013) presents analyses of the project-related effect on LOS.

6.3 IMPACTS

The following is a description of local CO impacts of the Auto Shop New Construction Project.

The traffic analysis of the Auto Shop New Construction Project concluded that all study facilities would operate at LOS D or better with the Proposed Project. Based on Section 5.4 of the *CEQA Air Quality Guidelines*, the Proposed Project is considered to not have the potential for resulting in a significant CO air quality impact. Therefore, this impact is considered less than significant, and no mitigation measures are required.

SECTION 7
GLOBAL CLIMATE CHANGE AND GREENHOUSE GASES

This section of this Air Quality Study describes the effects of the Santa Cruz Auto Shop New Construction Project on global climate change and GHG emissions. Short-term construction of the Proposed Project would generate emissions which are associated with global climate change. As noted earlier in Section 5, *Long-Term Operational Impacts*, of this Air Quality Study, the Auto Shop New Construction Project would not result in a change in long-term operational emissions.

7.1 SIGNIFICANCE THRESHOLDS

Section 15064.4(a) of the *State CEQA Guidelines* states,

> "The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project."

Section 15064.4(b) of the *State CEQA Guidelines* states,

> "A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
>
> "(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
>
> "(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project."

Neither the MBUAPCD nor Santa Cruz County has established a quantified threshold for determining the significance of GHG emissions. This Air Quality Study, therefore, applies a significance threshold adopted by the Bay Area Air Quality Management District (BAAQMD) (Bay Area Air Quality Management District 2010). The quantified BAAQMD threshold is applied for two reasons:

- A quantified threshold is needed in response to the direction provided in Section 15064.4(a) of the *State CEQA Guidelines* to calculate GHG emissions, and the direction provided in Section 15064.4(b) of the *State CEQA Guidelines* to assess whether project emissions exceed the threshold.

- While the Proposed Project is in the MBUAPCD, it is geographically close to the BAAQMD. The Project site in the Ben Lomond area is approximately six miles from the BAAQMD.

The BAAQMD *Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010* (Bay Area Air Quality Management District 2010) presents significance thresholds for several types of pollutants, and presents thresholds for both construction-related emissions and operational emissions. For GHG emissions, a threshold of 1,100 metric tons (MT) of CO_2e per year is presented.

The BAAQMD GHG threshold is described in *Adopted Air Quality CEQA Thresholds of Significance* as applying to operational emissions. No thresholds are presented for construction-related emissions. While the BAAQMD threshold applies to operational emissions, rather than construction-related emissions, the threshold is applied in this Air Quality Study to construction emissions. This approach is applied to provide a quantitative basis for determining the significance of project-related GHG emissions, as specified in the *State CEQA Guidelines*, and neither Section 15064.4(a) nor Section 15064.4(b) of the *State CEQA Guidelines* make a distinction between construction-related and operational GHG emissions. Applying an operational significance threshold to construction-related emissions is considered conservatively strict because the operational significance thresholds are intended to apply to annual emissions which would repeatedly occur every year for the lifetime of a project. Conversely, the Proposed Project would only generate construction-related emissions, which would only occur once, during the finite construction period.

7.2 METHODOLOGY

Implementation of the Auto Shop New Construction Project would generate GHG emissions in the study area. Short-term construction-related emissions associated with the project were estimated using the CalEEMod emissions modeling program (South Coast Air Quality Management District 2013). CalEEMod is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The CalEEMod program was applied to estimate GHG emissions associated with construction-related activities at the Project site in the Ben Lomond area.

More detailed information on the CalEEMod model is available at the internet website http://caleemod.com/. Output files from the CalEEMod model, as applied to the Auto Shop New Construction Project, are presented in the *Technical Appendix* of this Air Quality Study.

7.3 IMPACTS

Implementation of the Auto Shop New Construction Project would result in the following amounts of construction-related GHG emissions:

- In 2015, the Proposed Project would result in 149.16 MT of CO_2e emissions.
- In 2016, the Proposed Project would result in 112.30 MT of CO_2e emissions,

Because the Auto Shop New Construction Project would result in GHG emissions which are less than the significance threshold of 1,100 MT per year of CO_2e emissions, this impact is considered less-than-significant and no mitigation measures are required.

SECTION 8

CONSISTENCY WITH THE AIR QUALITY MANAGEMENT PLAN

The *CEQA Air Quality Guidelines* (Monterey Bay Unified Air Pollution Control District 2008) notes:

> "CEQA Guidelines §15125(b) requires that an EIR discuss consistency between the proposed project and applicable regional plans, including the Air Quality Management Plan (AQMP). Consistency determinations with the AQMP are used by the District to address a project's cumulative impact on regional air quality (i.e., ozone levels)."

8.1 SIGNIFICANCE THRESHOLDS

This Air Quality Study applies significance thresholds presented in the *CEQA Air Quality Guidelines*:

> "The District prepares air quality plans which address attainment of the State ozone AAQS and maintenance of federal AAQS. These plans accommodate growth by projecting growth in emissions based on different indicators. For example, population forecasts adopted by AMBAG are used to forecast population-related emissions. Through the planning process, emission growth is offset by basin wide controls on stationary, area, and transportation sources of air pollution.
>
> "Projects which are not consistent with the AQMP have not been accommodated in the AQMP and will have a significant cumulative impact on regional air quality unless emissions are totally offset."

8.2 METHODOLOGY

The methods used to determine the consistency of the Santa Cruz Auto Shop New Construction Project with the AQMP are presented in the *CEQA Air Quality Guidelines*:

> "Consistency of indirect emissions associated with a commercial, industrial or institutional projects intended to meet the needs of the population as forecast in

the AQMP is determined by comparing the estimated current population of the county in which the project is to be located with the applicable population forecast in the AQMP. If the estimated current population does not exceed the forecasts, indirect emissions associated with the project are deemed to be consistent with the AQMP."

8.3 IMPACTS

Table 5-5, *Population Forecast for North Central Coast Air Basin*, of the *CEQA Air Quality Guidelines* presents population forecasts for each county in the NCCAB. The forecasts are presented for the years 2000, 2005, 2010, 2020, and 2030. This table shows a population for Santa Cruz of 275,396 in 2010 and 292,695 in 2020.

The California Department of Finance presents estimates of population by county (California Department of Finance 2013). The Department of finance estimate of population in Santa Cruz County for January 1, 2013 is 266,662.

The California Department of Finance estimated 2013 population in Santa Cruz County of 266,662 is lower than the *CEQA Air Quality Guidelines* forecasts of 275,396 in 2010 and 292,695 in 2020. Therefore, based on significance thresholds presented in the *CEQA Air Quality Guidelines*, the impact of the Auto Shop New Construction Project on AQMP consistency is considered less-than-significant. No mitigation measures are required.

REFERENCES

Publications Cited

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TECHNICAL APPENDIX

CalEEMod MODEL OUTPUT FILES

The following CalEEMod emissions model output files are presented in this technical appendix:

CalEEMod Model Output File
Construction-Related Emissions
Summer Daily Period

CalEEMod Model Output File
Construction-Related Emissions
Winter Daily Period

CalEEMod Model Output File
Construction-Related Emissions
Annual Period

CalEEMod Model Output File
Construction-Related Emissions
Summer Daily Period

Auto Shop - Construction of Ben Lomond Shop

Santa Cruz County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	8.85	1000sqft	0.20	8,850.00	0
Parking Lot	75.93	1000sqft	1.74	75,925.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This analysis is for Phase I construction only, not for operational.

Land Use - 8,850 SqFt bldg size and 75,925 SqFt asphalt paving quantities measured from site plan.

Construction Phase - No demolition. Proj Descr: Start construction 7/15/15, 10-month construction period. Retain default number of days.

Off-road Equipment - Construction equipment specified in Project Description. No Rubber Tired Dozers.

Off-road Equipment - Construction equipment specified in Project Description. No Rubber Tired Dozers. Add Excavator and Compactors.

Off-road Equipment - Construction equipment specified in Project Description. No Cranes.

Off-road Equipment - Construction equipment specified in Project Description. Add Compactors.

Off-road Equipment -

Trips and VMT - Employee trips (20, 20, 40, 28, 16) and Dump Truck hauling trips (2 during Bldg Constr) from Project Description.

Architectural Coating - 75 g/l VOC content Per MBUAPCD Rule 426, average of flat and non-flat.

Vehicle Trips - Constuction only. No change in long-term operational emissions.

Consumer Products - Construction only. No change in long-term operational emissions.

Area Coating - Construction only. No change in long-term operational emissions.

Landscape Equipment - Construction only. No change in long-term operational emissions.

Energy Use - Construction only. No change in long-term operational emissions.

Water And Wastewater - Construction only. No change in long-term operational emissions.

Solid Waste - Construction only. No change in long-term operational emissions.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	75.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	75.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	75.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	75.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	75
tblAreaCoating	Area_Nonresidential_Interior	16692	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	75	250
tblConsumerProducts	ROG_EF	2.14E-05	1E-09

tblEnergyUse	LightingElect	3.43	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	18.78	0.00
tblLandscapeEquipment	NumberSummerDays	250	0.1
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblProjectCharacteristics	OperationalYear	2014	2016
tblSolidWaste	SolidWasteGenerationRate	33.81	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	35.00	40.00
tblTripsAndVMT	WorkerTripNumber	18.00	28.00
tblTripsAndVMT	WorkerTripNumber	7.00	16.00
tblVehicleTrips	ST_TR	62.00	0.00
tblVehicleTrips	SU_TR	62.00	0.00
tblVehicleTrips	WD_TR	62.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	832,617.80	0.00
tblWater	OutdoorWaterUseRate	510,314.14	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	3.9968	27.0210	19.7504	0.0292	5.9639	1.5152	7.4327	2.9973	1.4621	4.3485	0.0000	2,731.1292	2,731.1292	0.6062	0.0000	2,743.8585
2016	8.1793	22.1143	18.9929	0.0292	0.4206	1.3912	1.8118	0.1132	1.3410	1.4543	0.0000	2,707.1608	2,707.1608	0.4745	0.0000	2,717.1260
Total	**12.1761**	**49.1353**	**38.7433**	**0.0585**	**6.3844**	**2.9064**	**9.2444**	**3.1105**	**2.8031**	**5.8028**	**0.0000**	**5,438.2900**	**5,438.2900**	**1.0807**	**0.0000**	**5,460.9844**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	3.9968	27.0210	19.7504	0.0292	5.9639	1.5152	7.4327	2.9973	1.4621	4.3485	0.0000	2,731.1292	2,731.1292	0.6062	0.0000	2,743.8585
2016	8.1793	22.1143	18.9929	0.0292	0.4206	1.3912	1.8118	0.1132	1.3410	1.4543	0.0000	2,707.1608	2,707.1608	0.4745	0.0000	2,717.1260
Total	**12.1761**	**49.1353**	**38.7433**	**0.0585**	**6.3844**	**2.9064**	**9.2444**	**3.1105**	**2.8031**	**5.8028**	**0.0000**	**5,438.2900**	**5,438.2900**	**1.0807**	**0.0000**	**5,460.9844**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0197**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0197**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/15/2015	7/16/2015	5	2	
2	Grading	Grading	7/17/2015	7/22/2015	5	4	
3	Building Construction	Building Construction	7/23/2015	4/27/2016	5	200	
4	Paving	Paving	4/28/2016	5/11/2016	5	10	
5	Architectural Coating	Architectural Coating	5/12/2016	5/25/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,692; Non-Residential Outdoor: 5,564 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Grading	Excavators	1	7.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Plate Compactors	2	7.00	8	0.43
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	6.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Plate Compactors	2	7.00	8	0.43
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	40.00	14.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.5362	26.8886	17.0107	0.0171		1.4671	1.4671		1.3497	1.3497		1,801.7440	1,801.7440	0.5379		1,813.0398
Total	**2.5362**	**26.8886**	**17.0107**	**0.0171**	**5.7996**	**1.4671**	**7.2666**	**2.9537**	**1.3497**	**4.3034**		**1,801.7440**	**1,801.7440**	**0.5379**		**1,813.0398**

3.2 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1065	0.1324	1.3717	2.0300e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		175.0694	175.0694	0.0123		175.3268
Total	**0.1065**	**0.1324**	**1.3717**	**2.0300e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**175.0694**	**175.0694**	**0.0123**		**175.3268**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.5362	26.8886	17.0107	0.0171		1.4671	1.4671		1.3497	1.3497	0.0000	1,801.7440	1,801.7440	0.5379		1,813.0398
Total	**2.5362**	**26.8886**	**17.0107**	**0.0171**	**5.7996**	**1.4671**	**7.2666**	**2.9537**	**1.3497**	**4.3034**	**0.0000**	**1,801.7440**	**1,801.7440**	**0.5379**		**1,813.0398**

3.2 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1065	0.1324	1.3717	2.0300e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		175.0694	175.0694	0.0123		175.3268
Total	**0.1065**	**0.1324**	**1.3717**	**2.0300e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**175.0694**	**175.0694**	**0.0123**		**175.3268**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.5031	26.6620	17.4829	0.0196		1.4251	1.4251		1.3124	1.3124		2,028.6802	2,028.6802	0.5939		2,041.1520
Total	**2.5031**	**26.6620**	**17.4829**	**0.0196**	**4.9143**	**1.4251**	**6.3393**	**2.5256**	**1.3124**	**3.8380**		**2,028.6802**	**2,028.6802**	**0.5939**		**2,041.1520**

3.3 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1065	0.1324	1.3717	2.0300e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		175.0694	175.0694	0.0123		175.3268
Total	**0.1065**	**0.1324**	**1.3717**	**2.0300e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**175.0694**	**175.0694**	**0.0123**		**175.3268**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.5031	26.6620	17.4829	0.0196		1.4251	1.4251		1.3124	1.3124	0.0000	2,028.6802	2,028.6802	0.5939		2,041.1520
Total	**2.5031**	**26.6620**	**17.4829**	**0.0196**	**4.9143**	**1.4251**	**6.3393**	**2.5256**	**1.3124**	**3.8380**	**0.0000**	**2,028.6802**	**2,028.6802**	**0.5939**		**2,041.1520**

3.3 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1065	0.1324	1.3717	2.0300e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		175.0694	175.0694	0.0123		175.3268
Total	**0.1065**	**0.1324**	**1.3717**	**2.0300e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**175.0694**	**175.0694**	**0.0123**		**175.3268**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6000	21.5642	15.0041	0.0220		1.4851	1.4851		1.4344	1.4344		2,055.6247	2,055.6247	0.4741		2,065.5812
Total	**3.6000**	**21.5642**	**15.0041**	**0.0220**		**1.4851**	**1.4851**		**1.4344**	**1.4344**		**2,055.6247**	**2,055.6247**	**0.4741**		**2,065.5812**

3.4 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3000e-004	3.0000e-003	2.8800e-003	1.0000e-005	2.7000e-004	5.0000e-005	3.2000e-004	7.0000e-005	4.0000e-005	1.2000e-004		0.7305	0.7305	1.0000e-005		0.7306
Vendor	0.1835	1.5265	2.0000	3.2200e-003	0.0916	0.0266	0.1182	0.0260	0.0245	0.0505		324.6353	324.6353	2.9400e-003		324.6971
Worker	0.2130	0.2649	2.7434	4.0600e-003	0.3286	3.4800e-003	0.3321	0.0872	3.1600e-003	0.0903		350.1388	350.1388	0.0245		350.6537
Total	**0.3968**	**1.7943**	**4.7463**	**7.2900e-003**	**0.4204**	**0.0302**	**0.4506**	**0.1132**	**0.0277**	**0.1409**		**675.5045**	**675.5045**	**0.0275**		**676.0814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6000	21.5642	15.0041	0.0220		1.4851	1.4851		1.4344	1.4344	0.0000	2,055.6247	2,055.6247	0.4741		2,065.5812
Total	**3.6000**	**21.5642**	**15.0041**	**0.0220**		**1.4851**	**1.4851**		**1.4344**	**1.4344**	**0.0000**	**2,055.6247**	**2,055.6247**	**0.4741**		**2,065.5812**

3.4 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3000e-004	3.0000e-003	2.8800e-003	1.0000e-005	2.7000e-004	5.0000e-005	3.2000e-004	7.0000e-005	4.0000e-005	1.2000e-004		0.7305	0.7305	1.0000e-005		0.7306
Vendor	0.1835	1.5265	2.0000	3.2200e-003	0.0916	0.0266	0.1182	0.0260	0.0245	0.0505		324.6353	324.6353	2.9400e-003		324.6971
Worker	0.2130	0.2649	2.7434	4.0600e-003	0.3286	3.4800e-003	0.3321	0.0872	3.1600e-003	0.0903		350.1388	350.1388	0.0245		350.6537
Total	**0.3968**	**1.7943**	**4.7463**	**7.2900e-003**	**0.4204**	**0.0302**	**0.4506**	**0.1132**	**0.0277**	**0.1409**		**675.5045**	**675.5045**	**0.0275**		**676.0814**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1000e-004	2.5700e-003	2.7100e-003	1.0000e-005	3.6000e-004	4.0000e-005	4.0000e-004	9.0000e-005	4.0000e-005	1.3000e-004		0.7247	0.7247	1.0000e-005		0.7248
Vendor	0.1671	1.3322	1.8677	3.2200e-003	0.0916	0.0223	0.1139	0.0260	0.0205	0.0465		321.5970	321.5970	2.6400e-003		321.6525
Worker	0.1852	0.2336	2.4151	4.0500e-003	0.3286	3.2100e-003	0.3318	0.0872	2.9300e-003	0.0901		337.8959	337.8959	0.0220		338.3574
Total	**0.3525**	**1.5684**	**4.2855**	**7.2800e-003**	**0.4206**	**0.0256**	**0.4461**	**0.1132**	**0.0235**	**0.1367**		**660.2175**	**660.2175**	**0.0246**		**660.7347**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176	0.0000	2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**	**0.0000**	**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1000e-004	2.5700e-003	2.7100e-003	1.0000e-005	3.6000e-004	4.0000e-005	4.0000e-004	9.0000e-005	4.0000e-005	1.3000e-004		0.7247	0.7247	1.0000e-005		0.7248
Vendor	0.1671	1.3322	1.8677	3.2200e-003	0.0916	0.0223	0.1139	0.0260	0.0205	0.0465		321.5970	321.5970	2.6400e-003		321.6525
Worker	0.1852	0.2336	2.4151	4.0500e-003	0.3286	3.2100e-003	0.3318	0.0872	2.9300e-003	0.0901		337.8959	337.8959	0.0220		338.3574
Total	**0.3525**	**1.5684**	**4.2855**	**7.2800e-003**	**0.4206**	**0.0256**	**0.4461**	**0.1132**	**0.0235**	**0.1367**		**660.2175**	**660.2175**	**0.0246**		**660.7347**

3.5 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3574	13.6473	9.4563	0.0142		0.8246	0.8246		0.7609	0.7609		1,428.7755	1,428.7755	0.4115		1,437.4178
Paving	0.4559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8133**	**13.6473**	**9.4563**	**0.0142**		**0.8246**	**0.8246**		**0.7609**	**0.7609**		**1,428.7755**	**1,428.7755**	**0.4115**		**1,437.4178**

3.5 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1297	0.1635	1.6905	2.8400e-003	0.2300	2.2500e-003	0.2323	0.0610	2.0500e-003	0.0631		236.5271	236.5271	0.0154		236.8502
Total	**0.1297**	**0.1635**	**1.6905**	**2.8400e-003**	**0.2300**	**2.2500e-003**	**0.2323**	**0.0610**	**2.0500e-003**	**0.0631**		**236.5271**	**236.5271**	**0.0154**		**236.8502**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3574	13.6473	9.4563	0.0142		0.8246	0.8246		0.7609	0.7609	0.0000	1,428.7755	1,428.7755	0.4115		1,437.4178
Paving	0.4559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8133**	**13.6473**	**9.4563**	**0.0142**		**0.8246**	**0.8246**		**0.7609**	**0.7609**	**0.0000**	**1,428.7755**	**1,428.7755**	**0.4115**		**1,437.4178**

3.5 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1297	0.1635	1.6905	2.8400e-003	0.2300	2.2500e-003	0.2323	0.0610	2.0500e-003	0.0631		236.5271	236.5271	0.0154		236.8502
Total	**0.1297**	**0.1635**	**1.6905**	**2.8400e-003**	**0.2300**	**2.2500e-003**	**0.2323**	**0.0610**	**2.0500e-003**	**0.0631**		**236.5271**	**236.5271**	**0.0154**		**236.8502**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.7367					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**8.1052**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0741	0.0935	0.9660	1.6200e-003	0.1314	1.2800e-003	0.1327	0.0349	1.1700e-003	0.0360		135.1584	135.1584	8.7900e-003		135.3430
Total	**0.0741**	**0.0935**	**0.9660**	**1.6200e-003**	**0.1314**	**1.2800e-003**	**0.1327**	**0.0349**	**1.1700e-003**	**0.0360**		**135.1584**	**135.1584**	**8.7900e-003**		**135.3430**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.7367					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**8.1052**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0741	0.0935	0.9660	1.6200e-003	0.1314	1.2800e-003	0.1327	0.0349	1.1700e-003	0.0360		135.1584	135.1584	8.7900e-003		135.3430
Total	**0.0741**	**0.0935**	**0.9660**	**1.6200e-003**	**0.1314**	**1.2800e-003**	**0.1327**	**0.0349**	**1.1700e-003**	**0.0360**		**135.1584**	**135.1584**	**8.7900e-003**		**135.3430**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.493619	0.037966	0.233594	0.143711	0.050002	0.006916	0.012438	0.004613	0.000950	0.002925	0.009100	0.000713	0.003453

4.4 Fleet Mix

Historical Energy Use: N

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Unmitigated	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.7000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**		**0.0197**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.7000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**		**0.0197**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

CalEEMod Model Output File
Construction-Related Emissions
Winter Daily Period

Auto Shop - Construction of Ben Lomond Shop

Santa Cruz County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	8.85	1000sqft	0.20	8,850.00	0
Parking Lot	75.93	1000sqft	1.74	75,925.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This analysis is for Phase I construction only, not for operational.

Land Use - 8,850 SqFt bldg size and 75,925 SqFt asphalt paving quantities measured from site plan.

Construction Phase - No demolition. Proj Descr: Start construction 7/15/15, 10-month construction period. Retain default number of days.

Off-road Equipment - Construction equipment specified in Project Description. No Rubber Tired Dozers.

Off-road Equipment - Construction equipment specified in Project Description. No Rubber Tired Dozers. Add Excavator and Compactors.

Off-road Equipment - Construction equipment specified in Project Description. No Cranes.

Off-road Equipment - Construction equipment specified in Project Description. Add Compactors.

Off-road Equipment -

Trips and VMT - Employee trips (20, 20, 40, 28, 16) and Dump Truck hauling trips (2 during Bldg Constr) from Project Description.

Architectural Coating - 75 g/l VOC content Per MBUAPCD Rule 426, average of flat and non-flat.

Vehicle Trips - Constuction only. No change in long-term operational emissions.

Consumer Products - Construction only. No change in long-term operational emissions.

Area Coating - Construction only. No change in long-term operational emissions.

Landscape Equipment - Construction only. No change in long-term operational emissions.

Energy Use - Construction only. No change in long-term operational emissions.

Water And Wastewater - Construction only. No change in long-term operational emissions.

Solid Waste - Construction only. No change in long-term operational emissions.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	75.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	75.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	75.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	75.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	75
tblAreaCoating	Area_Nonresidential_Interior	16692	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	75	250
tblConsumerProducts	ROG_EF	2.14E-05	1E-09

tblEnergyUse	LightingElect	3.43	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	18.78	0.00
tblLandscapeEquipment	NumberSummerDays	250	0.1
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblProjectCharacteristics	OperationalYear	2014	2016
tblSolidWaste	SolidWasteGenerationRate	33.81	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	35.00	40.00
tblTripsAndVMT	WorkerTripNumber	18.00	28.00
tblTripsAndVMT	WorkerTripNumber	7.00	16.00
tblVehicleTrips	ST_TR	62.00	0.00
tblVehicleTrips	SU_TR	62.00	0.00
tblVehicleTrips	WD_TR	62.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	832,617.80	0.00
tblWater	OutdoorWaterUseRate	510,314.14	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	4.0667	27.0529	21.0203	0.0290	5.9639	1.5157	7.4327	2.9973	1.4625	4.3485	0.0000	2,712.1745	2,712.1745	0.6062	0.0000	2,724.9038
2016	8.1857	22.2289	20.1806	0.0290	0.4206	1.3915	1.8121	0.1132	1.3414	1.4546	0.0000	2,688.7544	2,688.7544	0.4746	0.0000	2,698.7211
Total	**12.2524**	**49.2818**	**41.2009**	**0.0581**	**6.3844**	**2.9072**	**9.2447**	**3.1105**	**2.8038**	**5.8031**	**0.0000**	**5,400.9289**	**5,400.9289**	**1.0808**	**0.0000**	**5,423.6249**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	4.0667	27.0529	21.0203	0.0290	5.9639	1.5157	7.4327	2.9973	1.4625	4.3485	0.0000	2,712.1745	2,712.1745	0.6062	0.0000	2,724.9038
2016	8.1857	22.2289	20.1806	0.0290	0.4206	1.3915	1.8121	0.1132	1.3414	1.4546	0.0000	2,688.7544	2,688.7544	0.4746	0.0000	2,698.7211
Total	**12.2524**	**49.2818**	**41.2009**	**0.0581**	**6.3844**	**2.9072**	**9.2447**	**3.1105**	**2.8038**	**5.8031**	**0.0000**	**5,400.9289**	**5,400.9289**	**1.0808**	**0.0000**	**5,423.6249**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0197**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**	**0.0000**	**0.0197**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/15/2015	7/16/2015	5	2	
2	Grading	Grading	7/17/2015	7/22/2015	5	4	
3	Building Construction	Building Construction	7/23/2015	4/27/2016	5	200	
4	Paving	Paving	4/28/2016	5/11/2016	5	10	
5	Architectural Coating	Architectural Coating	5/12/2016	5/25/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,692; Non-Residential Outdoor: 5,564 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Grading	Excavators	1	7.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Plate Compactors	2	7.00	8	0.43
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	6.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Plate Compactors	2	7.00	8	0.43
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	40.00	14.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.5362	26.8886	17.0107	0.0171		1.4671	1.4671		1.3497	1.3497		1,801.7440	1,801.7440	0.5379		1,813.0398
Total	**2.5362**	**26.8886**	**17.0107**	**0.0171**	**5.7996**	**1.4671**	**7.2666**	**2.9537**	**1.3497**	**4.3034**		**1,801.7440**	**1,801.7440**	**0.5379**		**1,813.0398**

3.2 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1167	0.1643	1.4803	1.9400e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		166.8734	166.8734	0.0123		167.1308
Total	**0.1167**	**0.1643**	**1.4803**	**1.9400e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**166.8734**	**166.8734**	**0.0123**		**167.1308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.5362	26.8886	17.0107	0.0171		1.4671	1.4671		1.3497	1.3497	0.0000	1,801.7440	1,801.7440	0.5379		1,813.0398
Total	**2.5362**	**26.8886**	**17.0107**	**0.0171**	**5.7996**	**1.4671**	**7.2666**	**2.9537**	**1.3497**	**4.3034**	**0.0000**	**1,801.7440**	**1,801.7440**	**0.5379**		**1,813.0398**

3.2 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1167	0.1643	1.4803	1.9400e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		166.8734	166.8734	0.0123		167.1308
Total	**0.1167**	**0.1643**	**1.4803**	**1.9400e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**166.8734**	**166.8734**	**0.0123**		**167.1308**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.5031	26.6620	17.4829	0.0196		1.4251	1.4251		1.3124	1.3124		2,028.6802	2,028.6802	0.5939		2,041.1520
Total	**2.5031**	**26.6620**	**17.4829**	**0.0196**	**4.9143**	**1.4251**	**6.3393**	**2.5256**	**1.3124**	**3.8380**		**2,028.6802**	**2,028.6802**	**0.5939**		**2,041.1520**

3.3 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1167	0.1643	1.4803	1.9400e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		166.8734	166.8734	0.0123		167.1308
Total	**0.1167**	**0.1643**	**1.4803**	**1.9400e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**166.8734**	**166.8734**	**0.0123**		**167.1308**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	2.5031	26.6620	17.4829	0.0196		1.4251	1.4251		1.3124	1.3124	0.0000	2,028.6802	2,028.6802	0.5939		2,041.1520
Total	**2.5031**	**26.6620**	**17.4829**	**0.0196**	**4.9143**	**1.4251**	**6.3393**	**2.5256**	**1.3124**	**3.8380**	**0.0000**	**2,028.6802**	**2,028.6802**	**0.5939**		**2,041.1520**

3.3 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1167	0.1643	1.4803	1.9400e-003	0.1643	1.7400e-003	0.1660	0.0436	1.5800e-003	0.0452		166.8734	166.8734	0.0123		167.1308
Total	**0.1167**	**0.1643**	**1.4803**	**1.9400e-003**	**0.1643**	**1.7400e-003**	**0.1660**	**0.0436**	**1.5800e-003**	**0.0452**		**166.8734**	**166.8734**	**0.0123**		**167.1308**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6000	21.5642	15.0041	0.0220		1.4851	1.4851		1.4344	1.4344		2,055.6247	2,055.6247	0.4741		2,065.5812
Total	**3.6000**	**21.5642**	**15.0041**	**0.0220**		**1.4851**	**1.4851**		**1.4344**	**1.4344**		**2,055.6247**	**2,055.6247**	**0.4741**		**2,065.5812**

3.4 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7000e-004	3.1500e-003	3.8900e-003	1.0000e-005	2.7000e-004	5.0000e-005	3.2000e-004	7.0000e-005	4.0000e-005	1.2000e-004		0.7287	0.7287	1.0000e-005		0.7288
Vendor	0.2329	1.5935	3.0518	3.2100e-003	0.0916	0.0271	0.1186	0.0260	0.0249	0.0509		322.0745	322.0745	3.0200e-003		322.1378
Worker	0.2335	0.3286	2.9606	3.8700e-003	0.3286	3.4800e-003	0.3321	0.0872	3.1600e-003	0.0903		333.7468	333.7468	0.0245		334.2617
Total	**0.4667**	**1.9253**	**6.0163**	**7.0900e-003**	**0.4204**	**0.0306**	**0.4510**	**0.1132**	**0.0281**	**0.1413**		**656.5499**	**656.5499**	**0.0276**		**657.1283**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6000	21.5642	15.0041	0.0220		1.4851	1.4851		1.4344	1.4344	0.0000	2,055.6247	2,055.6247	0.4741		2,065.5812
Total	**3.6000**	**21.5642**	**15.0041**	**0.0220**		**1.4851**	**1.4851**		**1.4344**	**1.4344**	**0.0000**	**2,055.6247**	**2,055.6247**	**0.4741**		**2,065.5812**

3.4 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7000e-004	3.1500e-003	3.8900e-003	1.0000e-005	2.7000e-004	5.0000e-005	3.2000e-004	7.0000e-005	4.0000e-005	1.2000e-004		0.7287	0.7287	1.0000e-005		0.7288
Vendor	0.2329	1.5935	3.0518	3.2100e-003	0.0916	0.0271	0.1186	0.0260	0.0249	0.0509		322.0745	322.0745	3.0200e-003		322.1378
Worker	0.2335	0.3286	2.9606	3.8700e-003	0.3286	3.4800e-003	0.3321	0.0872	3.1600e-003	0.0903		333.7468	333.7468	0.0245		334.2617
Total	**0.4667**	**1.9253**	**6.0163**	**7.0900e-003**	**0.4204**	**0.0306**	**0.4510**	**0.1132**	**0.0281**	**0.1413**		**656.5499**	**656.5499**	**0.0276**		**657.1283**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5000e-004	2.7000e-003	3.7100e-003	1.0000e-005	3.6000e-004	4.0000e-005	4.0000e-004	9.0000e-005	4.0000e-005	1.3000e-004		0.7229	0.7229	1.0000e-005		0.7230
Vendor	0.2122	1.3903	2.8851	3.2100e-003	0.0916	0.0227	0.1143	0.0260	0.0208	0.0468		319.0515	319.0515	2.7200e-003		319.1085
Worker	0.2013	0.2901	2.5844	3.8600e-003	0.3286	3.2100e-003	0.3318	0.0872	2.9300e-003	0.0901		322.0368	322.0368	0.0220		322.4984
Total	**0.4137**	**1.6831**	**5.4732**	**7.0800e-003**	**0.4206**	**0.0259**	**0.4465**	**0.1132**	**0.0238**	**0.1370**		**641.8112**	**641.8112**	**0.0247**		**642.3299**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176	0.0000	2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**	**0.0000**	**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5000e-004	2.7000e-003	3.7100e-003	1.0000e-005	3.6000e-004	4.0000e-005	4.0000e-004	9.0000e-005	4.0000e-005	1.3000e-004		0.7229	0.7229	1.0000e-005		0.7230
Vendor	0.2122	1.3903	2.8851	3.2100e-003	0.0916	0.0227	0.1143	0.0260	0.0208	0.0468		319.0515	319.0515	2.7200e-003		319.1085
Worker	0.2013	0.2901	2.5844	3.8600e-003	0.3286	3.2100e-003	0.3318	0.0872	2.9300e-003	0.0901		322.0368	322.0368	0.0220		322.4984
Total	**0.4137**	**1.6831**	**5.4732**	**7.0800e-003**	**0.4206**	**0.0259**	**0.4465**	**0.1132**	**0.0238**	**0.1370**		**641.8112**	**641.8112**	**0.0247**		**642.3299**

3.5 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3574	13.6473	9.4563	0.0142		0.8246	0.8246		0.7609	0.7609		1,428.7755	1,428.7755	0.4115		1,437.4178
Paving	0.4559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8133**	**13.6473**	**9.4563**	**0.0142**		**0.8246**	**0.8246**		**0.7609**	**0.7609**		**1,428.7755**	**1,428.7755**	**0.4115**		**1,437.4178**

3.5 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1409	0.2030	1.8091	2.7000e-003	0.2300	2.2500e-003	0.2323	0.0610	2.0500e-003	0.0631		225.4258	225.4258	0.0154		225.7488
Total	**0.1409**	**0.2030**	**1.8091**	**2.7000e-003**	**0.2300**	**2.2500e-003**	**0.2323**	**0.0610**	**2.0500e-003**	**0.0631**		**225.4258**	**225.4258**	**0.0154**		**225.7488**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3574	13.6473	9.4563	0.0142		0.8246	0.8246		0.7609	0.7609	0.0000	1,428.7755	1,428.7755	0.4115		1,437.4178
Paving	0.4559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8133**	**13.6473**	**9.4563**	**0.0142**		**0.8246**	**0.8246**		**0.7609**	**0.7609**	**0.0000**	**1,428.7755**	**1,428.7755**	**0.4115**		**1,437.4178**

3.5 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1409	0.2030	1.8091	2.7000e-003	0.2300	2.2500e-003	0.2323	0.0610	2.0500e-003	0.0631		225.4258	225.4258	0.0154		225.7488
Total	**0.1409**	**0.2030**	**1.8091**	**2.7000e-003**	**0.2300**	**2.2500e-003**	**0.2323**	**0.0610**	**2.0500e-003**	**0.0631**		**225.4258**	**225.4258**	**0.0154**		**225.7488**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.7367					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**8.1052**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0805	0.1160	1.0338	1.5500e-003	0.1314	1.2800e-003	0.1327	0.0349	1.1700e-003	0.0360		128.8147	128.8147	8.7900e-003		128.9993
Total	**0.0805**	**0.1160**	**1.0338**	**1.5500e-003**	**0.1314**	**1.2800e-003**	**0.1327**	**0.0349**	**1.1700e-003**	**0.0360**		**128.8147**	**128.8147**	**8.7900e-003**		**128.9993**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.7367					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	**8.1052**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**	**0.0000**	**281.4481**	**281.4481**	**0.0332**		**282.1449**

3.6 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0805	0.1160	1.0338	1.5500e-003	0.1314	1.2800e-003	0.1327	0.0349	1.1700e-003	0.0360		128.8147	128.8147	8.7900e-003		128.9993
Total	**0.0805**	**0.1160**	**1.0338**	**1.5500e-003**	**0.1314**	**1.2800e-003**	**0.1327**	**0.0349**	**1.1700e-003**	**0.0360**		**128.8147**	**128.8147**	**8.7900e-003**		**128.9993**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.493619	0.037966	0.233594	0.143711	0.050002	0.006916	0.012438	0.004613	0.000950	0.002925	0.009100	0.000713	0.003453

4.4 Fleet Mix

Historical Energy Use: N

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Unmitigated	9.5000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.7000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**		**0.0197**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.7000e-004	9.0000e-005	8.8800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0186	0.0186	5.0000e-005		0.0197
Total	**9.5000e-004**	**9.0000e-005**	**8.8800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0186**	**0.0186**	**5.0000e-005**		**0.0197**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

CalEEMod Model Output File
Construction-Related Emissions
Annual Period

Auto Shop - Construction of Ben Lomond Shop

Santa Cruz County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Automobile Care Center	8.85	1000sqft	0.20	8,850.00	0
Parking Lot	75.93	1000sqft	1.74	75,925.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This analysis is for Phase I construction only, not for operational.

Land Use - 8,850 SqFt bldg size and 75,925 SqFt asphalt paving quantities measured from site plan.

Construction Phase - No demolition. Proj Descr: Start construction 7/15/15, 10-month construction period. Retain default number of days.

Off-road Equipment - Construction equipment specified in Project Description. No Rubber Tired Dozers.

Off-road Equipment - Construction equipment specified in Project Description. No Rubber Tired Dozers. Add Excavator and Compactors.

Off-road Equipment - Construction equipment specified in Project Description. No Cranes.

Off-road Equipment - Construction equipment specified in Project Description. Add Compactors.

Off-road Equipment -

Trips and VMT - Employee trips (20, 20, 40, 28, 16) and Dump Truck hauling trips (2 during Bldg Constr) from Project Description.

Architectural Coating - 75 g/l VOC content Per MBUAPCD Rule 426, average of flat and non-flat.

Vehicle Trips - Constuction only. No change in long-term operational emissions.

Consumer Products - Construction only. No change in long-term operational emissions.

Area Coating - Construction only. No change in long-term operational emissions.

Landscape Equipment - Construction only. No change in long-term operational emissions.

Energy Use - Construction only. No change in long-term operational emissions.

Water And Wastewater - Construction only. No change in long-term operational emissions.

Solid Waste - Construction only. No change in long-term operational emissions.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	75.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	75.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	75.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	75.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	75
tblAreaCoating	Area_Nonresidential_Interior	16692	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	75	250
tblConsumerProducts	ROG_EF	2.14E-05	1E-09

tblEnergyUse	LightingElect	3.43	0.00
tblEnergyUse	NT24E	3.36	0.00
tblEnergyUse	NT24NG	6.90	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	18.78	0.00
tblLandscapeEquipment	NumberSummerDays	250	0.1
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblProjectCharacteristics	OperationalYear	2014	2016
tblSolidWaste	SolidWasteGenerationRate	33.81	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	35.00	40.00
tblTripsAndVMT	WorkerTripNumber	18.00	28.00
tblTripsAndVMT	WorkerTripNumber	7.00	16.00
tblVehicleTrips	ST_TR	62.00	0.00
tblVehicleTrips	SU_TR	62.00	0.00
tblVehicleTrips	WD_TR	62.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	832,617.80	0.00
tblWater	OutdoorWaterUseRate	510,314.14	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2412	1.4407	1.2345	1.7500e-003	0.0396	0.0922	0.1319	0.0145	0.0888	0.1033	0.0000	148.5684	148.5684	0.0280	0.0000	149.1563
2016	0.2046	1.0137	0.8901	1.3300e-003	0.0188	0.0636	0.0823	5.0700e-003	0.0611	0.0662	0.0000	111.8784	111.8784	0.0202	0.0000	112.3028
Total	**0.4459**	**2.4543**	**2.1246**	**3.0800e-003**	**0.0584**	**0.1558**	**0.2142**	**0.0196**	**0.1499**	**0.1695**	**0.0000**	**260.4469**	**260.4469**	**0.0482**	**0.0000**	**261.4591**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2412	1.4407	1.2345	1.7500e-003	0.0396	0.0922	0.1319	0.0145	0.0888	0.1033	0.0000	148.5683	148.5683	0.0280	0.0000	149.1561
2016	0.2046	1.0137	0.8901	1.3300e-003	0.0188	0.0636	0.0823	5.0700e-003	0.0611	0.0662	0.0000	111.8783	111.8783	0.0202	0.0000	112.3027
Total	**0.4459**	**2.4543**	**2.1246**	**3.0800e-003**	**0.0584**	**0.1558**	**0.2142**	**0.0196**	**0.1499**	**0.1695**	**0.0000**	**260.4466**	**260.4466**	**0.0482**	**0.0000**	**261.4588**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.0000e-005	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	19.4370	19.4370	8.8000e-004	1.8000e-004	19.5118
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**19.4370**	**19.4370**	**8.8000e-004**	**1.8000e-004**	**19.5118**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.0000e-005	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	19.4370	19.4370	8.8000e-004	1.8000e-004	19.5118
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**19.4370**	**19.4370**	**8.8000e-004**	**1.8000e-004**	**19.5118**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/15/2015	7/16/2015	5	2	
2	Grading	Grading	7/17/2015	7/22/2015	5	4	
3	Building Construction	Building Construction	7/23/2015	4/27/2016	5	200	
4	Paving	Paving	4/28/2016	5/11/2016	5	10	
5	Architectural Coating	Architectural Coating	5/12/2016	5/25/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,692; Non-Residential Outdoor: 5,564 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Grading	Excavators	1	7.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Plate Compactors	2	7.00	8	0.43
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	6.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Plate Compactors	2	7.00	8	0.43
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	40.00	14.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5400e-003	0.0269	0.0170	2.0000e-005		1.4700e-003	1.4700e-003		1.3500e-003	1.3500e-003	0.0000	1.6345	1.6345	4.9000e-004	0.0000	1.6448
Total	**2.5400e-003**	**0.0269**	**0.0170**	**2.0000e-005**	**5.8000e-003**	**1.4700e-003**	**7.2700e-003**	**2.9500e-003**	**1.3500e-003**	**4.3000e-003**	**0.0000**	**1.6345**	**1.6345**	**4.9000e-004**	**0.0000**	**1.6448**

3.2 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.3900e-003	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1515	0.1515	1.0000e-005	0.0000	0.1517
Total	**1.1000e-004**	**1.5000e-004**	**1.3900e-003**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1515**	**0.1515**	**1.0000e-005**	**0.0000**	**0.1517**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5400e-003	0.0269	0.0170	2.0000e-005		1.4700e-003	1.4700e-003		1.3500e-003	1.3500e-003	0.0000	1.6345	1.6345	4.9000e-004	0.0000	1.6448
Total	**2.5400e-003**	**0.0269**	**0.0170**	**2.0000e-005**	**5.8000e-003**	**1.4700e-003**	**7.2700e-003**	**2.9500e-003**	**1.3500e-003**	**4.3000e-003**	**0.0000**	**1.6345**	**1.6345**	**4.9000e-004**	**0.0000**	**1.6448**

3.2 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	1.5000e-004	1.3900e-003	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1515	0.1515	1.0000e-005	0.0000	0.1517
Total	**1.1000e-004**	**1.5000e-004**	**1.3900e-003**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1515**	**0.1515**	**1.0000e-005**	**0.0000**	**0.1517**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0100e-003	0.0533	0.0350	4.0000e-005		2.8500e-003	2.8500e-003		2.6200e-003	2.6200e-003	0.0000	3.6808	3.6808	1.0800e-003	0.0000	3.7034
Total	**5.0100e-003**	**0.0533**	**0.0350**	**4.0000e-005**	**9.8300e-003**	**2.8500e-003**	**0.0127**	**5.0500e-003**	**2.6200e-003**	**7.6700e-003**	**0.0000**	**3.6808**	**3.6808**	**1.0800e-003**	**0.0000**	**3.7034**

3.3 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.0000e-004	2.7700e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.3030	0.3030	2.0000e-005	0.0000	0.3035
Total	**2.2000e-004**	**3.0000e-004**	**2.7700e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3030**	**0.3030**	**2.0000e-005**	**0.0000**	**0.3035**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0100e-003	0.0533	0.0350	4.0000e-005		2.8500e-003	2.8500e-003		2.6200e-003	2.6200e-003	0.0000	3.6808	3.6808	1.0800e-003	0.0000	3.7034
Total	**5.0100e-003**	**0.0533**	**0.0350**	**4.0000e-005**	**9.8300e-003**	**2.8500e-003**	**0.0127**	**5.0500e-003**	**2.6200e-003**	**7.6700e-003**	**0.0000**	**3.6808**	**3.6808**	**1.0800e-003**	**0.0000**	**3.7034**

3.3 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.0000e-004	2.7700e-003	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.3030	0.3030	2.0000e-005	0.0000	0.3035
Total	**2.2000e-004**	**3.0000e-004**	**2.7700e-003**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3030**	**0.3030**	**2.0000e-005**	**0.0000**	**0.3035**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2088	1.2507	0.8702	1.2700e-003		0.0861	0.0861		0.0832	0.0832	0.0000	108.1602	108.1602	0.0250	0.0000	108.6841
Total	**0.2088**	**1.2507**	**0.8702**	**1.2700e-003**		**0.0861**	**0.0861**		**0.0832**	**0.0832**	**0.0000**	**108.1602**	**108.1602**	**0.0250**	**0.0000**	**108.6841**

3.4 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.8000e-004	2.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0384	0.0384	0.0000	0.0000	0.0384
Vendor	0.0121	0.0916	0.1472	1.9000e-004	5.1500e-003	1.5600e-003	6.7000e-003	1.4700e-003	1.4300e-003	2.9000e-003	0.0000	17.0247	17.0247	1.6000e-004	0.0000	17.0279
Worker	0.0125	0.0175	0.1607	2.2000e-004	0.0184	2.0000e-004	0.0186	4.8900e-003	1.8000e-004	5.0700e-003	0.0000	17.5753	17.5753	1.2900e-003	0.0000	17.6024
Total	**0.0246**	**0.1093**	**0.3081**	**4.1000e-004**	**0.0235**	**1.7600e-003**	**0.0253**	**6.3600e-003**	**1.6100e-003**	**7.9800e-003**	**0.0000**	**34.6384**	**34.6384**	**1.4500e-003**	**0.0000**	**34.6688**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2088	1.2507	0.8702	1.2700e-003		0.0861	0.0861		0.0832	0.0832	0.0000	108.1601	108.1601	0.0250	0.0000	108.6840
Total	**0.2088**	**1.2507**	**0.8702**	**1.2700e-003**		**0.0861**	**0.0861**		**0.0832**	**0.0832**	**0.0000**	**108.1601**	**108.1601**	**0.0250**	**0.0000**	**108.6840**

3.4 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.8000e-004	2.0000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0384	0.0384	0.0000	0.0000	0.0384
Vendor	0.0121	0.0916	0.1472	1.9000e-004	5.1500e-003	1.5600e-003	6.7000e-003	1.4700e-003	1.4300e-003	2.9000e-003	0.0000	17.0247	17.0247	1.6000e-004	0.0000	17.0279
Worker	0.0125	0.0175	0.1607	2.2000e-004	0.0184	2.0000e-004	0.0186	4.8900e-003	1.8000e-004	5.0700e-003	0.0000	17.5753	17.5753	1.2900e-003	0.0000	17.6024
Total	**0.0246**	**0.1093**	**0.3081**	**4.1000e-004**	**0.0235**	**1.7600e-003**	**0.0253**	**6.3600e-003**	**1.6100e-003**	**7.9800e-003**	**0.0000**	**34.6384**	**34.6384**	**1.4500e-003**	**0.0000**	**34.6688**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1382	0.8629	0.6177	9.2000e-004		0.0574	0.0574		0.0553	0.0553	0.0000	77.9921	77.9921	0.0171	0.0000	78.3521
Total	**0.1382**	**0.8629**	**0.6177**	**9.2000e-004**		**0.0574**	**0.0574**		**0.0553**	**0.0553**	**0.0000**	**77.9921**	**77.9921**	**0.0171**	**0.0000**	**78.3521**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.1000e-004	1.4000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0276	0.0276	0.0000	0.0000	0.0276
Vendor	7.9500e-003	0.0579	0.1004	1.4000e-004	3.7300e-003	9.4000e-004	4.6700e-003	1.0600e-003	8.7000e-004	1.9300e-003	0.0000	12.2127	12.2127	1.0000e-004	0.0000	12.2148
Worker	7.8200e-003	0.0112	0.1019	1.6000e-004	0.0133	1.3000e-004	0.0134	3.5400e-003	1.2000e-004	3.6600e-003	0.0000	12.2805	12.2805	8.4000e-004	0.0000	12.2980
Total	**0.0158**	**0.0692**	**0.2024**	**3.0000e-004**	**0.0170**	**1.0700e-003**	**0.0181**	**4.6000e-003**	**9.9000e-004**	**5.6000e-003**	**0.0000**	**24.5207**	**24.5207**	**9.4000e-004**	**0.0000**	**24.5404**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1382	0.8629	0.6177	9.2000e-004		0.0574	0.0574		0.0553	0.0553	0.0000	77.9921	77.9921	0.0171	0.0000	78.3520
Total	**0.1382**	**0.8629**	**0.6177**	**9.2000e-004**		**0.0574**	**0.0574**		**0.0553**	**0.0553**	**0.0000**	**77.9921**	**77.9921**	**0.0171**	**0.0000**	**78.3520**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	1.1000e-004	1.4000e-004	0.0000	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0276	0.0276	0.0000	0.0000	0.0276
Vendor	7.9500e-003	0.0579	0.1004	1.4000e-004	3.7300e-003	9.4000e-004	4.6700e-003	1.0600e-003	8.7000e-004	1.9300e-003	0.0000	12.2127	12.2127	1.0000e-004	0.0000	12.2148
Worker	7.8200e-003	0.0112	0.1019	1.6000e-004	0.0133	1.3000e-004	0.0134	3.5400e-003	1.2000e-004	3.6600e-003	0.0000	12.2805	12.2805	8.4000e-004	0.0000	12.2980
Total	**0.0158**	**0.0692**	**0.2024**	**3.0000e-004**	**0.0170**	**1.0700e-003**	**0.0181**	**4.6000e-003**	**9.9000e-004**	**5.6000e-003**	**0.0000**	**24.5207**	**24.5207**	**9.4000e-004**	**0.0000**	**24.5404**

3.5 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7900e-003	0.0682	0.0473	7.0000e-005		4.1200e-003	4.1200e-003		3.8000e-003	3.8000e-003	0.0000	6.4808	6.4808	1.8700e-003	0.0000	6.5200
Paving	2.2800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.0700e-003**	**0.0682**	**0.0473**	**7.0000e-005**		**4.1200e-003**	**4.1200e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**6.4808**	**6.4808**	**1.8700e-003**	**0.0000**	**6.5200**

3.5 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	9.3000e-004	8.4900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1200e-003	2.9000e-004	1.0000e-005	3.1000e-004	0.0000	1.0234	1.0234	7.0000e-005	0.0000	1.0248
Total	**6.5000e-004**	**9.3000e-004**	**8.4900e-003**	**1.0000e-005**	**1.1100e-003**	**1.0000e-005**	**1.1200e-003**	**2.9000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0234**	**1.0234**	**7.0000e-005**	**0.0000**	**1.0248**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7900e-003	0.0682	0.0473	7.0000e-005		4.1200e-003	4.1200e-003		3.8000e-003	3.8000e-003	0.0000	6.4808	6.4808	1.8700e-003	0.0000	6.5200
Paving	2.2800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.0700e-003**	**0.0682**	**0.0473**	**7.0000e-005**		**4.1200e-003**	**4.1200e-003**		**3.8000e-003**	**3.8000e-003**	**0.0000**	**6.4808**	**6.4808**	**1.8700e-003**	**0.0000**	**6.5200**

3.5 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	9.3000e-004	8.4900e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1200e-003	2.9000e-004	1.0000e-005	3.1000e-004	0.0000	1.0234	1.0234	7.0000e-005	0.0000	1.0248
Total	**6.5000e-004**	**9.3000e-004**	**8.4900e-003**	**1.0000e-005**	**1.1100e-003**	**1.0000e-005**	**1.1200e-003**	**2.9000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0234**	**1.0234**	**7.0000e-005**	**0.0000**	**1.0248**

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.0405**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

3.6 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	5.3000e-004	4.8500e-003	1.0000e-005	6.3000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5848	0.5848	4.0000e-005	0.0000	0.5856
Total	**3.7000e-004**	**5.3000e-004**	**4.8500e-003**	**1.0000e-005**	**6.3000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5848**	**0.5848**	**4.0000e-005**	**0.0000**	**0.5856**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**0.0405**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

3.6 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	5.3000e-004	4.8500e-003	1.0000e-005	6.3000e-004	1.0000e-005	6.4000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5848	0.5848	4.0000e-005	0.0000	0.5856
Total	**3.7000e-004**	**5.3000e-004**	**4.8500e-003**	**1.0000e-005**	**6.3000e-004**	**1.0000e-005**	**6.4000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5848**	**0.5848**	**4.0000e-005**	**0.0000**	**0.5856**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.493619	0.037966	0.233594	0.143711	0.050002	0.006916	0.012438	0.004613	0.000950	0.002925	0.009100	0.000713	0.003453

4.4 Fleet Mix

Historical Energy Use: N

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.4370	19.4370	8.8000e-004	1.8000e-004	19.5118
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.4370	19.4370	8.8000e-004	1.8000e-004	19.5118
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	66814	19.4370	8.8000e-004	1.8000e-004	19.5118
Total		**19.4370**	**8.8000e-004**	**1.8000e-004**	**19.5118**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	66814	19.4370	8.8000e-004	1.8000e-004	19.5118
Total		**19.4370**	**8.8000e-004**	**1.8000e-004**	**19.5118**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.0000e-005	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	2.0000e-005	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

APPENDIX B

Biological Resources Assessment

Biological Resources Assessment

Santa Cruz Auto Shop New Construction Project

Santa Cruz County, California

Prepared For:

Department of General Services
Real Estate Services Division

November 5, 2013

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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1.0 INTRODUCTION

At the request of RESD-Environmental Services, ECORP Consulting, Inc. (ECORP) has conducted a biological resource assessment (BRA) related to a proposed project in Santa Cruz County, California. A new auto maintenance shop (”new auto shop”) will be constructed within a part of an 2.73-acre area next to Ben Lomond Conservation Camp. The purpose of this assessment is to collect information on the biological resources present within the site and to determine any potential biological constraints to site construction.

1.1 Project Location

The new auto shop site is located on Empire Grade Road approximately 2.73 miles west of Boulder Creek in northern Santa Cruz County (Figure 1). The site corresponds to an unsectioned portion of San Vicinte (Escarrilla) Land Grant within the “Big Basin” and “Davenport, California” 7.5-minute quadrangles (U.S. Department of the Interior, Geological Survey 1997a, 1997b). The approximate center of the site occurs at Latitude 37° 07' 53" N and Longitude 122° 10' 12" W. The site occurs within the Monterey Bay watershed (Hydrologic Unit Code (HUC) #18060015) and San Francisco Coastal South watershed (HUC #18060006) and is at approximately 2,647 feet above mean sea level (MSL).

1.2 Project Description

Activities planned under this project are the construction of a new auto shop at the Ben Lomond Conservation Camp.

The new auto shop will be constructed on land of about 2 acres in size where a former nursery was located. The former nursery is located upslope from the camp area. An unpaved road traverses the site from northeast to southwest. The following activities are proposed:

1. Construct a LEED silver rating proto-typical drive-thru 5-bay vehicle repair facility with covered vehicle wash rack and water filtration system including lighting and landscaping;
2. Construct a generator building to house emergency propane powered generator to serve auto shop. Provide single 1,000-gallon propane supply tank to fuel minimum 72 hours of back-up at full rated load;
3. Provide footings and raceways for new radio tower (tower height needs determining);
4. Fire engine water pump test pit;
5. Asphalt paving driveway, parking area (located north of auto shop where vehicles park that attend existing fire training at Ben Lomond Training Facility) and asphalt and concrete paving around Auto shop;
6. Auto shop fire suppression with water tank;
7. Auto shop ten foot high perimeter fencing with two locked gates at both egress/ingress points.
8. Trench and connect into existing underground utilities and install permanent drainage, erosion and sedimentation control measures;
9. New driveway approach (may require trees to be felled);

10. Replace existing above ground storage vaults with two 2,000-gallon diesel and gasoline storage vaults;
11. Demolish existing fuel storage building and construct new building; and
12. Concrete paving fuel dispensing area.

Project duration will be divided into two phases of construction and demolition. The duration from start of construction to substantial completion is expected to be 15 months.

1.3 Biological Setting

The project site is located in the Central Western California region, San Francisco Bay subregion of the California Floristic Province (Hickman 1993). This is an area characterized by a Mediterranean climate comprised of hot and dry summer months and cold and wet winter months. In the time period between January 1937 and December 1965 the annual precipitation at Ben Lomond is 52.2 inches, with the wettest period during November-March. Average maximum temperatures range from 56.5 Fahrenheit (F) in December to 81.6 F in September (NOAA 2002) and average minimum temperatures range from 35.3 F in January to 48.9 F in July.

2.0 REGULATORY REQUIREMENTS

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and animals that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Section 9 of FESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 USC 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of FESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds,

taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Department of Fish and Game (CDFG) Code.

2.1.3 Federal Clean Water Act

The federal Clean Water Act's (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

2.2 State or Local Regulations

2.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, CESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the CDFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

2.2.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (Fish and Game Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Sections 1900-1913) was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The CESA of 1984 (Fish and Game Code Section 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.

2.2.4 California Streambed Alteration Notification/Agreement

Section 1602 of the Fish and Game Code requires that a Streambed Alteration Application be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

2.2.5 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of an important resource on a population-wide or region-wide basis.

2.2.6 Santa Cruz County General Plan 1994

The overall goal of the General Plan is to "guide future growth and development in a manner consistent with the goals and quality of life desired by Santa Cruz County residents." The plan guides commercial and residential development in a way which accommodates reasonable growth and redevelopment while limiting urban expansion." The "1994 General Plan serves two functions: it is a regulatory framework against which all proposed development is measured; and it is a vision statement for the desired future of the County."

Additionally, Chapter 5 of the plan provides a conservation and open space element for the "conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources." The overall goals of the conservation and open space element are:

Natural and Cultural Resource Protection: To protect and restore unique, rare, threatened, endangered, and other natural and cultural resources that warrant preservation because of their biological value, scarcity, scientific value, aesthetic quality, or cultural significance.

Open Space Protection: To retain the scenic, wooded, open space and rural character of Santa Cruz County; to provide a natural buffer between communities; to prevent development in naturally hazardous areas; and to protect wildlife habitat and other natural resources.

Resource Utilization: To provide for the conservation and environmentally sound and orderly economic use of renewable and nonrenewable natural resources to provide employment and income in Santa Cruz County while minimizing impacts to adjoining land uses and the environment.

3.0 METHODS

ECORP biologist Eric Stitt conducted the site assessment on 19 September 2013. Prior to conducting the field portion of the assessment, the CDFW's California Natural Diversity Database (CNDDB) (CDFW 2013) and California Native Plant Society Electronic Inventory (CNPS 2013) were queried to determine the special-status species that had been documented in the topographic quadrangles encompassing the site. Additional data regarding the potential occurrence of special-status species were gathered from various online websites and databases such as Calflora. Soil types were determined using the United States Department of Agriculture National Resource Conservation Service Web Soil Survey (NRCS 2013).

The project site was systematically surveyed on foot to ensure total site coverage. Special attention was given to identifying those portions of the site with the potential to support special-status species and sensitive habitat. Biological resource information that was collected included:

- Potential Waters of the U.S.;

- Plant and animal species directly observed;
- Characterization of habitats present on-site;
- Animal signs (e.g., scat, tracks);
- Active bird nests;
- Burrows and any other special habitat features; and
- Representative site photographs.

3.1 Special-Status Species

Using information from the CNDDB, the literature review, and observations in the field, a list of special-status plant and animal species that have the potential to occur in the general area was generated (Attachment D). Each of these species was assessed for their potential to occur on-site based on the following criteria guidelines:

Present: Species was observed on-site during a site visit or focused survey.

High: Habitat (including soils and elevational requirements) for the species occurs on-site and a known occurrence occurs within 5 miles of the site.

Moderate: Habitat (including soils and elevational requirements) for the species occurs on-site and a known occurrence occurs within the database search, but not within 5 miles of the site; or a known occurrence occurs within 5 miles of the site and marginal or limited amounts of habitat occurs on-site.

Low: Limited habitat (including soils and elevational requirements) for the species occurs on-site and a known occurrence occurs within the database search, but not within 5 miles of the site.

Absent: No suitable habitat (including soils and elevational requirements) occurs on-site, the site is located outside the species known geographical range, or the species was determined to be absent during focused surveys.

4.0 RESULTS

Representative site photos are shown in Attachment A.

4.1 Site Characteristics and Land Use

The planned new auto shop is located in a deforested clearing at approximately 2,647 feet above MSL. The property was previously a garden nursery, although the nursery was discontinued by at least year 1991 (according to historical aerial imagery). The site is generally flat and is currently used to train wildland firefighting techniques, such as creating firebreaks, to CAL FIRE personnel. The campus of Department of Corrections Ben Lomond Conservation Camp #45, a minimum security prison, occurs adjacent to the site to the southeast. A CAL FIRE facility, the Ben Lomond Training Center, occurs west of the proposed project area. This facility includes buildings, water storage tanks, bleachers, a shaded picnic area, and other amenities. A gravel road runs northeast to southwest through the site and provides access to the buildings. Big Basin Substation, a PG&E facility, occurs beyond the CAL FIRE facility to the southwest.

4.2 Plant Communities and Wildlife

Vegetation at the new auto shop site consists of introduced annual grasslands with ripgut brome (*Bromus diandrus*), soft brome (*B. mollis*), and wild oats (*Avena fatua*) as dominant species. Forbs were scattered throughout the grassland, and consisted of lupine (*Lupinus* sp.), plantain (*Plantago major*), California poppy (*Eschscholzia californica*), and turkey mullien (*Croton setigerus*) among other plants. Several large trees, including foothill pine (*Pinus sabiniana*), coast redwood (*Sequoia sempervirens*), and ornamentals provide shade for the buildings. The surrounding topography is gently rolling, hilly, or steeply mountainous, and the surrounding vegetation is characterized as *Calocedrus decurrens* forest alliance-Incense Cedar forest (Sawyer et al. 2009). Incense cedar is the dominant tree in the forest surrounding the site, but other components of the overstory include Ponderosa pine (*Pinus ponderosa*), coast live oak (*Quercus chrysolepis*), Douglas fir (*Pseudotsuga menziesii*), and coast redwood. Madrone (*Arbutus menziesii*) is a major component of the understory.

4.2.1 Wildlife

At the new auto shop site, terrestrial wildlife was more diverse. Common ravens (*Corvus corax*), Brewers blackbirds (*Euphagus cyanocephalus*), Steller's jays (*Cyanocitta stelleri*), house finch (*Haemorhous mexicanus*), and house sparrow (*Passer domesticus*) were among the bird species observed. Arboreal salamander (*Aneides lugubris*), western fence lizard (*Sceloporus occidentalis*), California ground squirrel (*Otospermophilus beecheyi*), and Botta's pocket gopher were also documented. California ground squirrels apparently do not occur in large numbers, however. A list of wildlife observed during the field survey is included in Attachment C.

4.2.2 Soils

One soil type is reported for the new auto shop (Figure 2): (110) Ben Lomond sandy loam, 5 to 15 percent slopes (Natural Resources Conservation Service 2013)

4.2.3 Potential Waters of the U.S.

No potential Waters of the U.S. were found within the proposed project area and there are no previously mapped NWI features on-site (USFWS 2013). During the site visit a small potential seasonal wetland was mapped approximately 50 feet north of the northern project boundary (Figure 3). A small riverine feature, freshwater ponds, and a freshwater forested/shrub wetland occur southwest, south and southeast of the project site (Figure 3). All NWI features are greater than 500 feet away and separated from the project site by infrastructure, managed fields, and/or forest.

4.2.4 Special-Status Plants

Numerous special-status plants have been reported for within 5 miles of the new auto shop site (Figure 4, Attachment D). The vast majority of special-status plants in this region are associated with unique soil/geological characteristics, vegetation communities, and/or habitats, such as coastal scrub, serpentine soil, chenopod scrub, vernal pools, and coastal dunes. Additionally, many special-status plant species in the area are shrubs, trees, or mosses, which are noticeably absent from the formerly cultivated site. However, one individual manzanita shrub was observed along the access road to the site. The shrub was not identified to species because flowers and fruit needed to make the species determination were not present during the time of the survey. There is a possibility the plant could be one of a few special-

status manzanitas reported for the area. Additionally, although the likelihood is low, the grasslands on-site may provide habitat for one or a few special-status species that occur in grasslands or meadows (Attachment D).

4.2.5 Special-Status Wildlife

No special-status animals were observed during the field surveys. A number of special-status animals have been documented within 5 miles of the project site (Figure 5; Attachment D).

Special-status animals that have been documented for nearby the project site include San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), California red-legged frog (*Rana draytonii*), Western pond turtle (*Actinemys marmorata*), Black swift (*Cypseloides niger*), osprey (*Pandion haliaetus*), tricolored blackbird (*Agelaius tricolor*), American peregrine falcon (*Falco peregrinus anatum*), California black rail (*Laterallus jamaicensis coturniculus*), marbled murrelet (*Brachyramphus marmoratus*), Western snowy plover (*Charadrius alexandrinus nivosus*), Central Coast evolutionarily significant unit (ESU) of Coho salmon (*Oncorhynchus kisutch*), Southern California distinct population segment (DPS) of southern steelhead (*Oncorhynchus mykiss irideus*), tidewater goby (*Eucyclogobius newberryi*), Antioch specid wasp (*Philanthus nasalis*), unsilvered fritillary (*Speyeria adiaste adiaste*), Sandy Beach tiger beetle (*Cicindela hirticollis gravida*), monarch butterfly (*Danaus plexippus*), Mount Hermon June beetle (*Polyphylla barbata*), Western pearlshell (*Margaritifera falcata*), Zayante band-winged grasshopper (*Trimerotropis infantilis*), pallid bat (*Antrozous pallidus*), hoary bay (*Lasiurus cinereus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and Santa Cruz kangaroo rat (*Dipodomys venustus venustus*). Additionally, the site occurs within USFWS-designated critical habitat for California red-legged frog, although aquatic habitat is not present on-site.

Most of these species are associated with unique vegetation communities or habitats such as coastal dunes, marshes, creeks, and specific soils. None of these characteristics are present within the proposed project site. Trees in the vicinity may provide habitat for nesting birds and special-status bats. Most are not proposed for removal, but some trees may be felled along the proposed new access road. Other trees are located in close proximity to the project. Nesting birds or roosting bats may be affected if ground clearance or tree felling occurs during bird nesting season (February 1 through August 31). The potential also exists for ground-nesting birds, also covered under MBTA, to use the site during the breeding season.

4.2.6 Wildlife Movement/Corridors

The proposed new auto shop is located within a large clearing within an otherwise dense incense cedar/Douglas fir forest. Abundant use of the site by black-tailed deer (*Odocoileus hemionus*) was noted during the site visit. The site does not appear to serve as a corridor for movement, but rather as a browsing/foraging area. Development of the project site is not expected to adversely affect wildlife movement in the region.

4.3 Recommendations

The site has potential bird nesting habitat within 200 feet of project boundaries. All native birds, including raptors, are protected under the Fish and Game Code and the Federal MBTA.

- To ensure that there are no impacts to protected active nests, a pre-construction nesting bird survey of all suitable habitat on the project should take place within 14 days of the commencement of

construction during the nesting season (February 1-August 31). If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist in consultation with CDFW. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

Other special-status birds identified as potentially occurring are migrants and/or wintering species. These species do not nest in this region. Therefore, no surveys for wintering and migrant species are recommended. Additionally, the following site-specific measures are recommended.

The potential exists for special-status plant species to be present on-site.

- Before construction, the presence or absence of special-status plant species should be determined through surveys conducted according to CNPS protocol. Surveys will be timed according to the blooming period for target species and known reference populations will be visited prior to surveys to confirm the species is blooming where known to occur. If rare species are found, avoidance zones may be established around plants to clearly demarcate areas for avoidance. Avoidance measures and buffer distances may vary between species and the specific avoidance zone distance will be determined in coordination with appropriate resource agencies (CDFW and USFWS).
- Preconstruction surveys for bats should be conducted using appropriate methods (e.g., camera inspection, exit survey with night optics, acoustic survey) within 14 days of tree removal. If bats are found during inspections, removal of that roost feature shall be delayed until the end of the maternity season (May through mid-August), or until a qualified bat biologist has determined that the young are capable of flight.

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United States Department of the Interior, Geological Survey (USGS). 1997b. "Davenport, California" 7.5-minute Quadrangle.

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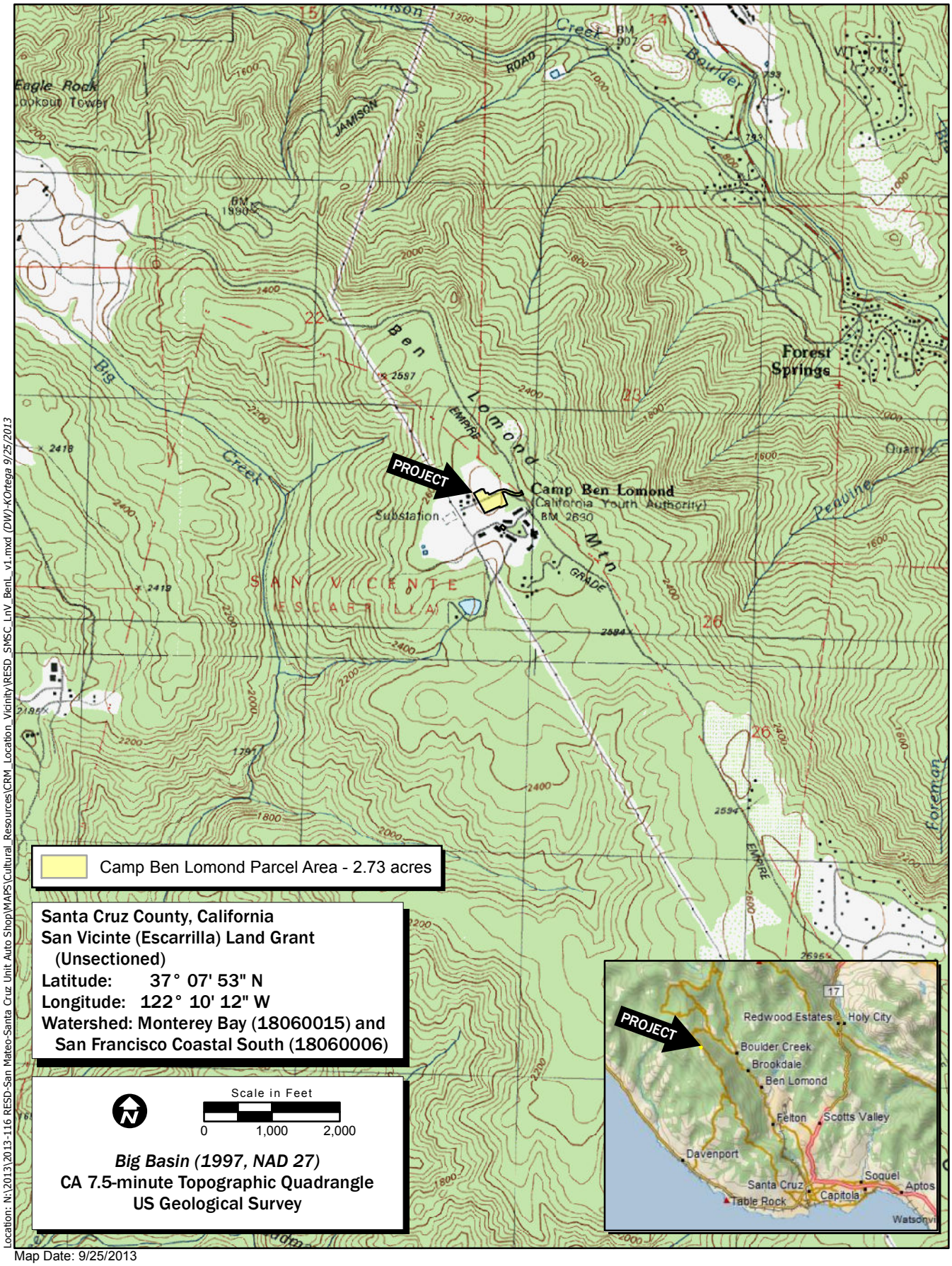
Figure 5. CNDDB Occurrences of Special-Status Animal Species



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Map Date: 9/25/2013
Service Layer Credits: Copyright:© 2012 DeLorme

Figure 1. Camp Ben Lomond Parcel Location and Vicinity

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ENVIRONMENTAL CONSULTANTS

2013-116 RESD San Mateo-Santa Cruz Unit Auto Shop

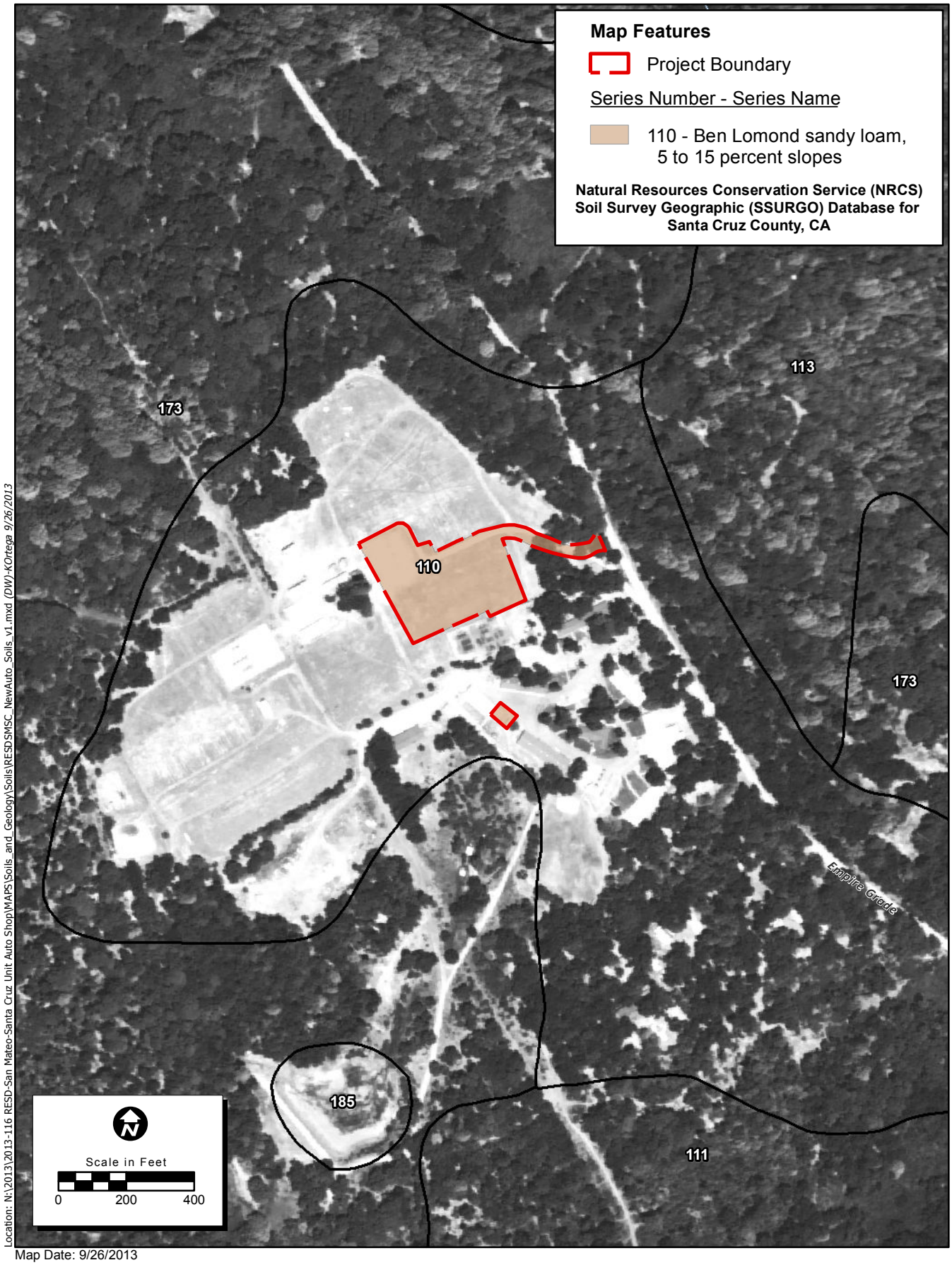

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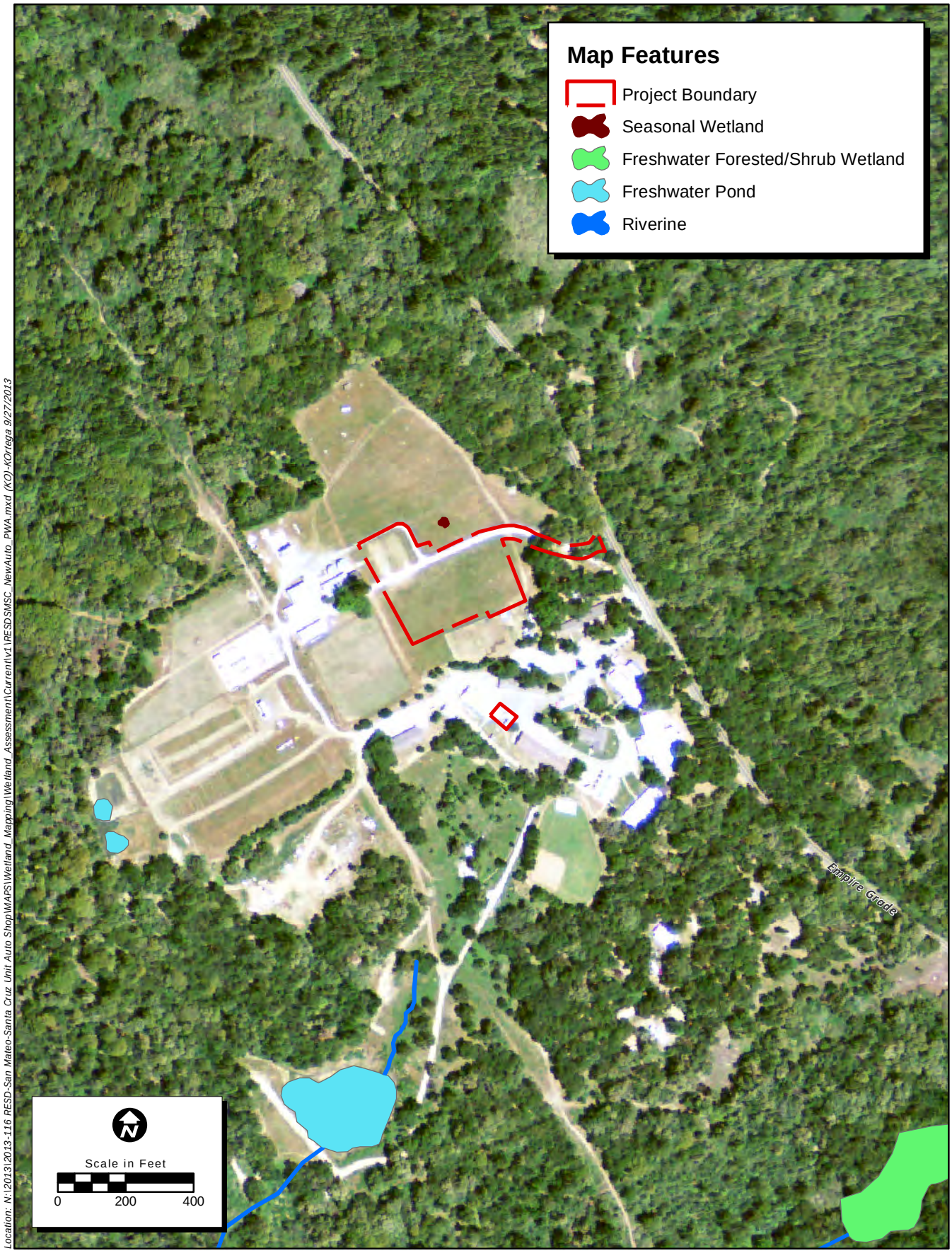
Photo Source: NAIP (2009)

Figure 2. Natural Resources Conservation Service Soil Types



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Map Date: 9/27/2013
Photo Source: NAIP 2012

Figure 3. Preliminary Wetland Assessment

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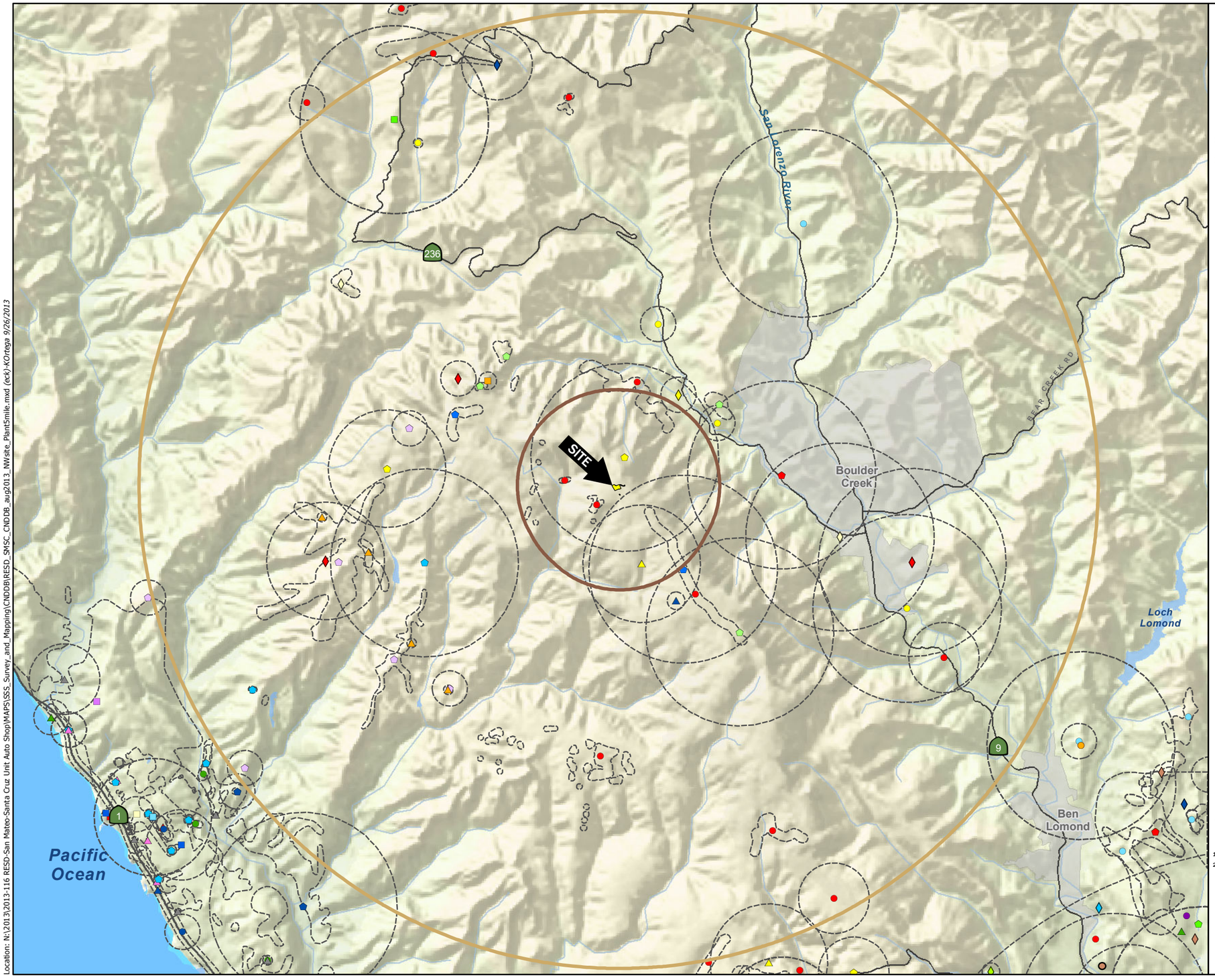
2013-116 RESD San Mateo-Santa Cruz Unit Auto Shop

Figure 4.
CNDDB Occurrences of Special-Status Plant Species
RESD-San Mateo-Santa Cruz Unit Auto Shop



Distance From Project
- 1 mile
- 5 miles

Boundaries
- Project Boundary [1]
- CNDDB Polygon Extent [2]

CNDDB Occurrences [2]
- Anderson's Manzanita *(Arctostaphylos andersonii)*
- Arcuate Bush-mallow *(Malacothamnus arcuatus)*
- Ben Lomond Buckwheat *(Eriogonum nudum var. decurrens)*
- Ben Lomond Spineflower *(Chorizanthe pungens var. hartwegiana)*
- Bent-flowered Fiddleneck *(Amsinckia lunaris)*
- Blasdale's Bent Grass *(Agrostis blasdalei)*
- Bonny Doon Manzanita *(Arctostaphylos silvicola)*
- Choris' Popcornflower *(Plagiobothrys chorisianus var. chorisianus)*
- Elongate Copper Moss *(Mielichhoferia elongata)*
- Kellogg's Horkelia *(Horkelia cuneata var. sericea)*
- Kings Mountain Manzanita *(Arctostaphylos regismontana)*
- Marsh Microseris *(Microseris paludosa)*
- Monterey Pine *(Pinus radiata)*
- Norris' Beard Moss *(Didymodon norrisii)*
- Ohlone Manzanita *(Arctostaphylos ohloneana)*
- Pajaro Manzanita *(Arctostaphylos pajaroensis)*
- Pine Rose *(Rosa pinetorum)*
- Point Reyes Horkelia *(Horkelia marinensis)*
- Robust Spineflower *(Chorizanthe robusta var. robusta)*
- San Francisco Campion *(Silene verecunda ssp. verecunda)*
- San Francisco Collinsia *(Collinsia multicolor)*
- San Francisco Popcornflower *(Plagiobothrys diffusus)*
- Santa Cruz Clover *(Trifolium buckwestiorum)*
- Santa Cruz Cypress *(Hesperocyparis abramsiana var. abramsiana)*
- Santa Cruz Microseris *(Stebbinsoseris decipiens)*
- Santa Cruz Mountains Beardtongue *(Penstemon rattanii var. kleei)*
- Santa Cruz Mountains Pussypaws *(Calyptridium parryi var. hesseae)*
- Santa Cruz Wallflower *(Erysimum teretifolium)*
- Schreiber's Manzanita *(Arctostaphylos glutinosa)*
- Short-leaved Evax *(Hesperevax sparsiflora var. brevifolia)*
- Slender Silver Moss *(Anomobryum julaceum)*
- Tear Drop Moss *(Dacryophyllum falcifolium)*
- White-flowered Rein Orchid *(Piperia candida)*
- White-rayed Pentachaeta *(Pentachaeta bellidiflora)*
- Woodland Woollythreads *(Monolopia gracilens)*

This map may include multiple species' occurrences at each location, some of which may not be visible on this graphic. The CNDDB occurrences shown may not reflect the actual location of the occurrence.

[1] Project Boundary: Glass Architects
[2] CDFW California Natural Diversity Database (CNDDB), August 2013 Update (GIS Shapefile)
CNDDB Occurrences Located on USGS 7.5' Quadrangles: Ano Nuevo, Big Basin, Castle Rock Ridge, Davenport, Felton, Franklin Point, CA.

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Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\SSS_Survey_and_Mapping\CNDDB\RESD_SMSC_CNDDB_aug2013_NWsite_Plant5mile.mxd (eck)-KOrtega 9/26/2013

2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop

Miles
0 1 2

Map Date: 9/26/2013

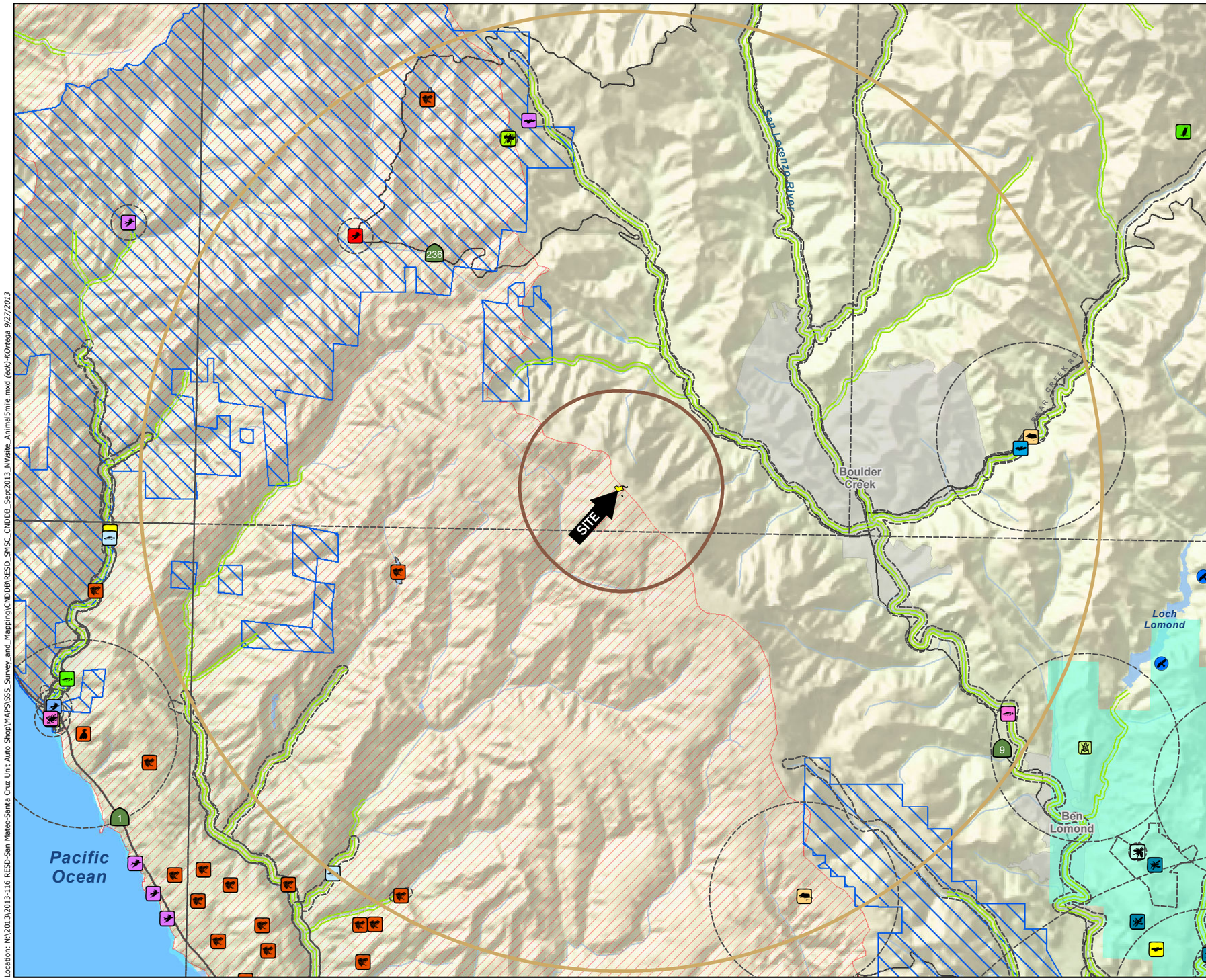

Figure 5.
CNDDB Occurrences of Special-Status Animal Species

RESD-San Mateo-Santa Cruz Unit Auto Shop

Distance From Project
- 1 mile
- 5 miles

Boundaries
- Project Boundary [1]
- CNDDB Polygon Extent [2]

CNDDB Occurrences [2]

Amphibians/Reptiles
- California Red-legged Frog *(Rana draytonii)*
- Western Pond Turtle *(Emys marmorata)*

Birds
- Black Swift *(Cypseloides niger)*
- Osprey *(Pandion haliaetus)*
- Tricolored Blackbird *(Agelaius tricolor)*
- American Peregrine Falcon *(Falco peregrinus anatum)*
- California Black Rail *(Laterallus jamaicensis coturniculus)*
- Marbled Murrelet *(Brachyramphus marmoratus)*
- Western Snowy Plover *(Charadrius alexandrinus nivosus)*

Fish
- Coho Salmon - Central California Coast Esu *(Oncorhynchus kisutch)*
- North Central Coast Drainage Sacramento Sucker/roach River
- Southern Steelhead - Southern California Dps *(Oncorhynchus mykiss irideus)*
- Tidewater Goby *(Eucyclogobius newberryi)*

Invertebrate
- Antioch Specid Wasp *(Philanthus nasalis)*
- Unsilvered Fritillary *(Speyeria adiaste adiaste)*
- Sandy Beach Tiger Beetle *(Cicindela hirticollis gravida)*
- Monarch Butterfly *(Danaus plexippus)*
- Mount Hermon (=barbate) June Beetle *(Polyphylla barbata)*
- Western Pearlshell *(Margaritifera falcata)*
- Zayante Band-winged Grasshopper *(Trimerotropis infantilis)*

Mammals
- Pallid Bat *(Antrozous pallidus)*
- Hoary Bat *(Lasiurus cinereus)*
- Townsend's Big-eared Bat *(Corynorhinus townsendii)*
- Santa Cruz Kangaroo Rat *(Dipodomys venustus venustus)*

Critical Habitat
- California red-legged frog
- Zayante band-winged grasshopper
- Marbled murrelet
- Steelhead Critical Habitat

This map may include multiple species' occurrences at each location, some of which may not be visible on this graphic. The CNDDB occurrences shown may not reflect the actual location of the occurrence.

[1] Project Boundary: Glass Architects
[2] CDFW California Natural Diversity Database (CNDDB), Sept. 2013 Update (GIS Shapefile)
[3] USFWS Critical Habitat: (E. newberryi 2/4/1994; R. draytonii 5/23/1996; T. infantilis 1/24/1997; B. marmoratus 10/1/1992)
CNDDB Occurrences Located on USGS 7.5' Quadrangles: Ano Nuevo, Big Basin, Castle Rock Ridge, Davenport, Felton, Franklin Point, CA.

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Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\SSS_Survey_and_Mapping\CNDDB\RESD_SMSC_CNDDB_Sept2013_NWsite_Animal5mile.mxd (eck)-KOrtega 9/27/2013

2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop

Miles
0 1 2

Map Date: 9/27/2013

LIST OF ATTACHMENTS

Attachment A - Representative Site Photos

Attachment B - Plants Observed On-Site (19 September 2013)

Attachment C - Wildlife Observed On-Site (19 September 2013)

Attachment D - Potentially Occurring Special-Status Species

Attachment E - USFWS Letter

ATTACHMENT A

Representative Site Photos

Ben Lomond—proposed facility, 9/19/13

Ben Lomond—proposed facility, 9/19/13

Ben Lomond—proposed facility, 9/19/13

Ben Lomond—proposed facility, 9/19/13

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Representative Site Photographs

2013-116 RESD San Mateo—Santa Cruz Auto Shop

Ben Lomond—proposed facility, 9/19/13

Ben Lomond—proposed facility, 9/19/13

Ben Lomond—proposed facility, 9/19/13

Ben Lomond—proposed facility, 9/19/13

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Representative Site Photographs

2013-116 RESD San Mateo—Santa Cruz Auto Shop

ATTACHMENT B

Plants Observed On-Site (19 September 2013)

Attachment B. Plants Observed On Site (19 September 2013)

Scientific Name	Common Name
ASTERACEAE	**Sunflower Family**
Heterotheca grandiflora	Telegraph weed
CUPRESSACEAE	**Cypress family**
Calocedrus decurrens	Incense cedar
Sequoia sempervirens	Coast redwood
ERICACEAE	**Heath Family**
Arbutus menziesii	Madrone
Arctostaphylos sp.	Manzanita
EUPHORBIACEAE	**Euphorb Family**
Chamaesyce maculata	Spotted spurge
Croton setigerus	Turkey mullien
FABACEAE	**Legume Family**
Lupinus sp.	Lupine
Trifolium hirtum	Rose clover
Vicia sp.	Vetch
FAGACEAE	**Oak Family**
Quercus chrysolepis	Coast live oak
GERANIACEAE	**Geranium Family**
Erodium botrys	Storksbill
MALVACEAE	**Mallow Family**
Malva neglecta	*Common mallow*
PAPAVERACEAE	**Poppy Family**
Eschscholzia californica	California poppy
PINACEAE	**Pine Family**
Pinus sabiniana	Foothill pine
PITTOSPORACEAE	**Pittosporum Family**
Pittosporum sp.	Pittosporum
POACEAE	**Grass Family**
Avena fatua	Wild oats
Bromus mollis	Soft chess
Bromus diandrus	Ripgut brome
Cynodon dactylon	Bermuda grass
Festuca perennis	Wild rye
PLANTAGINACEAE	**Plantain Family**
Plantago major	Plantain

ATTACHMENT C

Wildlife Observed On-Site (19 September 2013)

Attachment C. Wildlife Observed On Site (19 September 2013)

Common Name	Scientific Name
Amphibians	
Arboreal salamander	*Aneides lugubris*
Reptiles	
Western fence lizard	*Sceloporus occidentalis*
Birds	
Turkey	*Meleagris gallopavo*
Rock pigeon	*Columba livia*
Mourning dove	*Zenaida macroura*
Dark-eyed junco	*Junco hyemalis*
European starling	*Sturnus vulgaris*
Red-tail hawk	*Buteo jamaicensis*
House finch	*Haemorhous mexicanus*
California towhee	*Pipilo crissalis*
Steller's jay	*Cyanocitta stelleri*
Common raven	*Corvus corax*
Brewer's blackbird	*Euphagus cyanocephalus*
Mammals	
Botta's pocket gopher	*Thomomys bottae*
California ground squirrel	*Otospermophilus beecheyi*
Coyote	*Canis latrans*
Black-tailed deer	*Odocoileus hemionus*

ATTACHMENT D

Potentially Occurring Special-Status Species

Attachment D. Potentially Occurring Special-Status Species

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Plants						
Blasdale's bent grass	*Agrostis blasdalei*	-	-	1B	Occurs on coastal dunes, coastal bluffs, and coastal prairie, usually in nutrient poor sandy or gravelly soils with sparse vegetation from sea level to 500 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Franciscan onion	*Allium peninsulare var. franciscanum*	-	-	1B	Often found on serpentine, clay soils on dry hillsides in cismontane woodland and valley and foothill grassland. From 350 to 1000 feet elevation. Not known from Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Bent-flowered fiddleneck	*Amsinckia lunaris*	-	-	1B	Found in coastal bluff scrub, cismontane woodland, valley and foothill grassland from sea level to 1650 feet.	Not Present. Habitat for this species is not present on the project site and the site is above the known elevation limit for this species.
Slender silver moss	*Anomobrynum julaceum*	-	-	2	Occurs in broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Grows on acidic rocks, soils and roadcuts from 300-300 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Anderson's manzanita	*Arctostaphylos andersonii*	-	-	1B	Occurs in broadleafed upland forest, chaparral, northcoast coniferous forest, redwood forest and open sites from 590 to 2600 feet elevation.	Potential. One manzanita species was observed along the access road to the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Schreiber's manzanita	*Arctostaphylos glutinosa*	-	-	1B	Found in closed cone coniferous forest and chaparral, often on mudstone or shale outcrops with *Pinus attenuata.* From 560 to 2260 feet elevation.	Potential. One manzanita species was observed along the access road to the project site.
Ohlone manzanita	*Arctostaphylos ohloneana*	-	-	1B	Found in coastal scrub and closed cone coniferous forests on Monterey shale soils. From 1475 to 1750 feet above sea level.	Potential. One manzanita species was observed along the access road to the project site.
Pajaro manzanita	*Arctostaphylos pajaroensis*	-	-	1B	Found in chaparral on sandy soils from sea level to 2500 feet above sea level.	Potential. One manzanita species was observed along the access road to the project site.
Kings mountain manzanita	*Arctostaphylos regismontana*	-	-	1B	Found on granitic or sandstone outcrops in broadleafed upland forest, chaparral, and north coast coniferous forest from 1000 to 2400 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Bonny Doon manzanita	*Arctostaphylos silvicola*	-	-	1B	Known only from Zayanta sands/soils in closed cone coniferous forest, chaparral, andlower montane coniferous forestfrom 400 to 1300 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Marsh sandwort	*Arenaria paludicola*	FE	CE	1B	Found in sandy openings in bogs and fens and in freshwater marshes and swamps from sea level to 550 feet in elevation.	Not Present. Habitat for this species is not present on the project site.
Coastal Marsh milk-vetch	*Astragalus pycnostachyus var. pycnostachyus*	-	-	1B	Found on coastal dunes and salt marshes at sea level. Not known from Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Santa Cruz Mountains pussypaws	*Calyptridium parryi var. hesseae*	-	-	1B	Found in chaparral and cismontane woodland on sandy or gravelly soils from 1000 to 5000 feet.	Low. Limited habitat for this species may occur on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Swamp harebell	*Campanula californica*	-	-	1B	Found in mesic areas in closed-cone coniferous forests, coastal prairie, or North Coast coniferous forests, bogs and fens, meadows and seeps, and freshwater marshes and swamps from sea level to 1330 feet.	Not Present. Habitat for this species is not present on the project site.
Bristly sedge	*Carex comosa*	-	-	2	Found in coastal prairies, marshes and swamps along lake margins and in valley and foothill grassland from sea level to 2,050 feet.	Not Present. Habitat for this species is not present on the project site.
Deceiving sedge	*Carex saliniformis*	-	-	1B	Occurs in coastal prairie, coastal scrub, meadows, seeps, marshes and swamps from sea level to 750 feet.	Not Present. Habitat for this species is not present on the project site.
Ben Lomond spineflower	*Chorizanthe pungens var. hartwegiana*	FE	-	1B	Occurs on Zayanta coarse soils/sands in lower montane coniferous forest and maritime Ponderosa Pine Sandhills at elevations from 400 to 1500 feet.	Not Present. Habitat for this species is not present on the project site.
Scotts Valley spineflower	*Chorizanthe robusta var. hartwegii*	FE	-	1B	Occurs on mudstone and sandstone outcrops in meadows and valley and foothill grassland. Occurs at 750 feet in elevation.	Low. Limited habitat for this species may occur on the project site, although the site is above the known elevation for this species.
Robust spineflower	*Chorizanthe robusta var. robusta*	FE	-	1B	Occurs on loose sand in terraces and bluffs in cismontane woodland, coastal dunes, and coastal scrub from sea leavel to 400 feet.	Not Present. Habitat for this species is not present on the project site.
Franciscan thistle	*Cirsium andrewsii*	-	-	1B	Found sometimes at seeps on serpentine soil in coastal bluff scrub and broadleafed upland forest, near sea level.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
San Francisco collinsia	*Collinsia multicolor*	-	-	1B	Found on decomposed shale soils with humus in closed cone coniferous forest and coastal scrub from 90 to 820 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Tear drop moss	*Dacryophyllum falcifolium*	-	-	1B	Found on limestone substrates and rock outcrops in coast redwood forest, north coast coniferous forest, from 150 to 900 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Norris' beard moss	*Didymodon norrisii*	-	-	2	Moss is found on wet seeps on rock slabs in cismontane woodland, lower montane coniferous forest.	Not Present. Habitat for this species is not present on the project site.
Western leatherwood	*Dirca occidentalis*	-	-	1B	Found on brushy slopes at mesic sites in broadleafed upland forest, chaparral, closed cone coniferous forest, riparian forests and woodlands. From sea level to 1600 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Ben Lomond buckwheat	*Eriogonum nudum var. decurrens*	-	-	1B	Found on Ponderosa Pine sandhills in chaparral, cismontane woodland, and lower montane coniferous forest from 150 ft to 2600 feet elevation.	Not Present. Habitat for this species is not present on the project site.
San Mateo wooly sunflower	*Eriophyllum latilobum*	FE	CE	1B	Usually found on serpentine soils, often on roadcuts in cismontane woodland. Generally at sea level. Not found in Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Sand-loving wallflower	*Erysimum ammophilum*			1B	Found in sandy openings in maritime chaparral, coastal dunes, and coastal scrub. Usually near sea level.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Santa Cruz wallflower	*Erysimum teretifolium*	FE	CE	1B	Found on Zayante course sands (soils) in lower montane coniferous fores and chaparral from 400 to 2000 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Short-leaved evax	*Hesperevax sparsiflora var. brevifolia*	-	-	1B	Found on sandy bluffs and flats in coastal scrub from sea level to 650 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Santa Cruz cypress	*Hesperocyparis abramsiana var. abramsiana*	FE	CE	1B	Found on sandstone and granitic soils in chaparral, closed cone coniferous forest, and lower montane coniferous forest in the Santa Cruz Mountains. Often occurs with *Pinus attenuata*, at elevations from 900 to 2600 feet.	Not Present. Habitat for this species is not present on the project site.
Butano Ridge cypress	*Hesperocyparis abramsiana var. butanoensis*	FE	CE	1B	Found on sandstone derived soils in closed cone coniferous forest, lower montane coniferous forest, and chaparral from 1300 to 1600 feet	Not Present. Habitat for this species is not present on the project site.
Loma Prieta hoita	*Hoita strobilina*	-	-	1B	Occurs on mesic, serpentine soils in chaparral, cismontane woodland, and riparian woodland from sea level to 2000 feet.	Not Present. Habitat for this species is not present on the project site.
Santa Cruz tarplant	*Holocarpha macradenia*	FT	CE	1B	Found on clay or sandy soils in coastal prairie, coastal scrub, and valley and foothill grassland between sea level and 800 feet elevation.	Low. Limited habitat for this species may occur on the project site, although it is above the known elevation for this species.
Kellogg's horkelia	*Horkelia cuneata var. sericea*	-	-	1B	Found on dunes, coastal sandhills and in openings in closed cone coniferous forest, coastal scrub, and chaparral from sea level to 650 feet in elevation.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Point Reyes horkelia	*Horkelia marinensis*	-	-	1B	Found on sandy dunes and flats in coastal prairie, grassland and coastal scrub communities near sea level.	Not Present. Habitat for this species is not present on the project site.
Legenere limosa	*Legenere*	-	-	1B	A vernal pool species- found from sea level to approximately 3000 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Smooth lessingia	*Lessingia micradenia var. glabrata*	-	-	1B	Occurs on serpentine soils in chaparral, often on roadside cuts, from 400 to 1600 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Point Reyes meadowfoam	*Limnanthes douglasii ssp. sulphurea*		CE	1B	Found on clay soils in freshwater marsh, meadows, seeps, and vernal pools in coastal prairie and cismontane woodland. Near sea level. Not known from Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Indian Valley bush-mallow	*Malacothamnus aboriginum*	-	-	1B	Found on granitic outcrops and sandy, often disturbed, bare soil in cismontane woodland and chaparral. From 500 to 5600 feet elevation. No records from Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Arcuate bush-mallow	*Malacothamnus arcuatus*	-	-	1B	Occurs on gravelly alluvium in chaparral from 250 feet to 1200 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Davidson's bush-mallow	*Malacothamnus davidsonii*	-	-	1B	Occurs in sandy washes in coastal scrub, riparian woodland, chaparral, and cismontane woodland. From 600 to 2800 feet elevation. No records from Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Marsh microseris	*Microseris paludosa*	-	-	1B	Inhabits closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland from sea level to 1000 feet.	Low. Limited habitat for this species may occur on the project site, although the site is above the known elevation for this species.
Elongate copper moss	*Mielichhoferia elongata*	-	-	2	Occurs on metamorphic rock in cismontane woodland, usually in vernally mesic areas from 1640 to 4265 feet.	Not Present. Habitat for this species is not present on the project site.
Woodland woolythreads	*Monolopia gracilens*	-	-	1B	Found on sandy to rocky serpentine soils in chaparral, valley and foothill woodland, cismontane woodland, broadleafed upland forest, north coast coniferous forest, and grasslands from 330 to 4000 feet in elevation.	Low. Limited habitat for this species may occur on the project site.
Kellman's bristle moss	*Orthotrichum kellmanii*	-	-	1B	Occurs on sandstone outcrops with high calcium concentrations in cismontane oak woodlands, near Big Basin State Park.	Not Present. Habitat for this species is not present on the project site.
Dudley's lousewort	*Pedicularis dudleyi*	-	CR	1B	Occurs in North Coast coniferous forests, maritime chaparral, valley and foothill grassland, and cismontane woodland from 600 to 3000 feet elevation.	Low. Limited habitat for this species may occur on the project site.
Santa Cruz Mountains beardtongue	*Penstemon rattanii var. kleei*	-	-	1B	Found on sandy shale slopes in chaparral, lower montane coniferous forest, and chaparral from 1300 to 3600 feet.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
White-rayed pentachaeta	*Pentachaeta bellidiflora*	FE	CE	1B	Usually occurs on serpentine bedrock-derived soils in valley and foothill grassland and cismontane woodland from sea level to 2000 feet elevation.	Low. Limited habitat for this species may occur on the project site, although the site is above the known elevation for this species.
Monterey pine	*Pinus radiata*	-	-	1B	Occurs on dry bluffs and slopes in closed cone coniferous forest and cismontane woodland from sea level to 600 feet elevation.	Not Present. Habitat for this species is not present on the project site.
White-flowered rein orchid	*Piperia candida*	-	-	1B	Found on serpentine soils in forest duff and mossy banks in north coast coniferous forest, lower montane coniferous forest, and broadleafed upland forest from sea level to 4300 feet.	Not Present. Habitat for this species is not present on the project site.
Choris' popcorn-flower	*Plagiobothrys chorisianus var. chorisianus*	-	-	1B	Found in mesic areas in chaparral, coastal scrub, and coastal prarie generally at sea level.	Not Present. Habitat for this species is not present on the project site.
San Francisco popcorn-flower	*Plagiobothrys diffusus*	-	CE	1B	Found in valley and foothill grassland and coastal prairie from sea level to 1200 feet.	Low. Limited habitat for this species may occur on the project site, although the site is above the known elevation for this species.
Scotts Valley polygonum	*Polygonum hickmanii*	FE	CE	1B	Found on purisma sandstone or mudstone, usually seeps and areas of runoff, in valley and foothill grassland at approximately 100 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Pine rose	*Rosa pinetorum*	-	-	1B	Occurs in closed cone coniferous forest from sea level to 690 feet in elevation.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Chaparral ragwort	*Senecio aphanactis*	-	-	2	Found in chaparral, cismontane woodland, and alkaline coastal scrub from sea level to 2600 feet.	Not Present. Habitat for this species is not present on the project site.
San Francisco campion	*Silene verecunda ssp. verecunda*	-	-	1B	Found on mudstone, shale, or (rarely) serpentine soils in valley and foothill grassland, coastal bluff scrub, chaparral, or coastal prairie, near sea level to 2200 feet.	Not Present. Habitat for this species is not present on the project site.
Santa Cruz microseris	*Stebbinsoseris decipiens*	-	-	1B	Found in open areas in loose or disturbed sandstone, shale or serpentine derived soils. Occurs on seaward slopes in broadleafed upland forest, closed cone coniferous forest, chaparral, coastal prairie, and coastal scrub from sea level to 1600 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Santa Cruz clover	*Trifolium buckwestiorum*	-	-	1B	Found in mesic grasslands and gravel margins in coastal prairie, broadleafed upland forest, and cismontane woodland from 300 feet to 2000 feet elevation.	Not Present. Habitat for this species is not present on the project site.
Caper-fruited tropidocarpum	*Tropidocarpum capparideum*	-	-	1B	Occurs on alkaline clay soils in valley and foothill grasslands from sea level to 1500 feet elevation. No records from Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Invertebrates						
Unsilvered fritillary	*Speyeria adiaste adiaste*	-	-	CNDDB	Occurs in openings with western exposures near Sequoia sempervirens, mixed woodlands, and chaparral. Violets (*Viola* sp.) are obligate host of caterpillars.	Low. Violets were not observed on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Sandy Beach tiger beetle	*Cicindela hirticollis gravida*	-	-	CNDDB	Inhabits coastal areas adjacent to non-brackish water. Needs clean, light sand in the upper tidal zone.	Not Present. Habitat for this species is not present on the project site.
Antioch specid wasp	*Philanthus nasalis*	-	-	CNDDB	Currently known only from the inland sandhills of Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Monarch butterfly	*Danaus plexippus*	-	-	CNDDB	Roosts in protected tree groves with nector and water sources nearby.	Not Present. Habitat for this species is not present on the project site.
Mount Hermon June beetle	*Polyphylla barbata*	FE	-	-	Known only from the sandhills near Mount Hermon, Santa Cruz County.	Not Present. Habitat for this species is not present on the project site.
Western pearlshell	*Margaritifera falcata*	-	-	CNDDB	An aquatic snail that uses low velocity waters.	Not Present. Habitat for this species is not present on the project site.
Zayante band-winged grasshopper	*Trimerotropis infantilis*	FE	-	-	Found on isolated sandstone deposits in the Zayante sand hills ecosystem, sometimes in sparse chaparral with a grass understory.	Not Present. Habitat for this species is not present on the project site.
Fish						
Tidewater goby	*Eucyclogobius newberryi*	FE	-	CSC	Found in brackish waters, still but not stagnant and with high oxygen levels, including shallow lagoons and lower stream reaches.	Not Present. Habitat for this species is not present on the project site.
Coho salmon (Central California ESU)	*Oncorhynchus kisutch*	FE	CE	-	Found in undammed rivers, streams, creeks with substrates of loose, silt-free gravel for spawning. Other requirements include cover, cool water, and ample dissolved oxygen. The federal listing applies to populations found between Punts Gorda and the San Lorenzo River, while the state listing applies to fish south of Punta Gorda.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Steelhead (Central CA Coast ESU)	*Oncorhynchus mykiss*	FT	-	-	Occurs in undammed rivers, streams, creeks from the Russian River south to Soquel Creek and to but not including the Pajaro River. Also includes the San Francisco and San Pablo Bay basins.	Not Present. Habitat for this species is not present on the project site.
Amphibians						
California red-legged frog	*Rana draytonii*	FT	-	CSC	Occurs in the Coast Ranges from Mendocino County south to Baja California. found in lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Larvae require 11 to 20 weeks to transform, sometimes overwintering. Adults must have eastivation habitat to endure summer dry down.	Not Present. Habitat for this species is not present on the project site.
Reptiles						
Western pond turtle	*Actinemys marmorata*	-	-	CSC	The only native freshwater turtle in California. This turtle requires basking sites and upland habitats up to 0.5 KM from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	Not Present. Habitat for this species is not present on the project site.
Blainville's (Coast) horned lizard	*Phrynosoma blainvillii*	-	-	CSC	Formerly a wide-spread horned lizard found in a wide variety of habitats, relictual population found at Zayante Sand Hills. Needs open areas for basking, but with bushes and shaded areas for cover. A dietary specialist on native ants.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Birds						
Alameda song sparrow	*Melospiza melodia pusillula*	-	-	BCC, CSC	Found in *Salicornia* salt marshes along south arm of San Francisco Bay. Nests in *Grindelia* shrubs above high tide zone.	Not Present. Habitat for this species is not present on the project site.
American peregrine falcon	*Falco peregrinus anatum*	Delisted	Delisted		Nests on cliffs, banks, dunes, mounds and human structures (buildings) near wetlands, lakes, and other large waters.	Not Present. Habitat for this species is not present on the project site.
Bell's sparrow (nesting)	*Artemisiospiza belli*	-	-	BCC	Nests in chamise (*Addenostemma fasciculatum*) dominated chaparral among coastal sage scrub. Nests on the ground or low within shrubs.	Not Present. Habitat for this species is not present on the project site.
Black swift (nesting)	*Cypseloides niger*	-	-	BCC, CSC	Nests in small colonies on cliffs behind/near waterfalls or in deep canyons and sea bluffs.	Not Present. Habitat for this species is not present on the project site.
Black-chinned sparrow (nesting)	*Spizella atrogularis*	-	-	BCC	Uses sloping ground in mixed chaparral, sagebrush, and other brushy habitats, often on south-facing slopes.	Not Present. Habitat for this species is not present on the project site.
Burrowing owl (burrow sites)	*Athene cunicularia*	-	-	BCC, CSC	Found in grasslands, desert, agricultural and scrublands with low growing vegetation. Nests in ground squirrels burrows at habitat edges.	Low. Marginal habitat for this species is present on the project site. The isolated position of the grassland within a dense surrounding forest, combined with the elevation of the project site, make this species unlikely to occur.
California black rail	*Laterallus jamaicensis coturniculus*	-	CT	-	Needs shallow water and dense vegetation for nesting. Uses freshwater marshes, wet meadows, and shallow saltwater margins.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Cooper's hawk (nesting)	*Accipiter cooperii*	-	-	CNDDB	Nests primarily in deciduous riparian forest, canyon bottoms, and live oak woodlands. Forages in woodlands and edges.	Not Present. Habitat for this species is not present on the project site.
Lewis' woodpecker (nesting)	*Melanerpes lewis*	-	-	BCC	Primary cavity nester in dead trees in woodlands and open forests, usually with an open canopy and brushy understory.	Not Present. Habitat for this species is not present on the project site.
Marbled murrelet	*Brachyramphus marmoratus*	FT	CE	-	Nests in old-growth *Sequoia*/Douglas fir forests up to six miles inland.	Not Present. Habitat for this species is not present on the project site.
Merlin (wintering)	*Falco columbarius*	-	-	CNDDB	Found in woodland and grassland edges. For roosting in open areas, windbreaks are needed. Does not nest in the area.	Not Present. Habitat for this species is not present on the project site.
Olive-sided flycatcher	*Contopus cooperi*	-	-	CSC	Found in coniferous forests, often with tall trees overlooking canyons, meadows, lakes, and other topographic features.	Not Present. Habitat for this species is not present on the project site.
Osprey (nesting)	*Pandion haliaetus*	-	-	CNDDB	Found near ocean shores, large waters such as bays and reservoirs. Builds huge nests in tree tops within 15 miles of fish-laden waters.	Not Present. Habitat for this species is not present on the project site.
Sharp-shinned hawk (nesting)	*Accipiter striatus*	-	-	CNDDB	Nests in riparian areas within Ponderosa Pine, deciduous riparian, black oak, and mixed coniferous forests. Usually nests on north facing slopes within approximately 300 feet of water.	Not Present. Habitat for this species is not present on the project site.
Tricolored blackbird (nesting colony)	*Agelaius tricolor*	-	-	CSC	A highly colonial species that requires open water and anearby foraging area with abundant invertebrate prey.	Not Present. Habitat for this species is not present on the project site.
Western snowy plover	*Charadrius alexandrinus nivosus*	FT		CSC	Nests on sandy, gravelly, or friable soils on sandy beaches, levees of salt ponds, and shores of alkali lakes.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
Yellow warbler (nesting)	*Dendroica petechia*	-	-	CSC	Nests in riparian zones with willow (*Salix* spp.), cottonwood (*Populus fremontii*), Aspen (*Populus tremuloides*), and alder (*Alnus* spp).	Not Present. Habitat for this species is not present on the project site.
Mammals						
Hoary bat	*Lasiurus cinerus*	-	-	CNDDB	Roosts in folliage of medium to large trees, forages primarily on moths. Requires water and habitat edges for feeding.	Low. Habitat for this species does not occur on the project site. However, large trees surrounding the project may provide roosting habitat.
Pallid bat	*Antrozous pallidus*	-	-	CSC	Roosts in mines, man-made structures, rock outcrops, and woodlands near open grasslands for foraging. Roosts must be thermally buffered. Very sensitive to human disturbance.	Low. Habitat for this species does not occur on the project site. However, large trees and buildings surrounding the project may provide roosting habitat.
Townsend's big-eared bat	*Corynorhinus townsendii*	-	CPE	CSC	Found thoughout California in a variety of usually mesic habitats. Roosts in the open, and very sensitive to human disturbance.	Not Present. Habitat for this species is not present on the project site.
Santa Cruz kangaroo rat	*Dipodomys venustus venustus*	-	-	CNDDB	Occurs in mixed chaparral in the Zayante Sand Hills. Needs loose, well-drained sand for burrowing. Only one known population remaining.	Not Present. Habitat for this species is not present on the project site.
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectans*	-	-	CSC	Occurs in chaparral and redwood forests of moderate canopy and coverage. Availability of nesting materials may be limiting factor.	Not Present. Habitat for this species is not present on the project site.

Common Name	Scientific Name	Federal ESA Status	California ESA Status	Other Status	Habitat Description	Potential To Occur On-Site
American badger	*Taxidea taxus*	-	-	CSC	Found in shrublands and grasslands with loose soils. Digs burrows within large compexes of burrowing rodents, especially California ground squirrels (*Otospermophilus beecheyi*)	Low. Habitat for this species is limited, and a large colony of California ground squirrels (primary prey) appears to be absent.

Status Codes:

FE - Federal ESA listed, Endangered.
FT - Federal ESA listed, Threatened.
FPE - Formally Proposed for federal ESA listing as Endangered.
FPT - Formally Proposed for federal ESA listing as Threatened.
FPD - Listed under Federal ESA, but formally proposed for delisting.
Fd - Formally Delisted (delisted species are monitored for 5 years).
FC - Candidate for federal ESA listing as Threatened or Endangered.
NMFS - NOAA/NMFS species of concern
BC - U. S. Fish and Wildlife Service Bird of Conservation Concern (USFWS, 2002).
CE - California ESA or Native Plant Protection Act listed, Endangered.
CT - California ESA or Native Plant Protection Act listed, Threatened.
CR - California ESA or Native Plant Protection Act listed, Rare.
CC - Candidate for California ESA listing as Endangered or Threatened.
CFP - Fish and Game Code of California Fully Protected Species (§3511-birds, §4700-mammals, §5050-reptiles/amphibians).
CSC - California Department of Fish and Game Species of Special Concern (CDFG, updated August 2004).
1A - California Rare Plant Rank/Presumed extinct.
1B - California Rare Plant Rank/Rare or Endangered in California and elsewhere.
2 - California Rare Plant Rank/Rare or Endangered in California, more common elsewhere.
3 - California Rare Plant Rank/Plants About Which More Information is Needed - A Review List.
4 - California Rare Plant Rank/Plants of Limited Distribution - A Watch List.
CNDDB - Species that is tracked by CDFG's Natural Diversity Database but does not have any of the above special-status designations otherwise.

ATTACHMENT E

USFWS Letter

U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

VENTURA FISH AND WILDLIFE OFFICE
2493 PORTOLA ROAD, SUITE B
VENTURA, CA 93003
(805) 644-1766

Endangered Species Act species list information for your project is NOT available online for the following FWS Field Offices:

SACRAMENTO FISH AND WILDLIFE OFFICE
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:

Project Counties:

Santa Cruz, CA

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-122.1748528 37.1315443, -122.1697008 37.1338366, -122.1663964 37.1292844, -122.1715891 37.1270262, -122.1748528 37.1315443)))

Project Type:

Development

U.S. Fish and Wildlife Service

Natural Resources of Concern

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of **10** threatened, endangered, or candidate species, and/or designated critical habitat on your species list. Species on this list are the species that may be affected by your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Please contact the designated FWS office if you have questions.

Species that may be affected by your project: (View all critical habitat on one map)

Amphibians	Status	Species Profile		Contact
California red-legged frog (*Rana draytonii*) Population: Entire	Threatened	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Birds				
Least Bell's vireo (*Vireo bellii pusillus*) Population: Entire	Endangered	species info		Ventura Fish And Wildlife Office
Marbled murrelet (*Brachyramphus marmoratus*) Population: CA, OR, WA	Threatened	species info		Ventura Fish And Wildlife Office
Southwestern Willow flycatcher (*Empidonax traillii extimus*) Population: Entire	Endangered	species info		Ventura Fish And Wildlife Office
Conifers and Cycads				
Santa Cruz cypress (*Cupressus abramsiana*)	Endangered	species info		Ventura Fish And Wildlife Office
Flowering Plants				

Natural Resources of Concern

Ben Lomond spineflower (*Chorizanthe pungens var. hartwegiana*)	Endangered	species info		Ventura Fish And Wildlife Office
Ben Lomond wallflower (*Erysimum teretifolium*)	Endangered	species info		Ventura Fish And Wildlife Office
Marsh Sandwort (*Arenaria paludicola*)	Endangered	species info		Ventura Fish And Wildlife Office
White-Rayed pentachaeta (*Pentachaeta bellidiflora*)	Endangered	species info		Ventura Fish And Wildlife Office
Reptiles				
San Francisco Garter snake (*Thamnophis sirtalis tetrataenia*) Population: Entire	Endangered	species info		Ventura Fish And Wildlife Office

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668). The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

U.S. Fish and Wildlife Service

Natural Resources of Concern

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

The following wetlands intersect your project area:

Wetland Types	NWI Classification Code	Approximate Acres
Freshwater Pond	PUBHh	0.065956
Freshwater Pond	PUBHh	1.395501
Riverine	R4SBC	0.080768

APPENDIX C

Cultural Resources Assessment

Cultural Resources Inventory Report
California Department of General Services
Real Estate Services Division
Santa Cruz Auto Shop New Construction Project
Santa Cruz County, California
ECORP Project No. 2013-116

Prepared For:
Department of General Services
Real Estate Services Division
707 Third Street 3-40
West Sacramento, California 95605

Prepared By:
Jeremy Adams, Stephen Pappas, and Lisa Westwood, RPA
ECORP Consulting, Inc.
2525 Warren Drive
Rocklin, California 95677

October 2013

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

MANAGEMENT SUMMARY

In 2013, the California Department of General Services (DGS), Real Estate Services Division (RESD) retained ECORP Consulting, Inc. to conduct a cultural resources inventory for the proposed Santa Cruz Auto Shop New Construction Project. DGS proposes construct an automotive repair and maintenance facility. The Project Area consists of a proposed location for a new automotive repair shop located at 13575 Empire Grade Road, approximately eight miles northeast of Felton near Ben Lomond, Santa Cruz County, California, herein referred to as the Ben Lomond Site (Figure 1).

The inventory included a records search, literature review, and field survey. The records search results indicated that nine previous cultural resources studies have been conducted within 0.5 mile of the Ben Lomond Site No sites have previously been recorded within the Project Area at the Ben Lomond Site.

As a result of the field survey, no cultural resources were recorded inside the Project Area. However, if Historical Resources are located inside the project area, as determined by the CEQA lead agency and SHPO, mitigation will be required and could consist of some combination of preservation in place, documentation, and public interpretation. Recommendations for the management of unanticipated discoveries are also provided.

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Santa Cruz Auto Shop New Construction Project

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1.0 INTRODUCTION

In August 2013, ECORP was retained by the California Department of General Services (DGS), Real Estate Services Division (RESD) to conduct a cultural resources inventory of the proposed Santa Cruz Auto Shop New Construction Project (Project). RESD proposes to construct a new automotive repair and maintenance facility.

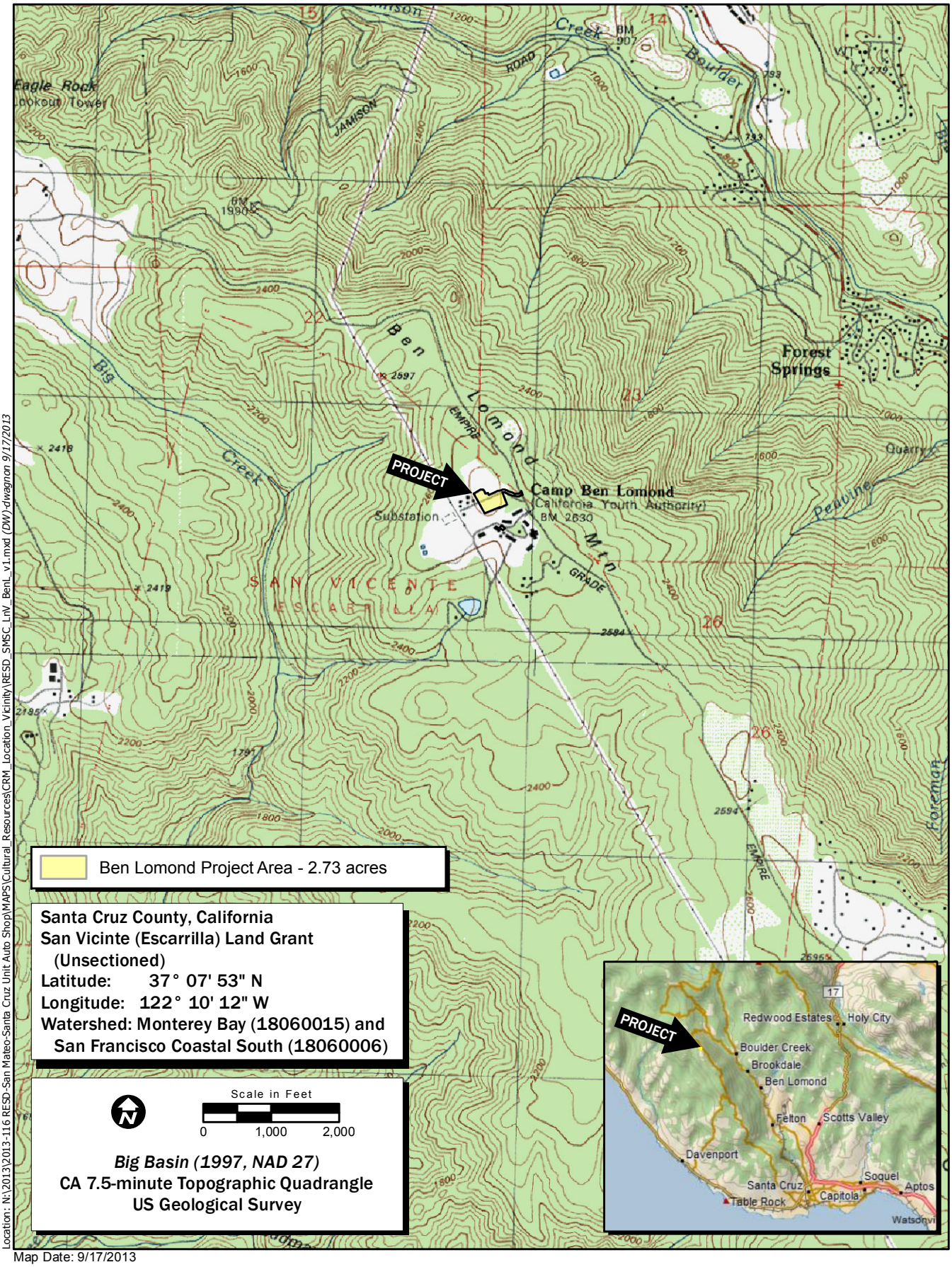
1.1 Project Location

The location of the proposed new automotive repair shop (Ben Lomond Site) is at 13575 Empire Grade Road, approximately eight miles northeast of Felton, Santa Cruz County, California. This Project Area consists of approximately 2.75 acres adjacent to the Ben Lomond Training Center. It is located in unsectioned land that is part of the San Vicente (Escarrilla) Land Grant in Santa Cruz County, California (Figures 1 and 2). This property is also designated as Assessor's Parcel Number (APN) 080-331-03.

1.2 Project Description

The Proposed Project would be located southeast of the Ben Lomond Training Center (BLTC) and includes updating an existing facility and construction of a modern auto shop. The primary structure would be a 5-bay drive-thru auto shop with a covered vehicle wash rack and water filtration system. The building would be oriented northeast to southwest parallel to the existing access road to the north. The wash rack would be located at the east end of the auto shop and the bay doors would be located on both sides of the building (north and south sides). The auto shop would also have security lighting, a fire suppression system with water tank, and landscaping. Other activities associated with constructing the auto shop consist of trenching and connecting into existing underground utilities; and installing a permanent drainage system with erosion and sedimentation control features.

Other facilities to be constructed as part of the Proposed Project include construction of an asphalt driveway and parking area for the Ben Lomond Training Center, pavement around the new auto shop (sidewalks and parking apron), a ten-foot high perimeter fence with two locking gates at the egress/ingress points, a generator building to house an emergency propane-powered generator to serve the auto shop with a 1,000 gallon propane tank, footings and raceways for a new radio tower, and a fire engine water pump test pit. The existing driveway has constraints for turning movements for some vehicles that would be serviced at this facility; therefore, the current entryway would be realigned near the entrance to accommodate larger vehicles. The new BLTC parking lot and fire engine water pump test pit would be constructed north of the existing access road and new ingress and egress-locking gates would be installed along the south side of the existing access road. Pavement would surround the new auto shop and extend to the proposed 6-foot chain-link perimeter fence. As part of the Proposed Project, a new radio tower, a generator building, and a water tank for the fire suppression system would be located between the new perimeter fence and the existing 8-foot chain-link fence on the northern boundary of the existing BLTC facilities.



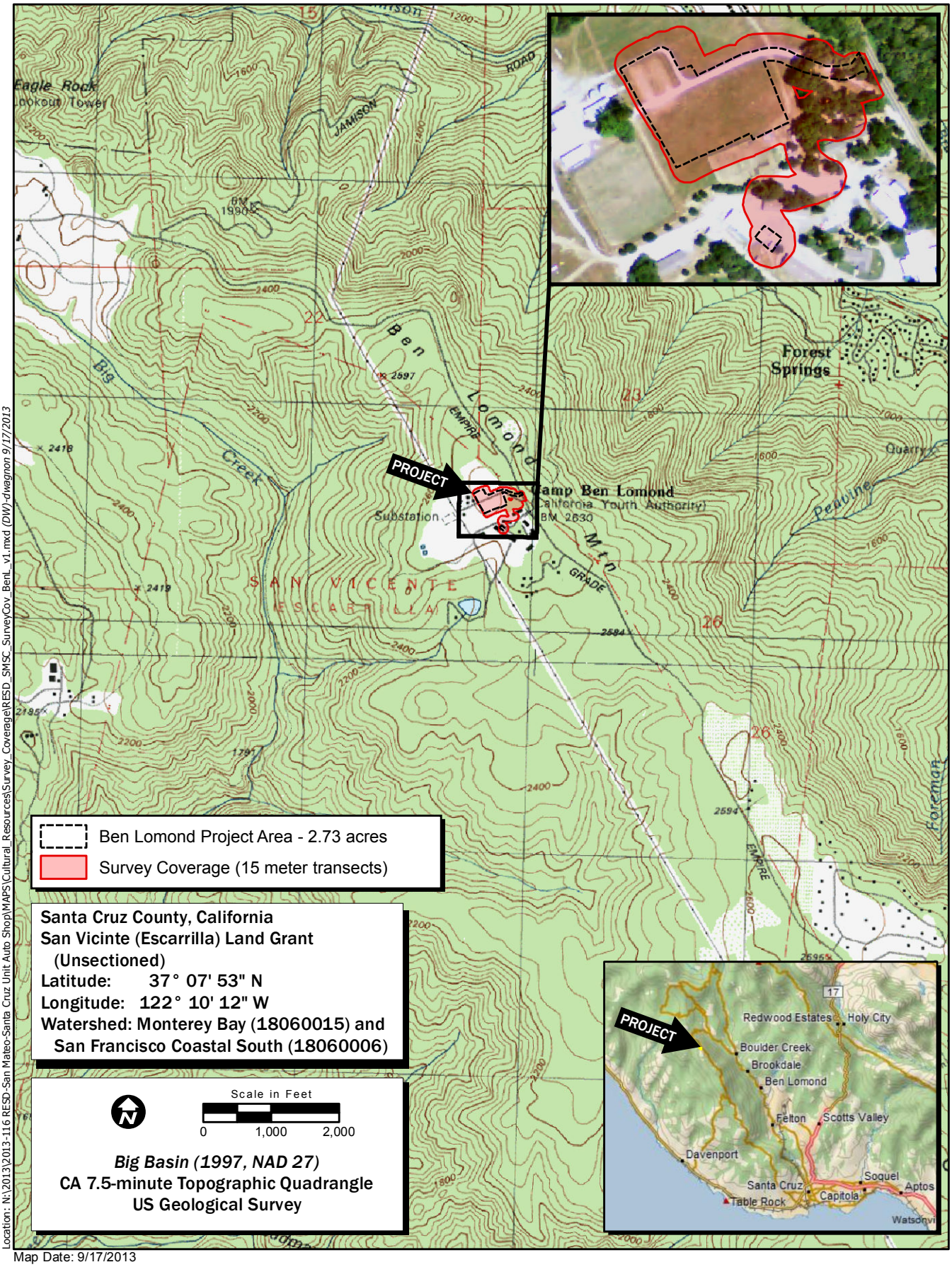
Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Cultural_Resources\CRM_Location_Vicinity\RESD_SMSC_LnV_BenL_v1.mxd (DW)-dwagnon 9/17/2013

Map Date: 9/17/2013
Service Layer Credits: Copyright:© 2012 DeLorme

Figure 1. Ben Lomond Site Location and Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2013-116 RESD San Mateo-Santa Cruz Unit Auto Shop



Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Cultural_Resources\Survey_Coverage\RESD_SMSC_Survey\Cov_BenL_v1.mxd (DW)-dwagnon 9/17/2013

Map Date: 9/17/2013

Service Layer Credits: Copyright:© 2012 DeLorme

Figure 2. Ben Lomond Site Survey Coverage

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2013-116 RESD San Mateo-Santa Cruz Unit Auto Shop

The project includes the replacement of the fuel storage facility located within the BLTC campus. The existing structure and aboveground storage vaults would be demolished. A new building with a concrete fuel dispensing area and two new 2,000-gallon storage vaults (diesel and gasoline) would be constructed. The new construction would occur in the same location as the existing facility.

This facility as a whole would be built to the LEED silver rating.

1.3 Area of Potential Effect

The Area of Potential Effects (APE) consists of the horizontal and vertical limits of the project, and includes the area within which significant impacts or adverse effects to Historical Resources or Historic Properties could occur as a result of the project. The horizontal APE consists of all areas where activities associated with the Project are proposed, and in the case of the current project, equals the Project Area subject to environmental review under the California Environmental Quality Act (CEQA). This includes areas proposed for construction, pole replacement or installation, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements described in the official project description. The horizontal APE is illustrated in Figure 1 and also represents the survey coverage area. The horizontal APE covers an area at the Project Site of approximately 2.75 acres.

The vertical APE is described as the maximum depth below the surface to which excavations for Project foundations and facilities will extend. Thus, the vertical APE includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project, depending on whether or not solar panel supports are installed. Ground disturbance of up to 20 feet below the surface will be necessary in order to construct the buildings.

The vertical APE is also described as the maximum height of poles and equipment, which could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. For the current Project, the above-surface vertical APE is up to 50 feet above the surface, which is the maximum height of the proposed buildings.

1.4 Regulatory Context

To meet the regulatory requirements of the Project, this cultural resources investigation was conducted pursuant to the provisions for the treatment of cultural resources contained within CEQA (Pub. Res. Code § 21000 *et seq*.). The goal of CEQA is to develop and maintain a high-quality environment that serves to identify the significant environmental effects of the actions of a proposed project and to either avoid or mitigate those significant effects where feasible. CEQA pertains to all proposed projects that require state or local government agency approval, including the enactment of zoning ordinances, the issuance of conditional use permits, and the approval of development project maps.
CEQA (Title 14, CCR, Article 5, Section 15064.5) applies to cultural resources of the historical and prehistoric periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant impact on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California Register of Historical Resources (CRHR) (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) or the National Register of Historic Places (NRHP) (36 CFR 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered Historical Resources under CEQA.

1.5 Report Organization

The following report documents the study and its findings and was prepared in conformance with the California Office of Historic Preservation's *Archaeological Resource Management Reports: Recommended Contents and Format.* Attachment A includes a confirmation of the records search with the California Historical Resources Information System. Attachment B contains documentation of Native American Consultation. Attachment C presents photographs of the Project Area.

Sections 6253, 6254, and 6254.10 of the California Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (Government Code §6250 *et seq*.) and California's open meeting laws (The Brown Act, Government Code §54950 *et seq*.) protect the confidentiality of Native American cultural place information. Under Exemption 3 of the federal Freedom of Information Act (5 USC 5), because the disclosure of cultural resources location information on federal lands is prohibited by the Archaeological Resources Protection Act of 1979 (16 USC 470hh), it is also exempted from disclosure under the Freedom of Information Act. Likewise, the Information Centers of the California Historical Resources Information System maintained by the Office of Historic Preservation prohibit public dissemination of records search information. In compliance with these requirements, the results of this cultural resource investigation were prepared in a publicly accessible format that omitted archaeological site locations.

2.0 SETTING

2.1 Environmental Setting

The Ben Lomond Site is at the California Department of Corrections and Rehabilitation (CDCR) Ben Lomond Training Center (BLTC). This facility is along the eastern ridge of the Ben Lomond Mountain, surrounded by the Big Basin Redwoods State Park to the north and west and the community of Boulder Creek to the east.

2.2 Geology and Soils

One soil type is identified within the Ben Lomond Site. Ben Lomond sandy loam (110), is a well-drained residuum weathered from granite and/or sandstone often found in mountain slopes and ridges at an elevation between 400 and 3,000 feet. The top 2 inches contain a decomposed plant material, 2 to 40 inches contain a sandy loam and 40 to 50 inches below surface contain bedrock (USDA 2013).

2.3 Vegetation and Wildlife

Vegetation at the proposed new auto shop site consists of introduced annual grasslands with ripgut brome (*Bromus diandrus*), soft brome (*B. mollis*), and wild oats (*Avena fatua*) as dominant species. Forbs were scattered throughout the grassland, and consisted of lupine (*Lupinus* sp.), plantain (*Plantago major*), California poppy (*Eschscholzia californica*), and turkey mullien (*Croton setigerus*) among other plants. Several large trees, including foothill pine (*Pinus sabiniana*), coast redwood (*Sequoia sempervirens*), and ornamentals provide shade for the buildings. The surrounding topography is gently rolling, hilly, or steeply mountainous, and the surrounding vegetation is characterized as *Calocedrus decurrens* forest alliance-Incense Cedar forest (Sawyer et al. 2009). Incense cedar is the dominant tree in the forest surrounding the site, but other components of the overstory include Ponderosa pine (*Pinus ponderosa*), coast live oak (*Quercus chrysolepis*), Douglas fir (*Pseudotsuga menziesii*), and coast redwood. Madrone (*Arbutus menziesii*) is a major component of the understory.

Common ravens (*Corvus corax*), Brewers blackbirds (*Euphagus cyanocephalus*), Steller's jays (*Cyanocitta stelleri*), house finch (*Haemorhous mexicanus*), and house sparrow (*Passer domesticus*) were among the

bird species observed. Arboreal salamander (*Aneides lugubris*), western fence lizard (*Sceloporus occidentalis*), California ground squirrel (*Otospermophilus beecheyi*), and Botta's pocket gopher were also documented, although California ground squirrels apparently do not occur in large numbers.

3.0 CULTURAL CONTEXT

3.1 Regional Prehistory

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 years BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Bones of extinct species have been found, but cannot definitely be associated with human artifacts. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods (Wallace 1978).

Around 8000 years BP, there was a shift in focus from hunting towards a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5000 years BP, is sometimes referred to as the "Millingstone Horizon" (Wallace 1978). Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to before 8,000 years BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period (Wallace 1978).

In sites dating to after about 5000 years BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more common. During this period, new peoples from the Great Basin began entering southern California. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the "Late Horizon," population densities were higher than before and settlement became concentrated in villages and communities along the coast and interior valleys (Erlandson 1994; McCawley 1996). Regional subcultures also started to develop, each with its own geographical territory and language or dialect (Kroeber 1925; McCawley 1996; Moratto 1984). These were most likely the basis for the groups encountered by the first Europeans during the 18th century (Wallace 1978). Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction (Erlandson 1994). The introduction of the bow and arrow into the region sometime around 2000 years BP is indicated by the presence of small projectile points (Wallace 1978; Moratto 1984).

3.2 Local Prehistory

Prehistory of the region can be associated with the San Francisco Bay Region, also known as the Western Berkeley Culture. This culture can be dated as far back as 3000 to 2000 BP. Some of the first surveys of the region were conducted between 1906 and 1908 by N.C. Nelson and J. C. Merriam, archaeologists from the University of California, Berkeley. Nelson's surveys extended as far south as Half Moon Bay, and as far north as the Russian River. Nelson discovered 425 shell and earth mounds along San Francisco Bay, most notably the Emeryville Shellmound (ALA-309), The Ellis Landing Site (CCO-295), and the Fernandez Site (CCO-259). Studies at these sites as well as many others in the Bay region provided archaeological data supporting Nelson's concept that the entire San Francisco Bay region had a long-term

occupation of cultures who shared similar mortuary practices, artifacts, and food processing techniques (Moratto 1984).

3.3 Ethnography

Ethnographically, the Project Area is in the west central portion of the Costanoan territory. The territory extended from the Carquinez Strait from the north down to Carmel in the south. The word Costanoan comes from the Spanish word Costanos meaning "coast people," which was given to the tribes in 1770 when the first mission was established in their territory. The "Costanoan" represented a group of people who spoke eight separate languages, but whose dialects were most similar to their geographic neighbors. In all, the Costanoan consisted of approximately 50 different tribelets or politically autonomous nations, each having their own village with an average of 200 inhabitants (Levy 1978: 485). The Costanoan and neighboring Miwok to the east were placed within the Penutian stock since the two languages were more similar to each other than to any of the other surrounding languages.

The language spoken in the region of the Project Area was Awaswas, also known as Santa Cruz Costanoan. This language was spoken within the Soquel Creek, San Lorenzo River, and Waddell Creek watersheds, consisting of approximately 600 to 1,000 people during the protohistoric and prehistoric periods. Within the Awaswas, there were seven major tribelets, three of which were near the Project Area. These included the Partacsi located near Saratoga Gap; the Sayant, located near the lower San Lorenzo River drainage; and the Achistaca, located upstream from the Sayant. Most of the villages were located in the higher elevations along the streams and creeks where lampreys, steelhead, and salmon were a large part of their diet (Milliken *et al.* 2007).

Each tribelet consisted of one or two main villages with smaller surrounding camps. According to early Spanish explorers, the members of a tribelet were not willing to go outside of their territory because of hostility from the neighboring tribelets (Bolton 1930, 3:129). The tribelets were headed by a single chief, who may have been a man or woman, and the leadership role was usually passed down from father to son. In the case where there was no male offspring, the title was usually passed down to the daughter or sister of the chief.

3.4 Regional History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port (Castillo 1978).

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. No missions were established in the Central Valley. The nearest missions were in the vicinity of San Francisco Bay and included Mission San Francisco de Asis (Dolores) established in 1776 on the San Francisco peninsula, Mission Santa Clara de Asis at the south end of San Francisco Bay in 1777, Mission Santa Cruz in 1791, Mission San Jose in 1797, Mission San Rafael, established as an *asistencia* in 1817, and as a full mission in 1823, and Mission San Francisco

Solano in Sonoma in 1823 (Castillo 1978; California Missions Online n.d.). Presidios were established at San Francisco and Monterey.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. In 1827, American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley to meet other trappers of his company who were camped there, but no permanent settlements were established by the fur trappers (Thompson and West 1880).

The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos" (Robinson 1948). During the Mexican period there were small towns at San Francisco (then known as Yerba Buena), Monterey, and Santa Cruz. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

John Sutter, a European immigrant, built a fort at the confluence of the Sacramento and American Rivers in 1839 and petitioned the Mexican governor of Alta California for a land grant, which he received in 1841. Sutter built a flourmill and grew wheat near the fort (Bidwell 1971). Gold was discovered in the flume of Sutter's lumber mill at Coloma on the South Fork of the American River in January 1848 (Marshall 1971). The discovery of gold initiated the 1849 California Gold Rush, which brought thousands of miners and settlers to the Sierra foothills east and southeast of Sacramento.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office. Land outside the land grants became federal public land, which was surveyed into sections, quarter-sections, and quarter-quarter sections. The federal public land could be purchased at a low fixed price per acre or could be obtained through homesteading (after 1862) (Robinson 1948).

3.5 Project Area History

CAL FIRE

The California Department of Forestry and Fire Protection (CAL FIRE) was established in 1905 during the Conservation Movement of the early 20th century (CAL FIRE 2013). The Act of 1905 granted the State Forester, E.T. Allen, the right to appoint local fire wardens and maintain a fire patrol at designated locations during times of emergency. The forestry department and state forester were synonymous through 1919. The department was based in Sacramento and consisted of a large group of local fire wardens funded by their local jurisdictions, and did not receive financial support from the State. In 1919, the California legislature appropriated $25,000 for fire prevention and suppression, and the U.S. Forest Service provided $3,500 for rangers. The source of this funding was a result of the Weeks Law of 1911, which provided aid for cooperative fire protection between States and the Forest Service. Initially there were four rangers headquartered in Redding, Oroville, Placerville and Auburn. By 1920, there were ten rangers overseeing ten districts: Shasta County, Butte and Yuba counties, Placer and Nevada counties, El Dorado and Amador counties, Tehama County, Colusa County, Lake County, and Santa Cruz, Santa Clara and San Mateo counties. In 1921, the State legislature appropriated $20,000 for the building of a physical operating plant for CAL FIRE on 30 acres of land in Yolo County near Davis. The State Highway Commission and the Board of Forestry established a state forestry nursery at this site to provide planting stock for highway and public land beautification. This operating plant was the beginning of the first state-

funded building projects for CAL FIRE. The first state-funded fire lookout was erected on Mount Bielawski in the Santa Cruz Mountains (CAL FIRE 2013).

The Clarke-McNary Act replaced the Weeks Act, and expanded federal assistance for state forestry programs. Governor Clement Calhoun Young established the California Division of Forestry (CAL FIRE) in 1927, and by 1931, California hired its first seasonal firefighters (CAL FIRE 2013). During the Great Depression, Franklin Delano Roosevelt created Emergency Conservation Work (ECW) Programs. One program, the Civilian Conservation Corps (CCC), established fire suppression camps throughout the State, and they erected 50 new fire lookouts between 1934 and 1936. All of these sites were part of the CAL FIRE detection system, and many CCC camps became permanent fire stations. During World War II, Governor Earl Warren appointed William Moore as Director of the Department of Natural Resources, the parent agency of the California Division of Forestry. Moore committed the State to hire and pay the salaries of all full-time and seasonal employees for CAL FIRE, the statewide wildland fire protection department. Post-World War II, the State began a prison "honor camp" program where inmates were used for conservation and fire protection projects. This led to the creation of the "Youth Honor Camp System," a collaboration between the California Youth Authority and the California Division of Forestry. Today, CAL FIRE oversees state and privately-owned wilderness areas, and administers the laws established under the Forest Practice Act of 1945 and 1973, that regulates commercial timber harvesting on non-federal lands (CAL FIRE 2013).

Ben Lomond

In 1851, a Scottish immigrant, John Burns, settled in the region now known as Ben Lomond. He named the mountain near the town "Ben Lomond" after an old wine district in Scotland (Clark 1978). The name means "beacon peak" in Gaelic. Burns planted the first commercial grape vines in Santa Cruz County in 1853 (Gibson 2013b). The region is covered with redwood forests and was the center of the early logging and lumber industry in the County. The Pacific Manufacturing Company established a mill in the area, and this was the area's dominant business. The mill site became Mill Street. Originally, the community was known as Pacific Mills. In 1887, James P. Pierce, the mill owner and president, and his superintendent, Thomas Bell, co-founded the town of Ben Lomond, which was adopted as the name of the town by the residents when they applied for a U.S. Post Office the same year. Bell served as the town's first postmaster (Clark 1978).

Also in 1887, Pierce installed one the first band saws in California. Instead of clear-cutting the forests, he left groves and corridors of Redwoods for the purpose of promoting tourism. Thomas Bell purchased 300 acres of forest between Highlands Park and Ben Lomond Bridge and established the Rowardennan (Celtic for "enchanted forest") Redwood Park, a mountain retreat. He built the 150-room Rowardennan Hotel consisting of 16 cabins and a main lodge that housed a 200-seat dining hall. There was a ballroom lodge, a clubhouse with a bowling alley and library, croquet and tennis courts, stables, bridle trails, and swimming and boating in a dammed section of the San Lorenzo River (Gibson 2013a).

Bell's house burned down in 1897, and he sold his hotel to Benjamin Dickinson, a lumberman from Nova Scotia. Dickinson added more cottages and named the property the Dickinson Hotel. The original hotel burned in 1932, and the ballroom in 1933. The land was subdivided for housing. In 1945, Dickinson died and Gordon Perry bought the Dickinson Hotel. He renamed it the Town and Country Lodge, which remained open through 1967. The Lodge still stands and is now a boutique (Gibson 2013a). In town, the Park Hall Community Center, established in 1923, was recently (2013) added to the Santa Cruz County list of historical sites (Ben Lomond 2013).

The Ben Lomond fire station was constructed in the 1940s. Currently, the facilities cannot accommodate 21st century engines and equipment. Also, the building does not meet California's seismic safety standards. The Ben Lomond Fire Protection District (CAL FIRE) is proposing to build a new auto shop, associated facilities, and replace an existing fuel storage facility. During the 1930s, Ben Lomond was the

site of Civilian Conservation Camp #45. After World War II, the Camp participated in the prison "honor camp" program, where 113 inmates who were serving the last nine months of their sentences were paid to work on 17-men fire crews and in support positions. The crews suppressed fires, cleared streams, improved trails and levees, and assisted with rescues, floods and landslides. CAL FIRE provided training and evaluated job performance (Ben Lomond Fire Protection District 2013).

4.0 METHODS

4.1 Personnel Qualifications

All phases of the cultural resources investigation were conducted or supervised by Registered Professional Archaeologist Lisa Westwood, who meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historical archaeologist. Architectural historian Jeremy Adams, who meets the Secretary of the Interior's Professional Qualifications Standards for architectural historian and historian, conducted historical research and records search for the Project. Fieldwork was conducted by Field Director Stephen Pappas. Jeremy Adams, Stephen Pappas, and Lisa Westwood wrote the technical report. Resumes are available upon request.

Lisa Westwood is a Registered Professional Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historical archaeologist with 18 years of cultural resource management, contract archaeology, museum curation, and teaching experience in northern and central California, southern Utah, New Mexico, and the Midwest. She holds a B.A. degree in Anthropology and an M.A. degree in Anthropology (Archaeology). She has participated in or supervised numerous survey, testing, and data recovery excavations, has recorded and mapped hundreds of prehistoric and historical sites, and has cataloged, identified, and curated hundreds of thousands of artifacts. She has conducted evaluations of cultural resources for eligibility to the National Register of Historic Places and California Register of Historical Resources and is well versed in impact assessment and development of mitigation measures for CEQA and Section 106 of the National Historic Preservation Act (NHPA) projects. She has authored or co-authored more than 150 cultural resources management reports.

Jeremy Adams meets the Secretary of the Interior's Professional Qualifications Standards for architectural historian and historian, holding an M.A. degree in Public History and a B.A. degree in History, with four years' experience specializing in historic resources of the built environment. He is skilled in carrying out historical research at repositories such as city, state, and private archives, libraries, CHRIS information centers, and historical societies. He has experience conducting field reconnaissance and intensive surveys. Mr. Adams has conducted evaluations of cultural resources for eligibility to the National Register of Historic Places and California Register of Historical Resources and has specialized experience evaluating electric transmission utilities.

Stephen Pappas is a Staff Archaeologist and Field Director for ECORP and has eight years of experience in cultural resources management, primarily in California and New Mexico. He holds a B.A. degree in Anthropology and has participated in all aspects of archaeological fieldwork, including survey, test excavation, data recovery, and construction monitoring. He has extensive familiarity in meeting the cultural resource requirements of CEQA and Section 106 of the NHPA.

Roger Mason meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historical archaeologist, holding a B.A. degree and a Ph.D. in Anthropology (Archaeology). He is the author of over 200 reports dealing with cultural resource surveys, evaluations, and mitigation programs in California. In addition to the numerous technical and professional reports that he has prepared over the years, Dr. Mason has written published articles and monographs, presented professional papers, and provided public lectures. He is a certified member of the Register of Professional Archaeologists.

4.2 Records Search Methods

A records search for the property was completed at the Northwestern Information Center (NWIC) of the California Historical Resources Information System at California State University-Sonoma on 29 March 2013 (NWIC search #13-1105; Attachment A). The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the proposed project location, and whether previously documented prehistoric or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in Santa Cruz County, the following historic references were also reviewed: Historic Property Data File for Santa Cruz County (Office of Historic Preservation 2013a); *The National Register Information System website* (National Park Service 2013); *Office of Historic Preservation, California Historical Landmarks websit*e (Office Historic Preservation 2013b); *California Historical Landmarks* (Office of Historic Preservation 1996 and updates); *California Points of Historical Interest* (Office of Historic Preservation 1992 and updates); *Directory of Properties in the Historical Resources Inventory* (1999); *Caltrans Local Bridge Survey* (Caltrans 2013a); *Caltrans State Bridge Survey* (Caltrans 2013b); and *Historic Spots in California* (Kyle 2002); and General Land Office (GLO) land patent records (BLM 2013).

Historic maps reviewed include:

- 1902 (surveyed in 1868) Plat of the Rancho San Vicente
- 1902 (surveyed in 1895, 1899) USGS California, Santa Cruz Quadrangle (1:125,000)
- 1943 Ben Lomond, Army Service Map (1:62,500)
- 1955 USGS Big Basin, California (7.5-minute scale)

Historic aerial photos taken in 1953, 1968, 1987, 1991, and 2010 were also reviewed for any indications of property usage and built environment.

4.3 Native American Coordination Methods

ECORP contacted the California Native American Heritage Commission (NAHC) on 18 August 2013 to request a search of the sacred land files for the Project Area. Although the search failed to yield information on Native American cultural resources located within or adjacent to the Project Area, the NAHC provided a list of individuals and organizations in the Native American community that may be able to provide information about unrecorded sites in the project vicinity.

ECORP contacted all persons or organizations on the NAHC list by letter on 30 August 2013 to request information on unrecorded cultural resources that may exist within the current Project Area, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action. Each individual was subsequently telephoned on 11 and 17 September 2013 to ensure that the materials had been received and to further solicit comments (Attachment B).

4.4 Field Methods

On 29 August 2013, the Project Area was subjected to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (National Park Service 1983) using 15 meter transects. The Project Area was surveyed, totaling one-quarter day expended in the field. At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for

indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

5.0 RESULTS

5.1 Records Search

The records search consisted of a review of previous research and literature, records on file with the NWIC for previously recorded resources, and historical aerial photographs and maps of the vicinity.

5.1.1 Previous Research

Nine previous cultural resources investigations have been conducted within 0.5 mile of the Ben Lomond Site, covering approximately 60 percent of the total area surrounding the property within the record search radius (Table 1). None of the studies were located within the Project Area. The previous studies were conducted between 1977 and 2004. No previously recorded cultural resources were recorded within 0.5 mile of the Project Area.

[redacted]

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

The results of the records search indicate that none of the property has been previously surveyed for cultural resources, and therefore, a pedestrian survey of the APE was warranted.

No previously recorded cultural resources were identified within 0.5 mile of the Ben Lomond Site.

5.1.2 Records

[redacted]

A letter was sent to the Santa Cruz County Museum Partnership on 22 August 2013 in order to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area. No response to the letter sent to the Santa Cruz Museum Partnership has been received to date.

5.1.3 Map Review and Aerial Photographs

The review of historical aerial photographs and maps of the Project Area provide information on the past land uses of the properties. Based on this information, the property was initially used for California Fire Department facilities. Following is a summary of the review of historical maps and photographs.

- The 1902 (surveyed in 1868) Plat of the Rancho San Vicente shows the area of the Ben Lomond Site in the northeastern portion of the rancho.

- The 1902 (surveyed in 1895, 1899) USGS California, Santa Cruz Quadrangle (1:125,000) shows the Ben Lomond Site as undeveloped land located in the northeastern portion of the Rancho San Vicente, along the top of the Ben Lomond Mountain.

- The 1943 Ben Lomond, Army Service Map (1:62,500) indicates the Ben Lomond Site as undeveloped land. The Empire Grade Road is located east of the Project Area.

- The 1955 USGS Big Basin, California (7.5-minute scale) quadrangle indicates several structures within the vicinity of the Ben Lomond Site, with the area labeled “Camp Ben Lomond”. One structure is possibly located within the southeastern portion or adjacent to the parcel. The 1955 (photorevised 1968) map indicates the addition of the northeast-southwest trending access road running through the northern end of the parcel.

5.2 Native American Coordination Results

A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project Area. Follow-up telephone calls were successful in gathering some comments on the proposed project from the list of Native American contacts provided by the NAHC. Irene Zqierlein, chairperson of the Amah Mutsun Tribal Band, requested that the construction crew be trained in cultural sensitivity to identify and report any findings identified during construction activities. Ann Marie Sayers of the Indian Canyon Mutsun Band of Costanoan requests that she be notified of any Native American materials found during construction. In addition, if materials are found, Sayers would like a Native American and archaeological monitor present during the remainder of construction activities. A record of all correspondence is provided in Attachment B. If any additional comments are received after the submission of this report, then they will be forwarded to the lead agencies for further consideration and appropriate action.

5.3 Field Survey Results

The Ben Lomond Site was surveyed using northwest-southeast trending transects through the survey area. Overall, the surface visibility was poor due to the main survey area consisting of overgrown grass fields, allowing an approximate 30 percent surface visibility (Figure 3). Several rodent burrows and back dirt piles scattered throughout the field revealed a light brown silt soil with few pebbles. The northwestern end of the survey area was mostly open with patches of grass, and mostly consisted of a decomposed gravel fill. This area also contained milled lumber set out in “T” formations, and may have been associated with a firefighting training course located southwest of the survey area. In addition to the gravel fill area and the overgrown field, a graded and graveled road alignment heading east towards Empire Grade Road was surveyed.

No historic resources were observed during the survey. The one structure indicated on the 1955 Big Basin, CA topographic map was not observed at the location shown, and may have been plotted incorrectly. It is possible that it is represented by a storage shed located directly south of the southeastern portion of the surveyed area. The road that was shown on the 1967 map is not historic in age. An electrical distribution wood pole line following the road is also not historic in age. One corrugated metal storage building was observed within the isolated rectangular shaped portion of the Project Area. The storage shed does not appear on historical maps or aerials. In addition, a close architectural inspection of the building indicates that the metal and roof materials, doorway, windows, and attached features all do not appear weathered or potentially older than 50 years of age. Therefore, the storage building does not qualify as an historical resource.

Figure 3. Overview of Ben Lomond Site (view north, 29 August 2013).

6.0 MANAGEMENT CONSIDERATIONS

6.1 Conclusions

No cultural resources were identified at the Ben Lomond Site as a result of the records search and field survey. Therefore, no Historical Resources, as defined by CEQA [CCR Title 14, Section 15064.5(a)], will be impacted at the Project location.

There are no prehistoric or historic archaeological sites within the Project Area which indicate the potential for existence of subsurface deposits. Should subsurface deposits be discovered during construction activities, it is recommended that the protocols for unanticipated discoveries, outlined in Section 6.3, are followed.

6.2 Recommendations

The CEQA document should contain mitigation measures for the unanticipated discovery of cultural resources or human remains. Until the lead agency concurs with the identification and evaluation of eligibility of cultural resources, including archaeological sites and standing structures, no ground-disturbing activity or demolition should occur.

6.3 Unanticipated Discovery

Due to the sensitivity of the Project Area, there remains a possibility that unrecorded cultural resources are present beneath the ground surface, and that such resources could be exposed during project construction. Both CEQA and Section 106 of the NHPA require the lead agency to address any unanticipated cultural resource discoveries during project construction. Therefore, ECORP recommends

the following mitigation measures be adopted and implemented by the lead agency to reduce potential adverse impacts to less than significant.

> **Mitigation Measure #1: Unanticipated Discovery**
> If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. A Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required.
>
> Work cannot continue within the no-work radius until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR.
>
> If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, total data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead agency as verification that the provisions in CEQA for managing unanticipated discoveries have been met.

In the event that evidence of human remains is discovered, construction activities within 100 feet of the discovery will be halted or diverted and the requirements of Mitigation Measure #1 will be implemented. In addition, the provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. When human remains are discovered, state law requires that the discovery be reported to the County Coroner (Section 7050.5 of the Health and Safety Code) and that reasonable protection measures be taken during construction to protect the discovery from disturbance (AB 2641). If the Coroner determines the remains are Native American, the Coroner notifies the Native American Heritage Commission, which then designates a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641).

The Lead Agency is responsible for ensuring compliance with these mitigation measures because damage to significant cultural resources is in violation of CEQA and Section 106. Section 15097 of Title 14, Chapter 3, Article 7 of CEQA, *Mitigation Monitoring or Reporting*, "the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program."

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LIST OF ATTACHMENTS

Attachment A – Records Search Confirmation

Attachment B – Native American Coordination

Attachment C – Project Area Photographs

ATTACHMENT A

Records Search Confirmation

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE
HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLATA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

DATE: 8/27/2013 NWIC File No.: 13-0270

TO: Jeremy Adams

FROM: Charles Mikulik

Re: RESD San Mateo-Santa Cruz 2013-116

Felton, Big Basin, and Davenport 7.5' Quad

Resources In	Old Auto Shop: P-44-000297 New Auto Shop: None.
Resources within .5-mile radius	Old Auto Shop: P-44-000209, P-44-000210, P-44-000230, P-44-000401 New Auto Shop: None.
Reports In	Old Auto Shop: S-007180 New Auto Shop: None.
Reports within .5-mile radius	Old Auto Shop: S-003787, S-003983, S-003984, S-004029, S-004075, S-004079, S-012694, S-016692, S-017863, S-021971, S-022539, S-022825, S-028809, S-034931, S-037033, S-039178 New Auto Shop: S-003932, S-004060, S-013795, S-014902, S-016846, S-027554, S-030539, S-032672, S-033737
Other Reports	Four (4) reports are classified as "Other Reports" (reports with little or no field work, missing maps, or inadequate locational information) that cover your search area: S-000848, S-009462, S-015529, S-018217. The electronic report map(s) do not depict study areas for these reports because their shapes are either not representable or would be shown at a very large scale (i.e., all of Santa Cruz County). In addition, you have not been charged the digitized shape fee for these study areas. The references for these reports are provided in a separate PDF, and should you decide you want a copy let us know.
OHP HPD	Felton and Ben Lomond and vicinity provided.
OHP ADOE	Santa Cruz County provided.

California Inventory	Santa Cruz County provided.
Local Inventories	None.
Caltrans Bridge Inventory	Santa Cruz County provided.
GLO or Rancho Maps	San Vicente and Zayanta Land Grants provided.

ATTACHMENT B

Native American Coordination

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd.
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

August 27, 2013

Jeremy Adams
ECORP
2525 Warren Drive
Rocklin, CA 95677

By Fax: 916-82-9134

Number of Pages 2

Re: San Mateo Auto Shop 2013-116, Santa Cruz County

Dear Mr. Adams:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3713.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
Santa Cruz County
August 27, 2013

Jakki Kehl
720 North 2nd Street
Patterson , CA 95363
(209) 892-1060

Ohlone/Costanoan

Amah/MutsunTribal Band
Jean-Marie Feyling
19350 Hunter Court
Redding , CA 96003
jmfgmc@sbcglobal.net
530-243-1633

Ohlone/Costanoan

Linda G. Yamane
1585 Mira Mar Ave
Seaside , CA 93955
rumsien123@yahoo.com
831-394-5915

Ohlone/Costanaon

Costanoan Ohlone Rumsen-Mutsen Tribe
Patrick Orozco, Chairman
644 Peartree Drive
Watsonville , CA 95076
yanapvoic@earthlink.net
(831) 728-8471

Ohlone/Costanoan

Amah MutsunTribal Band
Valentin Lopez, Chairperson
PO Box 5272
Galt , CA 95632
vlopez@amahmutsun.org
916-743-5833

Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister , CA 95024
ams@indiancanyon.org
831-637-4238

Ohlone/Costanoan

Amah MutsunTribal Band
Edward Ketchum
35867 Yosemite Ave
Davis , CA 95616
aerieways@aol.com

Ohlone/Costanoan
Northern Valley Yokuts

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
PO Box 360791
Milpitas , CA 95036
muwekma@muwekma.org
408-205-9714
510-581-5194

Ohlone / Costanoan

Amah/MutsunTribal Band
Irene Zwierlein, Chairperson
789 Canada Road
Woodside , CA 94062
irennezwierlein@gmail.com
(650) 851-7747 - Home
650-400-4806 cell preferred
(650) 851-7489 - Fax

Ohlone/Costanoan

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City , CA 94587
510-972-0645-home

soaprootmo@msn.com

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed San Mateo Auto Sho[p 2013-116, Santa Cruz County

Native American Contacts
San Mateo-Santa Cruz Unit Auto Shop 2013-116 Santa Cruz County

Name	Affiliation	Date Contacted				Response Received?	Comments
		1. Letter	2. Phone	3. Phone	4. Phone		
Native American Heritage Commission 915 Capital Mall, Room 364 Sacramento, CA 95814 nahc@pacbell.net (916) 373-3710 (916) 373-5471 Fax	N/A	8/15/2013 (Ben Lomond APE) 8/18/2013 (Felton APE)	N/A	N/A	N/A	Yes 8/27/2013	8/27/2013: NAHC sent response, no Sacred Lands. Provided list of 10 individuals.
Jakki Kehl 720 North 2nd Street Patterson, Ca 95363 209-892-1060	Ohlone/Costanoan	9/3/13	9/11/13	9/17/13	5/15/2014	No	9/11/13-Mailbox is full. 9/17/13-Mailbox is full. 5/15/2014- SP called, mailbox is full.
Linda G. Yamane 1585 Mira Mar Ave. Seaside, CA 93955 Rumsien123@yahoo.com 831-394-5915	Ohlone/Costanoan	9/3/13	9/11/13	9/17/13	5/15/2014	No	9/11/13-Left a message. 9/17/13-Left a message. 5/15/2014: SP left voice message, SP sent follow-up E-mail.
Amah Mutsun Tribal Band Valentin Lopez, Chairperson P.O. Box 5272 Galt, CA 95632 vlopez@amahmutsun.org 916-743-5833	Ohlone/Costanoan	9/3/13	9/11/13	9/17/13	N/A	Yes	9/11/13-no phone number. 9/17/13-Left a message, later received a response: He stated that as long as there was a 400ft buffer from the Creek than he was fine with the project. Jeremy and I calculated the distance and it is approximately 425ft. Val was informed the distance buffer is acceptable.
Amah Mutsun Tribal Band Edward Ketchum 35867 Yosemite Ave. Davis, Ca 95616 aerieways@aol.com	Ohlone/Costanoan Northern Valley Yokuts	9/3/13	9/18/2013	N/A	N/A	Yes 9/19/2013	E-mail sent because no phone number is available. Response received 9/19/2013: Ed would like to ensure we attempt to contact the Muwekma Tribe for this Project. He was informed we have reached out to the tribe. No additional comments received.

Name	Affiliation	Date Contacted				Response Received?	Comments
		1. Letter	2. Phone	3. Phone	4. Phone		
Amah Mutsun Tribal Band Irene Zwierlein, Chairperson 789 Canada Road Woodside, CA 94062 irennezwierlein@gmail.com 650-851-7747-home 650-400-4806-cell preferred 650-851-7489-fax	Ohlone/Costanoan	9/3/13	9/11/13	N/A	N/A	Yes 9/11/2013	9/11/13-She reviewed the letter and requested during demolition that a crew be culturally sensitive trained to identify and cultural findings and to please report any findings as the property was probably developed before licensing was required.
Amah Mutsun Tribal Band Jean-Marie Feyling 19350 Hunter Court Redding, CA 96003 jmfgmc@sbcglobal.net 530-243-1633	Ohlone/Costanoan	9/3/13	9/11/13	9/17/13	5/15/2014	Yes (5/15/2014)	9/11/13-Left a message. 9/17/13-Left a message. 5/15/2014: SP spoke with JMF. She recommended a Native American monitor as well as an Archaeologist.
Costanoan Ohlone Rumsen-Mutsun Tribe Patrick Orozco, Chairman 644 Peartree Drive Watsonville, CA 95076 (831) 728-8471	Ohlone/Costanoan	9/3/13	9/11/13	N/A	5/15/2014	No	9/11/13-No phone number or e-mail. 5/15/2014: SP left voice mail
Indian Canyon Mutsun Band of Costanoan Ann Marie Sayers, Chairperson P.O. Box 28 Hollister, CA 95024 ams@indiancanyon.org	Ohlone/Costanoan	9/3/13	9/11/13	9/12/2013	N/A	Yes	9/11/13-no phone number 9/12/2013 – Ann Marie Sayers requests that if any Native American materials are found during the archaeological inventory or discovered during construction that an archaeological monitor and Native American monitor be present on site for the remainder of the construction activities. She would also like to be informed if Native American an unanticipated discovery is made.
Muwekma Ohlone Indian Tribe of the SF Bay Area Rosemary Cambra, Chairperson P.O. Box 360791 Milpitas, CA 95036 muwekma@muwekma.org 408-205-9714 510-581-5194	Ohlone/Costanoan	9/3/13	9/11/13	9/17/13	5/15/2014	No	9/11/13-Please note the phone number change (408) 314-1898. Mailbox was full. 9/17/13- Mailbox was full. 5/15/2014: SP called, mailbox was still full. SP also sent follow-up E-mail.

Name	Affiliation	Date Contacted				Response Received?	Comments
		1. Letter	2. Phone	3. Phone	4. Phone		
Trina Marine Ruano Family Ramona Garibay, Representative 30940 Watkins Street Union City, CA 94587 510-972-0645-home soaprootmo@ms.com	Ohlone/Costanoan Bay Miwok Plains Miwok Patwin	9/3/13	9/11/13	9/17/13	5/15/2014	Yes 5/15/2014	9/11/13 Left a message. 9/17/13-Left a message. 5/15/2014: SP spoke w/ Ramona. She said that if any cultural resources are encountered during ground disturbing activities, that she be contacted.

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Jakki Kehl
720 North 2nd Street
Patterson, CA 95363

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Jakki:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

The purpose of the study is to identify cultural resources that could be affected by the proposed project, as required by Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). The investigation included a records search conducted with the Native American Heritage Commission's Sacred Lands File. The search of the Sacred Lands file did not identify any known Native American cultural resources within the immediate project vicinity; however, the Commission provided us with your name and contact information.

As part of this study, ECORP would like to identify archaeological, historic resources, or locations that are of cultural importance to the local Native American community. We would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed development of the parcel. We invite you to offer comments on the project, and we will forward them to the Section 106 lead agency for consideration and appropriate action. The lead agency will respond to your comments as soon as the Section 106 process is initiated. At this time, however, cultural resources investigations are being conducted for project planning purposes only. ECORP is gathering information on potentially unrecorded cultural resources that might be affected by this project.

We encourage you to participate in this process, so that potential impacts to Native American resources can be proactively addressed and minimized to the greatest extent feasible. We would like to receive a response from you about this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to comment on this project. If you have any questions, please feel free to call me at (916) 782-9100 or via email at jadams@ecorpconsulting.com. Thank you for your assistance and participation in this project.

Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Linda G. Yamane
1585 Mira Mar Ave
Seaside, CA 93955

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Linda:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

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Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

2525 Warren Drive, Rocklin, California 95677 • Tel: (916) 782-9100 • Fax: (916) 782-9134 • Web: www.ecorpconsulting.com

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Amah Mutsun Tribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA 95632

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Valentin:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

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Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

2525 Warren Drive, Rocklin, California 95677 • Tel: (916) 782-9100 • Fax: (916) 782-9134 • Web: www.ecorpconsulting.com

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Amah Mutsun Tribal Band
Edward Ketchum
35867 Yosemite Ave
Davis, CA 95616

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Edward:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

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Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Amah Mutsun Tribal Band
Irene Zwierlein, Chairperson
789 Canada Road
Woodside, CA 94062

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Irene:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

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As part of this study, ECORP would like to identify archaeological, historic resources, or locations that are of cultural importance to the local Native American community. We would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed development of the parcel. We invite you to offer comments on the project, and we will forward them to the Section 106 lead agency for consideration and appropriate action. The lead agency will respond to your comments as soon as the Section 106 process is initiated. At this time, however, cultural resources investigations are being conducted for project planning purposes only. ECORP is gathering information on potentially unrecorded cultural resources that might be affected by this project.

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Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

2525 Warren Drive, Rocklin, California 95677 • Tel: (916) 782-9100 • Fax: (916) 782-9134 • Web: www.ecorpconsulting.com

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Amah Mutsun Tribal Band
Jean-Marie Feyling
19350 Hunter Court
Redding, Ca 96003

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Jean-Marie:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

The purpose of the study is to identify cultural resources that could be affected by the proposed project, as required by Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). The investigation included a records search conducted with the Native American Heritage Commission's Sacred Lands File. The search of the Sacred Lands file did not identify any known Native American cultural resources within the immediate project vicinity; however, the Commission provided us with your name and contact information.

As part of this study, ECORP would like to identify archaeological, historic resources, or locations that are of cultural importance to the local Native American community. We would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed development of the parcel. We invite you to offer comments on the project, and we will forward them to the Section 106 lead agency for consideration and appropriate action. The lead agency will respond to your comments as soon as the Section 106 process is initiated. At this time, however, cultural resources investigations are being conducted for project planning purposes only. ECORP is gathering information on potentially unrecorded cultural resources that might be affected by this project.

We encourage you to participate in this process, so that potential impacts to Native American resources can be proactively addressed and minimized to the greatest extent feasible. We would like to receive a response from you about this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to comment on this project. If you have any questions, please feel free to call me at (916) 782-9100 or via email at jadams@ecorpconsulting.com. Thank you for your assistance and participation in this project.

Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Costanoan Ohlone Rumsen-Mutsen Tribe
Patrick Orozco, Chairman
644 Peartree Drive
Watsonville, CA 95076

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Patrick:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

The purpose of the study is to identify cultural resources that could be affected by the proposed project, as required by Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). The investigation included a records search conducted with the Native American Heritage Commission's Sacred Lands File. The search of the Sacred Lands file did not identify any known Native American cultural resources within the immediate project vicinity; however, the Commission provided us with your name and contact information.

As part of this study, ECORP would like to identify archaeological, historic resources, or locations that are of cultural importance to the local Native American community. We would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed development of the parcel. We invite you to offer comments on the project, and we will forward them to the Section 106 lead agency for consideration and appropriate action. The lead agency will respond to your comments as soon as the Section 106 process is initiated. At this time, however, cultural resources investigations are being conducted for project planning purposes only. ECORP is gathering information on potentially unrecorded cultural resources that might be affected by this project.

We encourage you to participate in this process, so that potential impacts to Native American resources can be proactively addressed and minimized to the greatest extent feasible. We would like to receive a response from you about this project within the next two weeks. If we have not heard from you within 30 days of the receipt of this letter, we will assume that you do not wish to comment on this project. If you have any questions, please feel free to call me at (916) 782-9100 or via email at jadams@ecorpconsulting.com. Thank you for your assistance and participation in this project.

Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

2525 Warren Drive, Rocklin, California 95677 • Tel: (916) 782-9100 • Fax: (916) 782-9134 • Web: www.ecorpconsulting.com

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Ann Marie:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

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As part of this study, ECORP would like to identify archaeological, historic resources, or locations that are of cultural importance to the local Native American community. We would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location that could be affected by the proposed development of the parcel. We invite you to offer comments on the project, and we will forward them to the Section 106 lead agency for consideration and appropriate action. The lead agency will respond to your comments as soon as the Section 106 process is initiated. At this time, however, cultural resources investigations are being conducted for project planning purposes only. ECORP is gathering information on potentially unrecorded cultural resources that might be affected by this project.

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Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Muwekma Ohlone Indian Tribe of the SF Bay Area
Rosemary Cambra, Chairperson
P.O. Box 360791
Milpitas, CA 95036

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Rosemary:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

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Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

3 September 2013

Trina Marine Ruano Family
Ramona Garibay, Representative
30940 Watkins Street
Union City, CA 94587

RE: Cultural Resources Identification Effort at San Mateo Auto Shop (ECORP Project No. 2013-116).

Dear Ramona:

ECORP Consulting, Inc. is currently conducting a cultural resources inventory of a half-mile buffer located near San Mateo in Santa Cruz County. The study is being conducted in advance of approval of the proposed San Mateo Auto shop project. For your reference, the boundary of the first location area is marked on the enclosed 1997 U.S. Geological Survey Santa Cruz County, California 7.5′ topographic quadrangle. The boundary of the second location is marked on the enclosed 1991 U.S. Geological Survey Felton, California 7.5′ topographic quadrangle.

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Sincerely,

Jeremy Adams
ECORP Consulting, Inc.

Enclosures, as stated

ATTACHMENT C

Project Area Photographs

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PHOTOGRAPH RECORD

Primary #
HRI#
Trinomial

Page 1 **of** 1 **Resource/Project Name:** RESD San Mateo-Santa Cruz **Year** 2013
Camera: Lens Size: 35mm
Film Type and Speed: Digital Negatives Kept at: ECORP Consulting, Inc.

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
8	29			Camp Ben Lomond SE end of APE	East	017
8	29			Overview of central APE grass field	East	018
8	29			SW end of APE	North	019
8	29			Southern fence line	NE	020
8	29			Example of rodent burrow w/ backdirt pile	Detail	021
8	29			Close up of rodent burrow	Detail	022
8	29			Overview of fire training course in north central APE	NW	023
8	29			Graded gravel road south of training course	NE	024
8	29			Overview of training course and modern pole line	SW	025
8	29			Overview of eastern APE from gravel road	SE	026
8	29			Gravel road through APE	SW	027
8	29			Detail of tree/leaves in APE	Detail	028
8	29			East end of APE road alignment	NW	029
8	29			Overview of Empire Grade Road east of APE	SE	030
8	29			Overview of Empire Grade Road east of APE	NW	031
8	29			Storage building		032
8	29			Gas tank		033
8	29			Gas tank w/storage building in the background		034
8	29			Storage building reverse side		035
8	29			Overview of concrete drainage		036

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036.JPG

STOP

8

FLAMMABLE
NO SMOKING
GASOLINE
8

DIESEL
FLAMMABLE
NO SMOKING
GASOLINE
8

EMERG.
PUMP
SHUTOFF
AT REAR
DIESEL

APPENDIX D

Paleontological Assessment

27 November 2013

Dan O'Brien
RESD-Environmental Services
3rd Floor, Room 3-401 Mailstop 509
P.O. Box 989052
West Sacramento, California 95798-9052

RE: Paleontological Records Search and Sensitivity Assessment for the RESD Santa Cruz Auto Shop New Construction Project

Dear Mr. O'Brien:

At your request, ECORP carried out a paleontological records search and sensitivity assessment for the RESD Santa Cruz Auto Shop New Construction Project (Project) to support the preparation of an environmental document under the California Environmental Quality Act (CEQA). The Project area is located north of Santa Cruz in Santa Cruz County, California (Figure 1. *Project Vicinity*). The Project site is locatedapproximately eight miles northeast of Felton. The Project includes updating an existing facility and construction of a modern auto shop. The primary structure would be a 5-bay drive-thru auto shop with a covered vehicle wash rack and water filtration system.

METHODS

A paleontological assessment was requested from the University of California Museum of Paleontology (UCMP) on 15 November 2013. Conducted by Museum Scientist (Microfossil Collections) Ken Finger, Ph.D., the assessment included a search of the paleontology specimen collection records for the Project area and vicinity. In addition, a query of the UCMP online catalog records, a review of regional geologic maps from the California Geological Survey, and a review of existing literature on paleontological resources of Santa Cruz County was conducted by Biologist Marin Meza. The purpose of the paleontological assessment was to determine: the sensitivity of the Project area; whether or not known occurrences of paleontological resources are present within or immediately adjacent to the Project area; and whether or not implementation of the Project could result in significant impacts to paleontological resources. Paleontological resources include mineralized (fossilized) or unmineralized bones, teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

Sedimentary rock units may be described as having (a) high (or known) potential for containing significant nonrenewable paleontological resources; (b) low potential for containing nonrenewable paleontological resources; or (c) undetermined potential (SVP 2013). The determination of a site's (or rock unit's) degree of paleontological potential is first founded on a review of pertinent geological ad paleontological literature and on locality records of specimens deposited in institutions. The sensitivity of rock units in which fossils occur may be divided into three operational categories:

I. HIGH POTENTIAL. Rock units from which vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a have potential for containing significant nonrenewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable

paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.

II. UNDETERMINED POTENTIAL. Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

III. LOW POTENTIAL. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils. Such units will be poorly represented by specimens in institutional collections. These deposits generally will not require protection or salvage operations.

RESULTS

The UCMP has 2,578 paleontological specimens from 457 localities in Santa Cruz County (UCMP 2013a). Not all specimens in the UCMP collections have been cataloged and digitized however; other specimens have likely been recorded within the vicinity of the Project area. The specific location of all localities is available only to qualified paleontologists, and the location of these occurrences relative to the Project area is unclear without more extensive archival research. Of the 2,578 specimens recorded within Santa Cruz County, 1,291 are fossil vertebrates, 1,245 are microfossils, 41 are fossil invertebrates, and one is a plant fossil (UCMP 2013a).

Over 400 records are recorded in the vicinity of the Project area; however, no fossil specimens are catalogued within a half-mile of the Project area (UCMP 2013a, Finger 2013; see attachment). There are 345 records listed under the San Lorenzo River, near Boulder Creek locality, exact location unspecified, and an additional 67 records are listed under the Boulder Creek area locality. These two localities are approximately 2.5 miles east of the Project area. Of these records, 210 are microfossils from the Eocene epoch and the remaining 202 records are microfossils from the Oligocene epoch (UCMP 2013a). The records are documented within one of three geologic formations: Vaqueros, Butano, and San Lorenzo.

According to the 2010 Geologic Map of California (Gutierrez et al. 2010) and the Geologic Map of the San Francisco-San Jose Quadrangle (Wagner et al. 1991), the geologic rock unit that underlies the Project area is described as cretaceous quartz diorite specifically and part of the larger rock unit described as Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite. The soil survey from the Geographic (SSURGO) Database for Santa Cruz County indicates that the soil type for the Project area corresponds to Ben Lomond sandy loam (USDA 2013). This soil type is a deep well drained soil formed in material weathered from sandstone, granodiorite, and quartz diorite (USDA 2009). The parent material occurs approximately 48 inches (four feet) below the surface.

Location: N:\2013\2013-116 RESD-San Mateo-Santa Cruz Unit Auto Shop\MAPS\Location_Vicinity\CEQA_Vicinity_v2.mxd (KO)-JSwager 3/5/2014

Map Date: 3/5/2014

Service Layer Credits: Sources: USGS, ESRI, TANA, AND

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

RESD San Mateo-Santa Cruz Auto Shop

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The Eocene is the second of five epochs in the Tertiary period and it lasted from about 55.8 to 33.9 million years ago (UCMP 2013b). The Oligocene, in the middle of the Tertiary period, lasted from about 33.9 to 23 million years ago (UCMP 2013c). A number of major changes occurred during this time including the appearance of the first elephants with trunks, early horses, and the appearance of many grasses.

The Mesozoic era is divided into three time periods: the Triassic (251-199.6 million years ago), the Jurassic (199.6-145.5 million years ago), and the Cretaceous (145.5-65.5 million years ago) (UCMP 2013d). Mesozoic means "middle animals," and is the time during which the world fauna changed drastically from that which had been seen in the Paleozoic. Dinosaurs, which are perhaps the most well-known organisms of the Mesozoic era, evolved in the Triassic, but were not very diverse until the Jurassic period. With the exception of birds, dinosaurs became extinct at the end of the Cretaceous. The Mesozoic era was also a time of great change in the terrestrial vegetation. The early Mesozoic was dominated by ferns, cycads, ginkgophytes, bennettitaleans, and other unusual plants. Modern gymnosperms, such as conifers, first appeared in their current recognizable forms in the early Triassic.

RECOMMENDATIONS

The records search determined that there are fossil vertebrate localities located in proximity to the Project area; however, these localities were deposited during a more recent geologic time than when the soil type and rock unit underlying the Project area formed. In addition, there are no localities recorded within a half-mile of the Project area. The geology of the Project area is not associated with any of the documented geologic formations associated with the documented localities. Based on this information, the Project area has low potential for containing nonrenewable paleontological resources. Therefore, no impacts to significant paleontological resources are expected.

The lead agency should implement a standard unanticipated discovery mitigation measure if paleontological resources are encountered during construction activities. A qualified paleontologist should be contacted if fossils are unearthed in the course of excavation. If any fossils are recovered, they shall be analyzed to a point of identification and curated at an established accredited museum repository with permanent retrievable paleontologic storage. A technical report of findings shall be prepared with an appended itemized inventory of identified specimens and submitted with the recovered specimens to the curation facility.

Thank you for the opportunity to assist you in your project planning. If you have any questions, you may contact me by phone at (916) 782-9100 or by email at mmeza@ecorpconsulting.com.

Sincerely,

Marin Meza
Biologist
ECORP Consulting, Inc.

Attachment(s)

REFERENCES CITED:

Anonymous
n.d. Geologic Legend Electronic Document http://www.quake.ca.gov/gmaps/images/GMC_Explanation.pdf, accessed 5 September 2013.

Finger, Ken
2013 UCMP record search response email for the RESD San Mateo-Santa Cruz unit headquarters auto shop relocation project. Dated 20 November 2013.

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1977 Geologic map of California: California Division of Mines and Geology, scale 1:750,000.

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2013 Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines, http://vertpaleo.org/The-Society/Statements-and-Guidelines/Conformable-Impact-Mitigation-Guidelines-Committee.aspx.

United States Department of Agriculture, Natural Resources Conservation Service (NRCS)
2013 Soil Survey Geographic (SSURGO) Database for Santa Cruz County, CA.

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2009 National Cooperative Soil Survey, Ben Lomond Series. October 2009.

University of California Museum of Paleontology (UCMP)
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2013b The Eocene Epoch. Electronic document, http://www.ucmp.berkeley.edu/tertiary/eocene.php, accessed 11 September 2013.
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APPENDIX E

Phase I Environmental Assessment

PHASE I ENVIRONMENTAL SITE ASSESSMENT

BEN LOMOND PROPERTY
13575 EMPIRE GRADE ROAD
BEN LOMOND, CALIFORNIA

Submitted to:
Mr. Chris Stabenfeldt
ECorp Consulting, Inc.
2525 Warren Drive,
Rocklin, CA 95677

Prepared by:
ENGEO Incorporated

September 11, 2013

Project No:
10498.000.000
Phase 002

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Project No.
10498.000.000
Phase 002

September 11, 2013

Chris Stabenfeldt
ECorp Consulting, Inc.
2525 Warren Drive
Rocklin, CA 95677

Subject: Ben Lomond Property
13575 Empire Grade Road (portion)
Santa Cruz, CA

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Dear Mr. Stabenfeldt:

ENGEO is pleased to present our phase I environmental site assessment of the subject property, located in Santa Cruz, California. The attached report includes a description of the site assessment activities, along with ENGEO's findings, opinions, and conclusions regarding the Property.

ENGEO has the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the Property, and has developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. We declare that, to the best of our professional knowledge and belief, the responsible charge for this study meets the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312 and ASTM 1527-05.

We are pleased to be of service to you on this project. If you have any questions concerning the contents of our report, please contact us.

Sincerely,

ENGEO Incorporated

Divya Bhargava

Shawn Munger, CHG

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EXECUTIVE SUMMARY

ENGEO conducted a phase I environmental site assessment for a portion of the Property located at 13575 Empire Grade Road, Santa Cruz, California (Figures 1 and 2). The Property is described as the Ben Lomond Conservation Camp, and is identified by Assessor's Parcel Number (APN) 080-331-03. The specific study area is limited to an approximate 2-acre portion of the parcel, as shown on Figures 1 and 2 (Study Area).

A plant nursery was formerly located in an approximately 2-acre area located within the Study Area. We understand that the auto shop located at 6059, Highway 9, Felton will be relocated to the Study Area. The Study Area is currently undeveloped vacant land, and an unpaved road traverses the site in an east-west direction.

This assessment included a review of local, state, tribal, and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources. A reconnaissance of the Study Area was conducted to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials and interviews with persons knowledgeable about current and past site use.

The site reconnaissance and records review did not find documentation or physical evidence of soil or groundwater impairments associated with the use or past use of the Study Area. A review of regulatory databases maintained by county, state, tribal, and federal agencies found no documentation of hazardous materials violations or discharge on the Property and did not identify contaminated facilities within the appropriate American Society for Testing and Materials (ASTM) search distances that would reasonably be expected to impact the Property.

Based on the findings of this assessment, no Recognized Environmental Conditions (RECs) and no historical RECs were identified for the Study Area within the Property. Based on the findings of this assessment, the following potential REC was identified for the Study Area:

- A review of past records found that the Study Area had been formerly used as a plant nursery between the 1950s to the early 1990s. There is a potential that persistent organochlorine pesticides or arsenical herbicides may have been used at the nursery.

ENGEO has performed a phase I environmental site assessment of the Study Area within the Property y in general conformance with the scope and limitations of ASTM E 1527-05 "Standard Practice for Environmental Site Assessments" and USEPA "Standards and Practices for All Appropriate Inquires", 40 CFR Part 312. Based on the findings of this assessment, ENGEO recommends the following:

- A limited agricultural chemical assessment to determine if the soil has been impacted due to past use of the Study Area as a plant nursery.

1.0 INTRODUCTION

ENGEO conducted a phase I environmental site assessment for a portion of the subject property (Property) located at 13575 Empire Grade Road, Santa Cruz, California (Figures 1 and 2). The Property is described as the Ben Lomond Conservation Camp, and is identified by Assessor's Parcel Number (APN) 080-331-03. The specific study area is an approximate 2-acre area, as shown on Figures 1 and 2 (Study Area).

A plant nursery was formerly located within the Study Area. We understand that the auto shop located at 6059, Highway 9, Felton will be relocated to the Study Area. The Study Area is currently undeveloped vacant land, and an unpaved road traverses the site in an east-west direction.

1.1 PURPOSE OF PHASE I ENVIRONMENTAL SITE ASSESSMENT

This assessment was performed at the request of ECorp Consulting for the purpose of environmental due diligence. The objective of this phase I environmental site assessment is to identify recognized environmental conditions associated with the Property. As defined in the ASTM Standard Practice E 1527-05, a REC is "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property".

1.2 DETAILED SCOPE OF SERVICES

The scope of services performed included the following:

- A review of publicly available and practically reviewable standard local, state, tribal, and federal environmental record sources.
- A review of publicly available and practically reviewable standard historical sources, aerial photographs, fire insurance maps and physical setting sources.
- A reconnaissance of the Property to review site use and current conditions. The reconnaissance was conducted to check for the storage, use, production or disposal of hazardous or potentially hazardous materials.
- Interviews with owners/occupants and public sector officials.
- Preparation of this report with our findings, opinions, and conclusions.

1.3 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

The professional staff at ENGEO strives to perform its services in a proper and professional manner with reasonable care and competence but is not infallible. The recommendations and conclusions presented in this report were based on the findings of our study, which were developed solely from the contracted services. The findings of the report are based in part on contracted database research, out-of-house reports and personal communications. The opinions formed by ENGEO are based on the assumed accuracy of the relied upon data in conjunction with our relevant professional experience related to such data interpretation. ENGEO assumes no liability for the validity of the materials relied upon in the preparation of this report.

This document must not be subject to unauthorized reuse; that is, reuse without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time. The findings from a phase I environmental site assessment are valid for one year after completion of the report. Updates of portions of the assessment may be necessary after a period of 180 days after completion.

This phase I environmental site assessment is not intended to represent a complete soil or groundwater characterization, nor define the depth or extent of soil or groundwater contamination. It is intended to provide an evaluation of potential environmental concerns associated with the use of the Property. A more extensive assessment that would include a subsurface exploration with laboratory testing of soil and groundwater samples could provide more definitive information concerning site-specific conditions. If additional assessment activities are considered for the Property and if other entities are retained to provide such services, ENGEO cannot be held responsible for any and all claims arising from or resulting from the performance of such services by other persons or entities. ENGEO can also not be held responsible from any and all claims arising or resulting from clarifications, adjustments, modifications, discrepancies or other changes necessary to reflect changed field or other conditions.

1.4 SPECIAL TERMS AND CONDITIONS

ENGEO has prepared this report for the exclusive use of our client, ECorp Consulting. It is recognized and agreed that ENGEO has assumed responsibility only for undertaking the study for the client. The responsibility for disclosures or reports to a third party and for remedial or mitigative action shall be solely that of the Client.

Laboratory testing of soil or groundwater samples was not within the scope of the contracted services. The assessment did not include an asbestos survey, an evaluation of lead-based paint, an inspection of light ballasts for polychlorinated biphenyls (PCBs), a radon evaluation, or a mold survey.

This report is based upon field and other conditions discovered at the time of preparation of ENGEO's assessment. Visual observations referenced in this report are intended only to represent conditions at the time of the reconnaissance. ENGEO would not be aware of site contamination, such as dumping and/or accidental spillage that occurred subsequent to the reconnaissance conducted by ENGEO personnel.

2.0 PROPERTY INFORMATION

2.1 SITE LOCATION

The Property is located at 13575 Empire Grade Road, Santa Cruz, California (Figures 1 and 2). The Property is described as the Ben Lomond Conservation Camp, and is identified by Assessor's Parcel Number (APN) 080-331-03. The specific Study Area is an approximate 2-acre portion of the larger parcel, as shown on Figures 1 and 2.A plant nursery was formerly located within the Study Area. We understand that the auto shop located at 6059, Highway 9, Felton will be relocated to the Study Area. The Study Area is currently undeveloped vacant land, and an unpaved road traverses the site in an east-west direction.

2.2 SITE AND VICINITY CHARACTERISTICS

According to published topographic maps, the Property is relatively level at approximately 2648 feet above mean sea level (msl). A review of the 1997 Graham, et.al Geological Map (Graham, et.al, 199) found that the Property is primarily underlain by undifferentiated alluvial deposits (Holocene; Qal).

Geocheck – The Physical Setting Source Summary of the Environmental Resources Data report (Appendix A) showed no Federal United States Geological Survey (USGS) well, no Federal public water supply system, and four State wells located within one mile of the Property.

We also reviewed the Department of Water Resources On-line Water Data Library for depth to water in the vicinity of the Property. The website did not identify wells within one mile of the Property.

The site-specific depth to groundwater and direction of groundwater flow was not determined as part of this assessment. Fluctuations in groundwater levels may occur seasonally and over a period of years due to variations in precipitation, temperature, irrigation and other factors.

We reviewed the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) website and map database to determine if any historic oil and/or gas wells were located within the Property. No wells were mapped within one mile of the Property.

2.3 CURRENT USE OF PROPERTY/DESCRIPTION OF SITE IMPROVEMENTS

The Study Area is within the greater Ben Lomond Conservation Camp site. A plant nursery was formerly located within Study Area. The Study Area is currently undeveloped vacant land, and an unpaved road traverses the site in an east-west direction.

2.4 CURRENT USE OF ADJOINING PROPERTIES

The Ben Lomond Conservation Camp is a part of the CA-Forestry and Fire Protection. It is located in the mountains, approximately 12 miles from the town of Santa Cruz. The adjoining parcels are mostly residential.

3.0 RECORDS REVIEW

3.1 PREVIOUS ENVIRONMENTAL REPORTS

There were no previous environmental reports for the Property provided for review.

3.2 PROPERTY RECORDS

3.2.1 Title Report/Ownership

We did not receive a preliminary title report for the Property.

3.3 HISTORICAL RECORD SOURCES

The purpose of the historical record review is to develop a history of the previous uses or occupancies of the Property and surrounding area in order to identify those uses or occupancies that are likely to have led to recognized environmental conditions on the Property.

3.3.1 Historical Topographic Maps

Historical USGS topographic maps were reviewed to determine if discernible changes in topography or improvements pertaining to the Property had been recorded. The following maps were provided to us through an EDR Historical Topographic Map Report, presented in Appendix C.

TABLE 3.3.1-1
Historical Topographic Maps

Quad	Year	Series	Scale
Santa Cruz	1902	30	1:125000
Ben Lomond	1948	15	1:50000
Big Basin	1955	7.5	1:24000

Quad	Year	Series	Scale
Big Basin	1968	7.5	1:24000
Big Basin	1991	7.5	1:24000
Big Basin	1997	7.5	1:24000

1902 and 1948 Maps – The Property is mapped as undeveloped land within the Ben Lomond mountains. Empire Grade Road is mapped east of the Property and Jamison Road is mapped northeast of the Property.

1955 Map – The Property is labeled as "Camp Ben Lomond" and several structures are mapped on site. The Big Creek extends north-south west of the Property. The town of Forest Springs is identified to the northeast.

1968 Map - The Property is now labeled as "Camp Ben Lomond (California Youth Authority)", and an unpaved road now extends through the northern portion of the Property (within the Study Area).

1991 and 1997 Maps – No structures are mapped on the Study Area, while several additional structures now exist in the rest of the Property. The road in the northern portion of the Property(on our Study Area) now appears to be paved, and it appears to be leading to a substation.

3.3.2 Aerial Photographs

The following aerial photographs, provided by EDR, were reviewed for information regarding past conditions and land use at the Property and in the immediate vicinity. These photographs are presented in Appendix D.

TABLE 3.3.2-1
Aerial Photographs

Flyer	Year	Scale
Exxon	1948	1" = 500'
Aero	1956	1" = 500'
Cartwright	1963	1" = 500'
NASA	1977	1" = 500'
USGS	1982	1" = 500'
EDR	1991	1" = 500'
USGS	1998	1" = 500'
EDR	2005	1" = 500'
EDR	2006	1" = 500'

Flyer	Year	Scale
EDR	2009	1” = 500’
EDR	2010	1” = 500’
EDR	2012	1” = 500’

1948 and 1956 Photographs – No structures are visible on the Study Area, and a few structures are visible on the rest of the Property. The Study Area and the adjacent areas appear to be used as a plant nursery. A paved road in the current location of Empire Grade Road exists east of the Property, while another unpaved road extends north-south in the western portion of the Property.

1963 through 1982 Photographs – The Study Area still appears to be used as a nursery. Other portions of the Property appear to be associated with activities of the Ben Lomond Conservation Camp. A reservoir exists in the southeast portion of the Property.

1991 Photograph – An unpaved road now extends east-west in the northern portion of the Study Area. A few structures and two circular tanks are visible northwest of the Study Areal. Additional structures now exist in other portions of the Property.

1998 Photograph – The Study Area and the adjacent areas no longer appear to be used as a plant nursery.

2005 and Photographs – Additional unpaved roads are now visible on the remainder of the Property. The Study Area appears to be vacant undeveloped land. A paved road is shown as an access from Empire Grade Road to the Property.

2009 through 2012 Photographs – The Property now exists as its current configuration. The Study Area is vacant land with a paved road extending through its northern portion.

3.3.3 Fire Insurance Maps

EDR prepared a Sanborn Fire insurance map search for the Property and surrounding properties. EDR reported that no maps were available for the Property and surrounding properties.

3.3.4 City Directory

City Directories, published since the 18th century for major towns and cities, lists the name of the resident or business associated with each address. A city directory search conducted by EDR is located in Appendix E.

The following listings were found for 13575 Empire Grade: State of CA Ben Lomond Conservation (2010), State of CA Ben Lomond Youth, CA State Youth Auth Conservation Camp (2005), CA State Youth Auth (2000), CA State Youth Auth (1995), CA State Forestry Camp (1990), CA State Youth Auth (1995), Rogers Reginald (1995), CA State Forestry Camp

(1985), CA State Youth Auth (1985), Primm Scott (1985), Tavernelli Tomalyn (1985), CA State Forestry (1980), CA State Youth Auth (1980), CA State Youth Auth Camp (1975), CA State Forestry (1975), and White Frank R (1975).

3.3.5 Government Agencies

The following agencies were contacted pertaining to possible past development and/or activity at the Property.

- Santa Cruz County Building Department
- Felton Fire Protection District
- Santa Cruz County Department of Environmental Health
- Santa Cruz County Assessor's Office
- California Regional Water Quality Control Board
- Department of Toxic Substance Control

Santa Cruz County Building Department - We viewed online County building permit records dating back to 1985. One permit for an emergency diesel generator dated 1998 was found.

Felton Fire Protection District - We contacted the Felton Fire Protection District and were informed that the District does not file hazmat or UST records.

Santa Cruz County Department of Environmental Health - We received a CD containing Property records filed by the Santa Cruz County Department of Environmental Health. Of significance, were records pertaining to the removal of two 1,000 gallon gasoline underground storage tanks (USTs) in 1994. The USTs were located in the proposed location of the new tanks that are planned as part of the auto shop relocation project. We noted no sampling records for the UST removal.

Santa Cruz County Assessor's Office – The Santa Cruz County Assessor's Office website was viewed for information regarding the Property. Information on the website confirmed that the Property is identified by APN 080-331-03.

California Regional Water Quality Control Board – The California Regional Water Quality Control Board's online database, GeoTracker, was reviewed for files relating to the Property and surrounding properties. There were no records for the Property listed in the GeoTracker database. The GeoTracker database did not identify any sites in the immediate vicinity of the Property that would be expected to impact the Property.

Department of Toxic Substances Control – We reviewed the EnviroStor Database maintained by the Department of Toxic Substances Control (DTSC) to identify ongoing environmental site assessment and remedial activities at or within the immediate vicinity of the Property. There were no records for the Property listed in the EnviroStor Database. The EnviroStor Database did not identify any other sites within the immediate vicinity of the Property that would be considered an environmental concern.

3.4 ENVIRONMENTAL RECORD SOURCES

EDR performed a search of federal, tribal, state, and local databases regarding the Property and nearby properties. Details regarding the databases searched by EDR are provided in Appendix A. A list of the facilities documented by EDR within the approximate minimum search distance of the Property is provided below:

3.4.1 Federal ASTM Standard/Supplemental Sources

3.4.1.1 Subject Property

The Property is not listed on the Federal ASTM Standard or supplemental sources.

3.4.1.2 Other Properties

No facilities were listed within the appropriate ASTM search distances of the Property on Federal ASTM Standard or supplemental sources.

3.4.2 State ASTM Standard/Supplemental Sources

3.4.2.1 Subject Property

The Property is listed on the following State ASTM Standard or supplemental sources:

- AST – The Aboveground Storage Tank database contains registered ASTs. The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

- HAZNET - Facility and Manifest Data – Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments.

- ENVIROSTOR – The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further.

- SWF/LF (SWIS) - Solid Waste Information System Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

3.4.2.2 Other Properties

No facilities were listed within the appropriate ASTM search distances of the Property on State ASTM Standard or supplemental sources.

3.4.3 Local ASTM Supplemental Sources

3.4.3.1 Subject Property

The Property is listed on the following Local ASTM Standard or supplemental sources:

- SWEEPS UST – Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990s. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

- CA FID UST – The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

- FINDS – Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail.

- HIST UST – Historical UST Registered Database.

- WDS – Waste Discharge System. Sites which have been issued waste discharge requirements.

- ENF: Enforcement Action Listing. A listing of Water Board Enforcement Actions.

- CUPA Listings - A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

3.4.3.2 Other Properties

The following database includes facilities listed within the appropriate ASTM search distances of the Property on local ASTM Standard or supplemental sources.

- EDR US Hist Auto Stations – Listings of potential gas station/filling station/service station sites.

Not Reported *13400 Empire Grade*

All listings identified for the Property are for the greater Ben Lomond Conservation Camp parcel. None of these listings are associated with the Study Area.

Based on the distances to the identified database sites, regional topographic gradient, and the EDR findings, it is unlikely that the above-stated database sites pose an environmental risk to the Property. Properties that are on the "Orphan Summary" list appear to be located beyond the ASTM recommended radius search criteria.

4.0 SITE RECONNAISSANCE

4.1 METHODOLOGY

ENGEO conducted a reconnaissance of the Property on August 30, 2013 The Property was viewed for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination. The site was also checked for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or preexisting underground storage tanks. Photographs taken during the site reconnaissance are presented in Figure 4.

4.2 GENERAL SITE SETTING

The specific Study Area is an approximately 2-acre portion of the larger Ben Lomond Conservation Camp site. .A plant nursery was formerly located within the Study Area. We understand that the auto shop located at 6059, Highway 9, Felton will be relocated to the Study Area. The Study Area is currently undeveloped vacant land, and an unpaved road traverses the site in an east-west direction.

4.3 EXTERIOR OBSERVATIONS

Structures. No structures were observed during the site reconnaissance.

Hazardous Substances and Petroleum Products in Connection with Identified Uses. No hazardous substances or petroleum products were observed within the Study Area during the site reconnaissance.

Storage Tanks. No above-ground storage tanks or evidence of existing underground storage tanks was observed within the Study Area during the site reconnaissance. Aboveground storage tanks exist on the remainder of the Property.

Odors. No odors indicative of hazardous materials or petroleum material impacts were noted at the time of the reconnaissance.

Pools of Potentially Hazardous Liquid. No pools of potentially hazardous liquid were observed within the Study Area at the time of our reconnaissance.

Drums. No drums were observed on the Study Area at the time of the reconnaissance.

Hazardous Substance and Petroleum Product Containers. No hazardous substance or petroleum product containers were observed on the Study Area at the time of our reconnaissance.

Polychlorinated Biphenyls (PCBs). No PCB-containing materials, including transformers, were observed within the Study Area during our site reconnaissance.

Pits, Ponds and Lagoons. No pits, ponds or lagoons were observed within the Study Area at the time of our reconnaissance.

Stained Soil/Pavement. No stained soil or pavement was observed within the Study Area at the time of our reconnaissance.

Stressed Vegetation. No signs of stressed vegetation were observed on the Study Area at the time of our reconnaissance.

Solid Waste/Debris No disposal of solid waste was observed within the Study Area.

Wastewater. No wastewater conveyance systems were observed at the Study Area during the reconnaissance.

Wells. No wells were found within the Study during our site reconnaissance. Wells exist on other portions of the Property.

Septic Systems. No septic systems were found within the Study Area during our site reconnaissance. Septic systems likely exist within the greater Ben Lomond Conservation Camp site.

4.4 ASBESTOS-CONTAINING MATERIALS AND LEAD-BASED PAINT

No structures are currently located on the Study Area.

4.5 INDOOR AIR QUALITY

An evaluation of indoor air quality, mold, or radon was not included as part of the contracted scope of services. The California Department of Health Services has conducted studies of radon risks throughout the state, sorted by zip code. Results of the studies indicate that 102 tests were conducted within the Property zip code, with 24 tests exceeding the current EPA action level of 4 picocuries per liter [pCi/L][1]).

[1] California Department of Health Services – Division of Drinking Water and Environmental Management – Radon (http://www.cdph.ca.gov/HealthInfo/environhealth/Documents/Radon/CaliforniaRadonDatabase.pdf).

In accordance with ASTM E2600-10 (Tier 1) (*Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*); there are no potential petroleum hydrocarbon sources for vapor intrusion within 1/10 mile of the Property or volatile organic compound (VOCs) sources within 1/3 mile of the Property.

5.0 INTERVIEWS

Ms. Leia Riley of the California Department of General Services completed both the client-based environmental questionnaire and the key site managed-based environmental questionnaire. In the questionnaires, Ms. Riley mentioned that the Property is the Ben Lomond Conservation Camp combined with the Cal Fire camp. She identified that a plant nursery and California Youth Authority were formerly located on the Property. The plant nursery was located within the Study Area. She also identified engine-oil, anti-freeze, and spray paint as chemicals used in small quantities at the larger Ben Lomond Conservation Camp site. Copies of the completed questionnaires are presented in Appendix F.

6.0 FINDINGS

The reconnaissance and records research did not find documentation or physical evidence of soil or groundwater impairments associated with the current or past use of the Property. A review of regulatory databases maintained by county, state and federal agencies found no documentation of hazardous materials violations or discharge on the Property. No documented soil or groundwater contamination associated with abutting properties was found from the records research.

Based on the findings of this assessment, no Recognized Environmental Conditions (RECs) and no historical RECs were identified for the Property. Based on the findings of this assessment, the following potential REC was identified for the Property:

- A review of past records found that the Study Area had been formerly used as a plant nursery between the 1950s to the early 1990s. There is a potential that persistent organochlorine pesticides or arsenical herbicides may have been used at the nursery.

7.0 OPINIONS AND DATA GAPS

It is our opinion that the findings of this study are based on a sufficient level of information obtained during our contracted scope of services to render a conclusion as to whether additional appropriate investigation is required to identify the presence or likely presence of a REC. The following data gaps were identified during the preparation of this assessment:

- We did not receive a preliminary title report for the Property.

- The Santa Cruz County Department of Environmental Health did not respond to our inquiry regarding public records pertaining to the Property at the time of report preparation.

The data gaps identified during this process do not represent a significant data gap and do not affect the conclusions as to the presence or lack of presence of RECs at the Property.

8.0 CONCLUSIONS

This assessment included a review of local, state, tribal, and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources. A reconnaissance of the Property was conducted to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials and interviews with persons knowledgeable about current and past site use.

Based on the findings of this assessment, no Recognized Environmental Conditions (RECs) and no historical RECs were identified for the Study Area. Based on the findings of this assessment, the following potential REC was identified for the Study Area:

- A review of past records found that the Study Area had been formerly used as a plant nursery between the 1950s to the early 1990s. There is a potential that persistent organochlorine pesticides or arsenical herbicides may have been used at the nursery.

ENGEO has performed a phase I environmental site assessment of the Study Area within the Property in general conformance with the scope and limitations of ASTM E 1527-05 “Standard Practice for Environmental Site Assessments” and USEPA “Standards and Practices for All Appropriate Inquires”, 40 CFR Part 312. Based on the findings of this assessment, ENGEO recommends the following:

- A limited agricultural chemical assessment to determine if the soil has been impacted due to past use of the Study Area as a plant nursery.

SELECTED REFERENCES

Aero, Aerial Photograph, Scale 1”=500’, Flight Year 1956.

California Department of Water Resources (http://wdl.water.ca.gov).

California Department of Conservation, Department of Oil, Gas and Geothermal Resources Website; Oil and Gas Maps, (http://www.consrv.ca.gov/dog/maps/pages/index_map.aspx).

Cartwright, Aerial Photograph, Scale 1”=500’, Flight Year 1963.

Environmental Data Resources (EDR), Aerial Photograph, Scale 1”=500’, Flight Years 1991, 2005, 2006, 2009, 2010, and 2012.

Exxon, Aerial Photograph, Scale 1”=500’, Flight Year 1948.

EnviroStor Website, Department of Toxic Substances Control, http://www.envirostor.dtsc.ca.gov/public//

GeoTracker Website, State Water Resources Control Board, http://geotracker.swrcb.ca.gov/.

Google Maps (http://maps.google.com)

Graham, S., Wentworth, C., Knifong, D., Graymer R., and Blissenbach, J., Geologic Map of Santa Cruz County, USGS, 1997.

NASA, Aerial Photograph, Scale 1”=500’, Flight Year 1977.

United States Environmental Protection Agency Indoor Air Quality Website (http://www.cdph.ca.gov/HealthInfo/environhealth/Documents/Radon/CaliforniaRadonDatabase.pdf)

USGS, Aerial Photograph, Scale 1”=500’, Flight Years 1982 and 1998.

USGS 7.5’/15’/30’ Santa Cruz, Ben Lomond, Big Basin County Maps dated 1902, 1948, 1955, 1968, 1991, and 1997.

LIST OF FIGURES

Figure 1 - Vicinity Map
Figure 2 - Assessor's Parcel Map or Site Map
Figure 3 - Topographic Map
Figure 4 - Site Photographs

FIGURES

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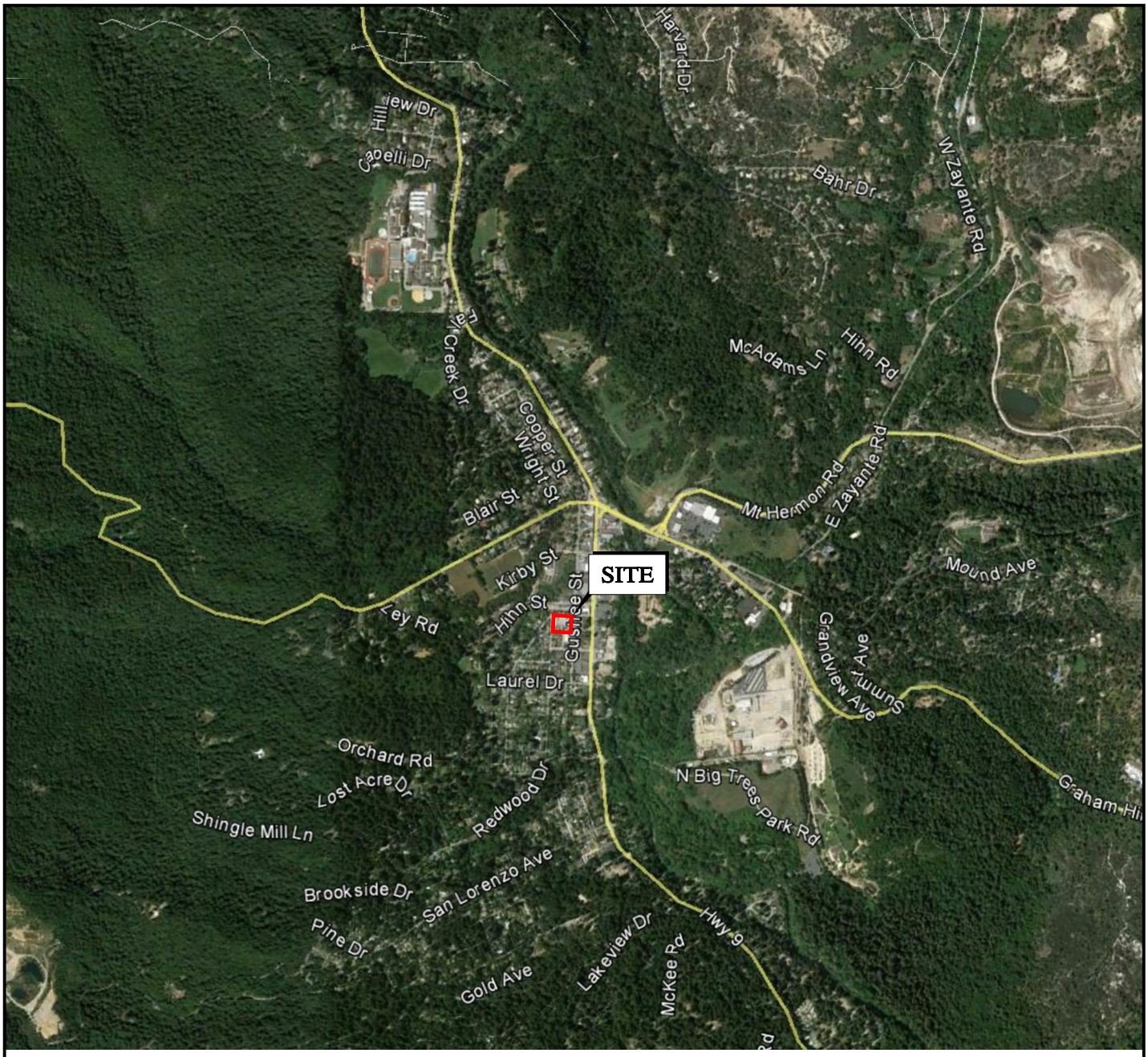

N

0 FEET 2000

0 METERS 1000

BASE MAP SOURCE: GOOGLE EARTH PRO

ENGEO Expect Excellence

VICINITY MAP

FELTON PROPERTY

SANTA CRUZ, CALIFORNIA

PROJECT NO.:	10498.000.000
SCALE:	AS SHOWN
DRAWN BY: LL	CHECKED BY: BF

FIGURE NO. 1

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ORIGINAL FIGURE PRINTED IN COLOR

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N

0 FEET 50
0 METERS 25

EXPLANATION

APPROXIMATE LOCATION OF MONITORING WELLS

BASE MAP SOURCE: GOOGLE EARTH PRO

ENGEO Expect Excellence

AERIAL MAP
FELTON PROPERTY
SANTA CRUZ, CALIFORNIA

PROJECT NO.: 10498.000.000		FIGURE NO. 2
SCALE: AS SHOWN		
DRAWN BY: LL	CHECKED BY: BF	

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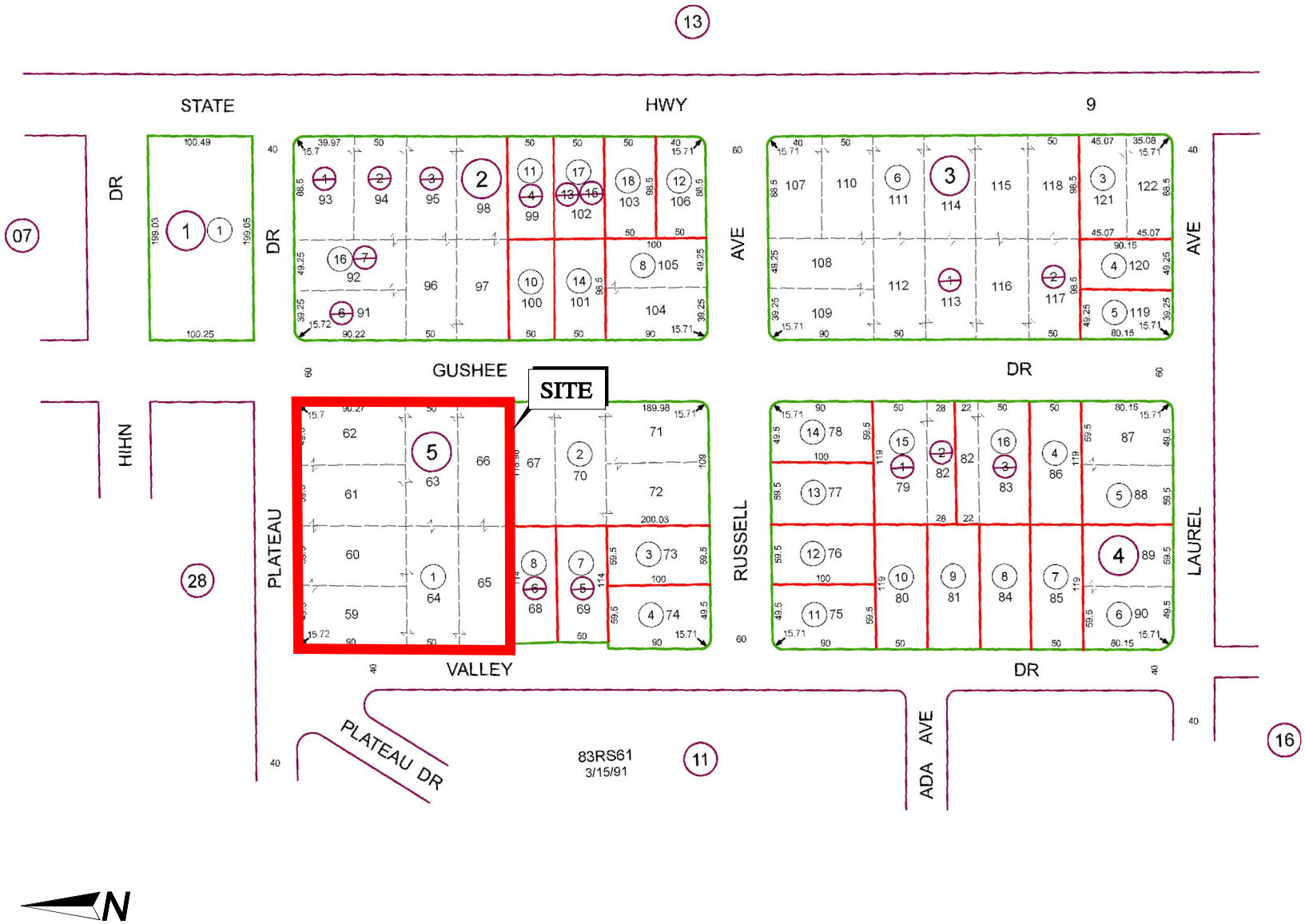

0 FEET 150
0 METERS 75

BASE MAP SOURCE: COUNTY ASSESSOR'S OFFICE

ENGEO
Expect Excellence

ASSESSOR'S PARCEL MAP
FELTON PROPERTY
SANTA CRUZ, CALIFORNIA

PROJECT NO.: 10498.000.000	FIGURE NO. 3
SCALE: AS SHOWN	
DRAWN BY: LL	CHECKED BY: BF

ORIGINAL FIGURE PRINTED IN COLOR

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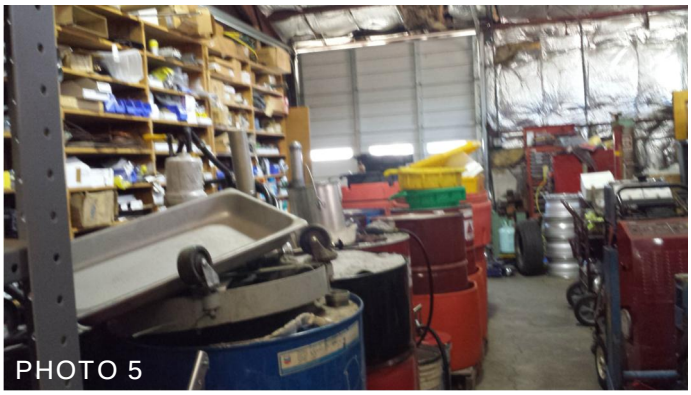
ABOVEGROUND STORAGE TANKS SOUTHEAST OF THE AUTO SHOP

BATTERIES AND DRUMS STORED OUTSIDE STORAGE BUILDING

DRUM CONTAINING USED OIL FILTERS OUTSIDE FRONT WALL OF AUTO SHOP

DRUMS CONTAINING OIL INSIDE THE AUTO SHOP



DRUMS IN SECONDARY CONTAINMENT INSIDE THE AUTO SHOP

FRONT VIEW OF THE AUTO SHOP

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SITE PHOTOGRAPHS
FELTON PROPERTY
SANTA CRUZ, CALIFORNIA

PROJECT NO.: 10498.000.000	FIGURE NO. 4A
SCALE: NO SCALE	
DRAWN BY: LL	CHECKED BY: BF

G:\Drafting\DRAFTING2_Dwg_10000 to 12999\10498\000\Felton\ESA\10498000000-ESA-4-SitePhotos-0913.dwg Plot Date: 9-06-13 llee

ORIGINAL FIGURE PRINTED IN COLOR

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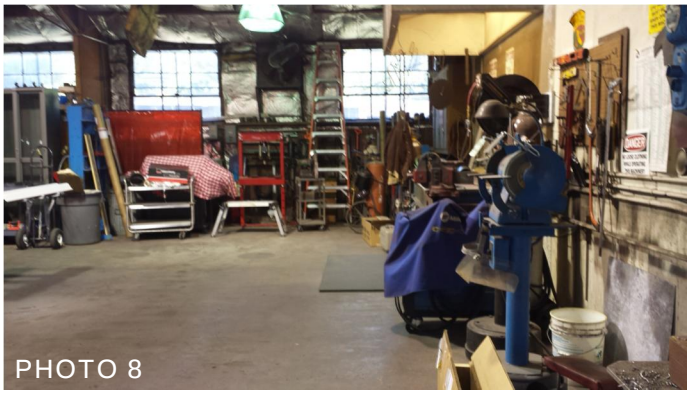
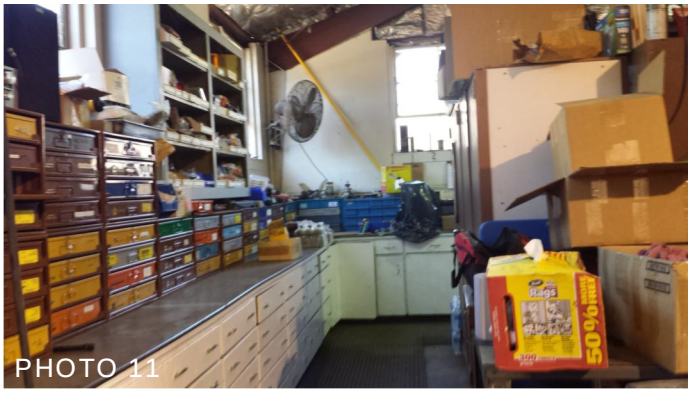
HYDRAULIC VEHICLE LEFT IN THE NORTHEAST CORNER OF THE PROPERTY



INSIDE VIEW OF THE AUTO SHOP

MISCELLANEOUS EQUIPMENT STORED INSIDE THE STORAGE BUILDING

OFFICE SPACE WITHIN THE AUTO SHOP



STOARGE SHELVES WITHIN AUTO SHOP

TIRES STORED ON SHELVES INSIDE THE STORAGE BUILDING

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SITE PHOTOGRAPHS
FELTON PROPERTY
SANTA CRUZ, CALIFORNIA

PROJECT NO.: 10498.000.000	FIGURE NO. 4B
SCALE: NO SCALE	
DRAWN BY: LL	CHECKED BY: BF

G:\Drafting\DRAFTING2_Dwg_10000 to 12999\10498\000\Felton\ESA\10498000000-ESA-4-SitePhotos-0913.dwg Plot Date: 9-05-13 llee

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TREATMENT AND RECYCLING SYSTEM ADJACENT TO EASTERN EDGE OF AUTO SHOP

VEHICLE EQUIPMENT AND DRUMS STORED OUTSIDE OF STORAGE BUILDING

VIEW ALONG FRONT OF AUTO SHOP

VIEW ALONG WESTERN EDGE OF THE AUTO SHOP

VIEW LOOKING AT THE DOOR OF THE AUTO SHOP

VIEW OF THE STORAGE AREA INSIDE THE AUTO SHOP

ENGEO
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SITE PHOTOGRAPHS
FELTON PROPERTY
SANTA CRUZ, CALIFORNIA

PROJECT NO.: 10498.000.000	FIGURE NO. 4C
SCALE: NO SCALE	
DRAWN BY: LL	CHECKED BY: BF

G:\Drafting\DRAFTING2_Dwg_10000 to 12999\10498\000\Felton\ESA\10498000000-ESA-4-SitePhotos-0913.dwg Plot Date: 9-06-13 llee

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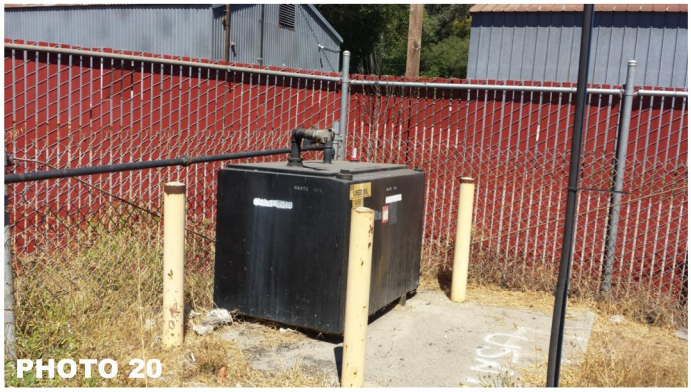
WASHING EQUIPMENT OUTSIDE AUTO SHOP



WASTE OIL TANK ADJACENT TO THE VEHICLE LIFT

WOODEN DEBRIS STORED ALONG STORAGE BUILDING

ENGEO
Expect Excellence

SITE PHOTOGRAPHS
FELTON PROPERTY
SANTA CRUZ, CALIFORNIA

PROJECT NO.: 10498.000.000
SCALE: NO SCALE
DRAWN BY: LL
CHECKED BY: BF

FIGURE NO.
4D

G:\Drafting\DRAFTING2_Dwg_10000 to 12999\10498\000\Felton\ESA\10498000000-ESA-4-SitePhotos-0913.dwg Plot Date: 9-09-13 llee

ORIGINAL FIGURE PRINTED IN COLOR

APPENDIX A

ENVIRONMENTAL DATA RESOURCES, INC.

Radius Map Report

APPENDIX A

13575 Empire Grade Road
13575 Empire Grade Road
Santa Cruz, CA 95060

Inquiry Number: 3700789.2s
August 19, 2013

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
Map Findings Summary	4
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

13575 EMPIRE GRADE ROAD
SANTA CRUZ, CA 95060

COORDINATES

Latitude (North):	37.1314000 - 37˚ 7' 53.04''
Longitude (West):	122.1702000 - 122˚ 10' 12.72''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	573707.6
UTM Y (Meters):	4109567.8
Elevation:	2648 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	37122-B2 BIG BASIN, CA
Most Recent Revision:	1999
South Map:	37122-A2 DAVENPORT, CA
Most Recent Revision:	1999

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2012
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
BEN LOMOND YOUTH CONSERVATION 13575 EMPIRE GRADE SANTA CRUZ, CA 95060	CA FID UST SWEEPS UST	N/A
BEN LOMOND CONSERVATION CAMP 13575 EMPIRE GRADE SANTA CRUZ, CA 95060	AST	N/A
BEN LOMOND CYA DISPOSAL SITE 13575 EMPIRE GRADE RD SANTA CRUZ, CA	FINDS	N/A

EXECUTIVE SUMMARY

CA DEPT OF FORESTRY 13575 EMPIRE GRADE SANTA CRUZ, CA 95060	HAZNET	N/A
BEN LOMOND CONSERVATION CAMP 13575 EMPIRE GRADE SANTA CRUZ, CA 95060	SWF/LF HIST UST CUPA Listings ENF ENVIROSTOR Status: Refer: RWQCB WDS	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators

RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls
LUCIS ..... Land Use Control Information System

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State and tribal leaking storage tank lists

LUST ..... Geotracker's Leaking Underground Fuel Tank Report
SLIC ..... Statewide SLIC Cases
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST ..... Active UST Facilities
INDIAN UST ..... Underground Storage Tanks on Indian Land
FEMA UST ..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

VCP ..... Voluntary Cleanup Program Properties
INDIAN VCP ..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
WMUDS/SWAT ..... Waste Management Unit Database
SWRCY ..... Recycler Database
HAULERS ..... Registered Waste Tire Haulers Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program

EXECUTIVE SUMMARY

Toxic Pits	Toxic Pits Cleanup Act Sites
CDL	Clandestine Drug Labs
US HIST CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information
LIENS	Environmental Liens Listing
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators
DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA BOND EXP. PLAN	Bond Expenditure Plan
UIC	UIC Listing
NPDES	NPDES Permits Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE	Hazardous Waste & Substance Site List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing

EXECUTIVE SUMMARY

Financial Assurance..... Financial Assurance Information Listing
LEAD SMELTERS..... Lead Smelter Sites
2020 COR ACTION..... 2020 Corrective Action Program List
US AIRS..... Aerometric Information Retrieval System Facility Subsystem
PRP..... Potentially Responsible Parties
EPA WATCH LIST..... EPA WATCH LIST
US FIN ASSUR..... Financial Assurance Information
PCB TRANSFORMER..... PCB Transformer Registration Database
PROC..... Certified Processors Database
MWMP..... Medical Waste Management Program Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants
EDR US Hist Cleaners..... EDR Exclusive Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there is 1 EDR US Hist Auto Stat site within approximately 0.25 miles of the target property.

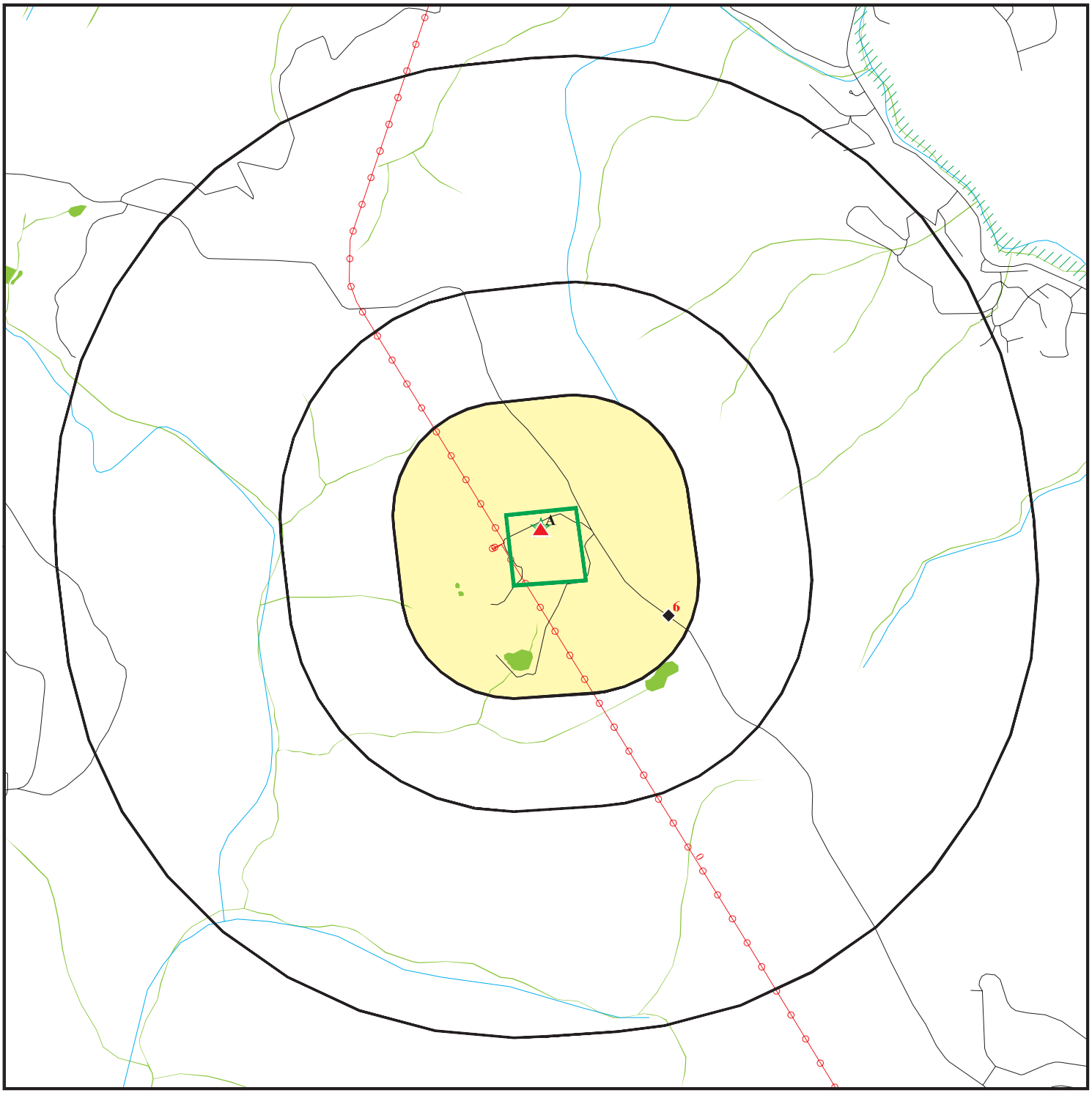
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	13400 EMPIRE GRADE	SE 1/8 - 1/4 (0.199 mi.)	6	24

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 6 records.

Site Name	Database(s)
R. FAMBRINI AND CO.	SWEEPS UST
PG&E GAS PLANT SANTA CRUZ	CERC-NFRAP
BOULDER CREEK SHELL	HIST UST
SANTA CRUZ FACILITY	HIST UST
SANTA CRUZ DISPOSAL SITE	WMUDS/SWAT
15769 COMSTOCK MILL ROAD	US CDL

OVERVIEW MAP - 3700789.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

0 1/4 1/2 1 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 13575 Empire Grade Road	CLIENT: Engeo
ADDRESS: 13575 Empire Grade Road Santa Cruz CA 95060	CONTACT: Morgan Johnson INQUIRY #: 3700789.2s
LAT/LONG: 37.1314 / 122.1702	DATE: August 19, 2013 3:48 pm

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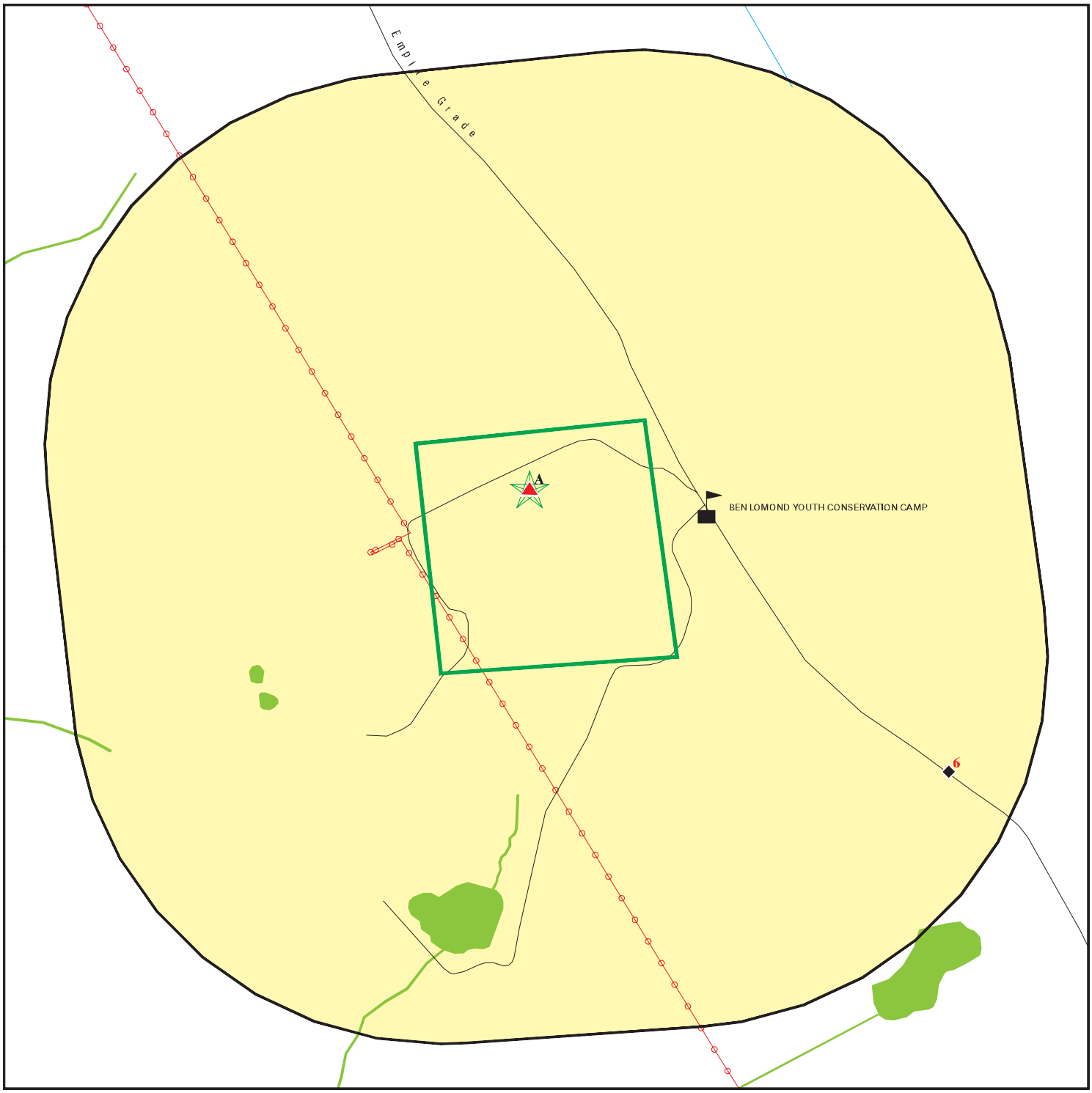
DETAIL MAP - 3700789.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 13575 Empire Grade Road	CLIENT: Engeo
ADDRESS: 13575 Empire Grade Road Santa Cruz CA 95060	CONTACT: Morgan Johnson INQUIRY #: 3700789.2s
LAT/LONG: 37.1314 / 122.1702	DATE: August 19, 2013 3:52 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000	1	0	0	0	0	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500	1	0	0	0	NR	NR	1
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	0	NR	NR	NR	0
AST	0.250	1	0	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250	1	0	0	NR	NR	NR	1
HIST UST	0.250	1	0	0	NR	NR	NR	1
SWEEPS UST	0.250	1	0	0	NR	NR	NR	1
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250	1	0	0	NR	NR	NR	1
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP	1	NR	NR	NR	NR	NR	1
HAZNET	TP	1	NR	NR	NR	NR	NR	1
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
WDS	TP	1	NR	NR	NR	NR	NR	1
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PROC	0.500		0	0	0	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	1	NR	NR	NR	1
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 Target Property | **BEN LOMOND YOUTH CONSERVATION**
13575 EMPIRE GRADE
SANTA CRUZ, CA 95060 | **CA FID UST**
SWEEPS UST | **S101625292**
N/A

Site 1 of 5 in cluster A

Actual: 2648 ft.

CA FID UST:

Facility ID:	44000712
Regulated By:	UTNKA
Regulated ID:	00021288
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	4084261610
Mail To:	Not reported
Mailing Address:	13575 EMPIRE GRADE
Mailing Address 2:	Not reported
Mailing City,St,Zip:	SANTA CRUZ 95060
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

SWEEPS UST:

Status:	Active
Comp Number:	21288
Number:	6
Board Of Equalization:	Not reported
Referral Date:	10-04-90
Action Date:	10-04-90
Created Date:	12-31-88
Tank Status:	A
Owner Tank Id:	Not reported
Swrcb Tank Id:	44-000-021288-000001
Actv Date:	10-04-90
Capacity:	1000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	2

Status:	Active
Comp Number:	21288
Number:	6
Board Of Equalization:	Not reported
Referral Date:	10-04-90
Action Date:	10-04-90
Created Date:	12-31-88
Tank Status:	A
Owner Tank Id:	4
Swrcb Tank Id:	44-000-021288-000002
Actv Date:	10-04-90
Capacity:	1000
Tank Use:	M.V. FUEL
Stg:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

A2 Target Property | **BEN LOMOND CONSERVATION CAMP** | **AST** | **A100340211**
13575 EMPIRE GRADE | **N/A**
SANTA CRUZ, CA 95060

Site 2 of 5 in cluster A

Actual: 2648 ft.

AST:

Owner:	STATE OF CALIFORNIA
Total Gallons:	2,000
Certified Unified Program Agencies:	Santa Cruz

A3 Target Property | **BEN LOMOND CYA DISPOSAL SITE** | **FINDS** | **1006829644**
13575 EMPIRE GRADE RD | **N/A**
SANTA CRUZ, CA

Site 3 of 5 in cluster A

Actual: 2648 ft.

FINDS:

Registry ID: 110013900378

Environmental Interest/Information System
The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY

A4 Target Property | **CA DEPT OF FORESTRY** | **HAZNET** | **S113164358**
13575 EMPIRE GRADE | **N/A**
SANTA CRUZ, CA 95060

Site 4 of 5 in cluster A

Actual: 2648 ft.

HAZNET:

Year:	1999
Gepaid:	CAL913506197
Contact:	DEPT OF FORESTRY
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	13575 EMPIRE GRADE
Mailing City,St,Zip:	SANTA CRUZ, CA 950600000
Gen County:	Not reported
TSD EPA ID:	CAT080033681
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Disposal, Land Fill
Tons:	.2000
Facility County:	Santa Cruz

A5 Target Property | **BEN LOMOND CONSERVATION CAMP**
13575 EMPIRE GRADE
SANTA CRUZ, CA 95060

Site 5 of 5 in cluster A

SWF/LF
HIST UST
CUPA Listings
ENF
ENVIROSTOR
WDS

U001601943
N/A

Actual: 2648 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	44-CR-0003
Lat/Long:	37.1292400 / -122.17151
Owner Name:	California Department Of Forestry-Fire
Owner Telephone:	8314261610
Owner Address:	Not reported
Owner Address2:	13675 Empire Grade
Owner City,St,Zip:	Santa Cruz, CA 95060
Operational Status:	Closed
Operator:	Not reported
Operator Phone:	Not reported
Operator Address:	Not reported
Operator Address2:	Not reported
Operator City,St,Zip:	Not reported
Permit Date:	Not reported
Permit Status:	Not reported
Permitted Acreage:	0
Activity:	Solid Waste Disposal Site
Regulation Status:	Unpermitted
Landuse Name:	Not reported
GIS Source:	Map
Category:	Disposal
Unit Number:	01
Inspection Frequency:	Annual
Accepted Waste:	Not reported
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	0
SWIS Num:	44-CR-0003
Waste Discharge Requirement Num:	Not reported
Program Type:	Not reported
Permitted Throughput with Units:	0
Actual Throughput with Units:	Not reported
Permitted Capacity with Units:	0
Remaining Capacity:	0
Remaining Capacity with Units:	Not reported

HIST UST:

Region:	STATE
Facility ID:	00000021288
Facility Type:	Other
Other Type:	CDF CAMP
Total Tanks:	0002
Contact Name:	WILLIAM BORO
Telephone:	4084261610
Owner Name:	CALIFORNIA DEPT OF FORESTRY
Owner Address:	1416 9TH ST
Owner City,St,Zip:	SACRAMENTO, CA 95814
Tank Num:	001
Container Num:	3

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Year Installed: 1968
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: None

Tank Num: 002
Container Num: 4
Year Installed: 1968
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

CUPA SANTA CRUZ:
Facility Id: FA0001947
Region: SANTA CRUZ
Cross Street: ALBA RD
Description: ABOVEGROUND PETROLEUM STORAGE-SPCC FACILITY

Facility Id: FA0001947
Region: SANTA CRUZ
Cross Street: ALBA RD
Description: HAZARDOUS WASTE GENERATOR (HMMP STD FORM)

Facility Id: FA0001947
Region: SANTA CRUZ
Cross Street: ALBA RD
Description: HMMP STANDARD FORM FILING FEE

ENF:
Region: 3
Facility Id: 209225
Agency Name: Ca Dept of Forestry Ben Lomond
Place Type: Facility
Place Subtype: Not reported
Facility Type: Municipal/Domestic
Agency Type: State Agency
Of Agencies: 1
Place Latitude: 37.131197
Place Longitude: -122.16802
SIC Code 1: 4952
SIC Desc 1: Sewerage Systems
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported
NAICS Code 2: Not reported
NAICS Desc 2: Not reported
NAICS Code 3: Not reported
NAICS Desc 3: Not reported
Of Places: 1

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Source Of Facility:	Reg Meas
Design Flow:	2.10000000
Threat To Water Quality:	3
Complexity:	C
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Domestic wastewater
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NON15
# Of Programs:	1
WDID:	3 440801001
Reg Measure Id:	148197
Reg Measure Type:	WDR
Region:	3
Order #:	01-026
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/18/2001
Effective Date:	05/18/2001
Expiration/Review Date:	05/18/2016
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	58 - Non15 Based on (TTWQ)/CPLX)
Direction/Voice:	Passive
Enforcement Id(EID):	311988
Region:	3
Order / Resolution Number:	Not reported
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	09/20/2006
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	09/20/2006
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Letter for 3 440801001
Description:	Letter sent concerning numerous violations of EL No. 1 and and failure to permanently provide a certified operator for plant.
Program:	NON15
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	3
Facility Id:	209225
Agency Name:	Ca Dept of Forestry Ben Lomond
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Municipal/Domestic
Agency Type:	State Agency
# Of Agencies:	1
Place Latitude:	37.131197
Place Longitude:	-122.16802
SIC Code 1:	4952
SIC Desc 1:	Sewerage Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	2.10000000
Threat To Water Quality:	3
Complexity:	C
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Domestic wastewater
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NON15
# Of Programs:	1
WDID:	3 440801001
Reg Measure Id:	148197
Reg Measure Type:	WDR
Region:	3
Order #:	01-026
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/18/2001
Effective Date:	05/18/2001
Expiration/Review Date:	05/18/2016

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	58 - Non15 Based on (TTWQ)/CPLX)
Direction/Voice:	Passive
Enforcement Id(EID):	256788
Region:	3
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice of Violation
Effective Date:	03/04/2003
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	03/04/2003
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 3 440801001
Description:	Numerous violations over two years.
Program:	NON15
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	3
Facility Id:	209225
Agency Name:	Ca Dept of Forestry Ben Lomond
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Municipal/Domestic
Agency Type:	State Agency
# Of Agencies:	1
Place Latitude:	37.131197
Place Longitude:	-122.16802
SIC Code 1:	4952
SIC Desc 1:	Sewerage Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	2.10000000
Threat To Water Quality:	3
Complexity:	C
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Domestic wastewater
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NON15
# Of Programs:	1
WDID:	3 440801001
Reg Measure Id:	148197
Reg Measure Type:	WDR
Region:	3
Order #:	01-026
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/18/2001
Effective Date:	05/18/2001
Expiration/Review Date:	05/18/2016
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	58 - Non15 Based on (TTWQ)/CPLX)
Direction/Voice:	Passive
Enforcement Id(EID):	378659
Region:	3
Order / Resolution Number:	Not reported
Enforcement Action Type:	Notice of Violation
Effective Date:	04/27/2011
Adoption/Issuance Date:	04/27/2011
Achieve Date:	Not reported
Termination Date:	04/27/2011
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NOV 4/27/11 for Ca Dept of Forestry Ben Lomond, Conservation Camp
Description:	Violations for April - June 2010.
Program:	NON15
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	3
Facility Id:	209225
Agency Name:	Ca Dept of Forestry Ben Lomond
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Municipal/Domestic
Agency Type:	State Agency
# Of Agencies:	1
Place Latitude:	37.131197
Place Longitude:	-122.16802
SIC Code 1:	4952
SIC Desc 1:	Sewerage Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	2.10000000
Threat To Water Quality:	3
Complexity:	C
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Domestic wastewater
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NON15
# Of Programs:	1
WDID:	3 440801001
Reg Measure Id:	148197
Reg Measure Type:	WDR
Region:	3
Order #:	01-026
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/18/2001
Effective Date:	05/18/2001
Expiration/Review Date:	05/18/2016
Termination Date:	Not reported

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	58 - Non15 Based on (TTWQ)/CPLX)
Direction/Voice:	Passive
Enforcement Id(EID):	242530
Region:	3
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice of Violation
Effective Date:	06/25/2003
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	06/25/2003
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 3 440801001
Description:	Failed to achieve nitrogen reduction January-April.
Program:	NON15
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	3
Facility Id:	209225
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Municipal/Domestic
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	37.131197
Place Longitude:	-122.16802
SIC Code 1:	4952
SIC Desc 1:	Sewerage Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NON15
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	242540
Region:	3
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice of Violation
Effective Date:	07/22/2003
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	07/22/2003
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 3 440801001
Description:	1,000 gallons of secondary treated effluent spilled to Boulder Creek.
Program:	NON15
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0
Region:	3
Facility Id:	209225
Agency Name:	Ca Dept of Forestry Ben Lomond
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Municipal/Domestic
Agency Type:	State Agency
# Of Agencies:	1
Place Latitude:	37.131197
Place Longitude:	-122.16802
SIC Code 1:	4952
SIC Desc 1:	Sewerage Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	2.10000000
Threat To Water Quality:	3
Complexity:	C
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Domestic wastewater
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NON15
# Of Programs:	1
WDID:	3 440801001
Reg Measure Id:	148197
Reg Measure Type:	WDR
Region:	3
Order #:	01-026
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/18/2001
Effective Date:	05/18/2001
Expiration/Review Date:	05/18/2016
Termination Date:	Not reported

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	58 - Non15 Based on (TTWQ)/CPLX)
Direction/Voice:	Passive
Enforcement Id(EID):	337788
Region:	3
Order / Resolution Number:	Not reported
Enforcement Action Type:	Notice of Violation
Effective Date:	11/29/2007
Adoption/Issuance Date:	11/29/2007
Achieve Date:	Not reported
Termination Date:	11/29/2007
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	NOV for CA DEPT OF FORESTRY-BEN LOMOND
Description:	NOV issued for flow violations and effluent vioaltions which occured during July, August and September of 2007.
Program:	NON15
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

Region:	3
Facility Id:	209225
Agency Name:	Ca Dept of Forestry Ben Lomond
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Municipal/Domestic
Agency Type:	State Agency
# Of Agencies:	1
Place Latitude:	37.131197
Place Longitude:	-122.16802
SIC Code 1:	4952
SIC Desc 1:	Sewerage Systems
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	2.10000000
Threat To Water Quality:	3
Complexity:	C
Pretreatment:	X - Facility is not a POTW
Facility Waste Type:	Domestic wastewater
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NON15
# Of Programs:	1
WDID:	3 440801001
Reg Measure Id:	148197
Reg Measure Type:	WDR
Region:	3
Order #:	01-026
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	N - No
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Active
Status Date:	05/18/2001
Effective Date:	05/18/2001
Expiration/Review Date:	05/18/2016
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	58 - Non15 Based on (TTWQ)/CPLX)
Direction/Voice:	Passive
Enforcement Id(EID):	304082
Region:	3
Order / Resolution Number:	Not reported
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	08/22/2005
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	08/22/2005
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	FTS for CA DEPT OF FORESTRY-BEN LOMOND
Description:	FTS letter sent for failure to submit quarterly monitoring report due 08/01/2005.
Program:	NON15
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	0

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid/Completed Amount:	0

ENVIROSTOR:

Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Referred - Not Assigned
Division Branch:	Cleanup Berkeley
Facility ID:	44080002
Site Code:	Not reported
Assembly:	29
Senate:	17
Special Program:	Not reported
Status:	Refer: RWQCB
Status Date:	07/27/1994
Restricted Use:	NO
Site Mgmt. Req.:	NONE SPECIFIED
Funding:	Not reported
Latitude:	37.12892
Longitude:	-122.1715
APN:	080-331-03
Past Use:	NONE SPECIFIED
Potential COC:	10097, 40001, 10199
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	BEN LOMOND YOUTH CONSERVATION CAMP
Alias Type:	Alternate Name
Alias Name:	080-331-03
Alias Type:	APN
Alias Name:	44080002
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	11/19/1992
Comments:	The Ben Lomond YCC is a work camp which also stored government and CDF surplus chemicals (pesticides, chlor- inated herbicides, thinners, solvents, petroleum products, lubricants, and waste oils. A preliminary Site Investigation dated Dec 1, 1992 by Harding Lawson Associates, revealed three areas of concern. Area 1 consisted of soil contaminated with total petroleum hydrocarbons/motor oil (TPH/MO) <1,200 mg/kg at 2 ft> Total oil and Grease (TOG) <3,900mg/kg at .5 ft> and petroleum based oil and grease (non-polar; 210mg/kg at .5 ft) from a former waste oil above ground tank (AGT). Area 2 is a boneyard where soil contaminated with TPH/Gas/ Diesel/Motor Oil <340mg/kg, 410 mg/kg, 5,900 mg/kg> re- spectively at .5 feet. Soil contamination in

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

this area was limited to an approximate 30 x 15 foot area. Area 3 was a hazardous materials storage shed where soil, within and around the shed (approximate 40 x 50 foot area) contaminated with TPH/D/MO <830mg/kg and 15,000mg/kg, respectively, at .25 ft.> was detected. Removal and disposal of all hazardous materials and storage containers from Areas 2 and 3, as well as 700 linear feet of cement (transite) pipe containingasbestos, wqs done between July 28 and Oct. 19, 1992.

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

CA WDS:

Facility ID:	Central Coastal 440801001
Facility Type:	Municipal/Domestic - Facility that treats sewage or a mixture of predominantly sewage and other waste from districts, municipalities, communities, hospitals, schools, and publicly or privately owned systems (excluding individual subsurface leaching systems disposing of less than 1,000 gallons per day).
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	Not reported
Subregion:	3
Facility Telephone:	Not reported
Facility Contact:	CAPTAIN MICHAEL SNYD
Agency Name:	CA DEPT OF FORESTRY-BEN LOMOND
Agency Address:	13575 EMPIRE GRADE
Agency City,St,Zip:	SANTA CRUZ 95060
Agency Contact:	DAVID SUAREZ
Agency Telephone:	8314261610
Agency Type:	State
SIC Code:	4952
SIC Code 2:	Not reported
Primary Waste:	Domestic Sewage
Primary Waste Type:	Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported
Design Flow:	0
Baseline Flow:	0
Reclamation:	No reclamation requirements associated with this facility.
POTW:	The facility is not a POTW.
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.

BEN LOMOND CONSERVATION CAMP (Continued) **U001601943**

Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

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6 **EDR US Hist Auto Stat** **1015210964**
SE **13400 EMPIRE GRADE** **N/A**
1/8-1/4 **SANTA CRUZ, CA 95060**
0.199 mi.
1051 ft.

Relative:
Lower

Actual:
2599 ft.

EDR Historical Auto Stations:
Name: 26K ENGINEERING
Year: 2005
Address: 13400 EMPIRE GRADE

Count: 6 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BOULDER CREEK	U001600831	BOULDER CREEK SHELL	HWY 9	95006	HIST UST
SANTA CRUZ	S106931034	R. FAMBRINI AND CO.	HWY 1 NO NO P O BOX 25	95060	SWEEPS UST
SANTA CRUZ	1011858741	15769 COMSTOCK MILL ROAD	15769 COMSTOCK MILL RD		US CDL
SANTA CRUZ	U001601996	SANTA CRUZ FACILITY	EMPIRE GRADE ROAD	95060	HIST UST
SANTA CRUZ	1003878941	PG&E GAS PLANT SANTA CRUZ	W SIDE N PACIFIC ADJ RIVER ST	95060	CERC-NFRAP
SANTA CRUZ	S101612199	SANTA CRUZ DISPOSAL SITE	HIGHWAY 1 XST DIMEO LN	95060	WMUDS/SWAT

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: EPA
Telephone: N/A
Last EDR Contact: 05/09/2013
Next Scheduled EDR Contact: 07/22/2013
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/26/2013	Source: EPA
Date Data Arrived at EDR: 05/09/2013	Telephone: N/A
Date Made Active in Reports: 07/10/2013	Last EDR Contact: 05/09/2013
Number of Days to Update: 62	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/26/2013	Source: EPA
Date Data Arrived at EDR: 05/29/2013	Telephone: 703-412-9810
Date Made Active in Reports: 08/09/2013	Last EDR Contact: 05/29/2013
Number of Days to Update: 72	Next Scheduled EDR Contact: 09/09/2013
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/31/2012	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/09/2012	Telephone: 703-603-8704
Date Made Active in Reports: 12/20/2012	Last EDR Contact: 07/08/2013
Number of Days to Update: 72	Next Scheduled EDR Contact: 10/21/2013
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 04/26/2013	Source: EPA
Date Data Arrived at EDR: 05/29/2013	Telephone: 703-412-9810
Date Made Active in Reports: 08/09/2013	Last EDR Contact: 05/29/2013
Number of Days to Update: 72	Next Scheduled EDR Contact: 05/09/2013
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/18/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/18/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/18/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/18/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/17/2013
Date Made Active in Reports: 02/15/2013
Number of Days to Update: 29

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 07/01/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 05/06/2013
Date Data Arrived at EDR: 05/07/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 49

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 05/06/2013
Date Data Arrived at EDR: 05/07/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 49

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/20/2013
Date Data Arrived at EDR: 05/21/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 35

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 10

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 10

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/01/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 162

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Semi-Annually

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 10

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-327-5092
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 02/06/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 65

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/21/2013
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 45

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 43

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 02/08/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 11/07/2012
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 156

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 05/06/2013
Date Data Arrived at EDR: 05/07/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 49

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 07/02/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/24/2013
Date Data Arrived at EDR: 06/25/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: No Update Planned

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 08/16/2013
Number of Days to Update: 60

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/17/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 04/26/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 20

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/31/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 59

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 05/06/2013
Date Data Arrived at EDR: 05/07/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 49

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2013
Date Data Arrived at EDR: 04/25/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/11/2013
Date Data Arrived at EDR: 03/12/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 13

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 06/11/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/01/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/12/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 55

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 10

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/17/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 10

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/18/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 15

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 01/15/2013
Date Made Active in Reports: 03/13/2013
Number of Days to Update: 57

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/11/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/05/2013
Date Data Arrived at EDR: 04/18/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 22

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/04/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 09/01/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 131

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/29/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 07/01/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2012
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 114

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/20/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 112

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/11/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 29

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/12/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 03/08/2013
Date Data Arrived at EDR: 03/21/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 111

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/08/2012
Date Data Arrived at EDR: 05/25/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/30/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/20/2013
Date Data Arrived at EDR: 05/21/2013
Date Made Active in Reports: 06/12/2013
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

UIC: UIC Listing

A listing of underground control injection wells.

Date of Government Version: 03/05/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/2013
Date Data Arrived at EDR: 04/02/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 42

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 07/05/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/18/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 12/12/2012
Date Made Active in Reports: 01/04/2013
Number of Days to Update: 23

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 06/18/2013
Next Scheduled EDR Contact: 12/24/2012
Data Release Frequency: Annually

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 04/29/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 17

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 06/22/2012
Date Made Active in Reports: 07/06/2012
Number of Days to Update: 14

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/16/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 10/18/2010
Number of Days to Update: 19

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/01/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/04/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Quarterly

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/02/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/17/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/02/2013
Date Data Arrived at EDR: 06/13/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 41

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/14/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/15/2013
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 27

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/16/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/28/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/29/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/21/2013
Date Data Arrived at EDR: 05/22/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 36

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 03/01/2007
Date Data Arrived at EDR: 06/01/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 28

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 08/26/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 01/29/2013
Date Data Arrived at EDR: 02/14/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List
The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/16/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: N/A

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 12/18/2012
Date Data Arrived at EDR: 04/04/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 97

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Quarterly

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/30/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-5962
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Annually

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/18/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: N/A
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 07/25/2013
Date Data Arrived at EDR: 07/26/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 14

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/28/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Semi-Annually

Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 30

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/28/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 03/13/2013
Date Data Arrived at EDR: 03/14/2013
Date Made Active in Reports: 04/04/2013
Number of Days to Update: 21

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 06/18/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 10/16/2012
Date Data Arrived at EDR: 10/17/2012
Date Made Active in Reports: 11/13/2012
Number of Days to Update: 27

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Varies

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 07/24/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 16

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/20/2013
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 08/09/2013
Number of Days to Update: 39

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 06/10/2013
Date Data Arrived at EDR: 06/11/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 43

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/09/2013
Date Data Arrived at EDR: 01/10/2013
Date Made Active in Reports: 02/25/2013
Number of Days to Update: 46

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/31/2013
Next Scheduled EDR Contact: 08/19/2013
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/20/2013
Date Data Arrived at EDR: 05/21/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 35

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/05/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/30/2013
Date Data Arrived at EDR: 07/16/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 8

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 07/15/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/09/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 04/30/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 10

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/26/2012
Date Data Arrived at EDR: 06/27/2012
Date Made Active in Reports: 08/17/2012
Number of Days to Update: 51

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/12/2013
Date Data Arrived at EDR: 02/13/2013
Date Made Active in Reports: 03/21/2013
Number of Days to Update: 36

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/23/2013
Date Data Arrived at EDR: 01/25/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 07/08/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 12/28/2012
Date Made Active in Reports: 01/25/2013
Number of Days to Update: 28

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/15/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/24/2013
Date Data Arrived at EDR: 04/24/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 23

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/22/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/30/2013
Date Data Arrived at EDR: 02/21/2013
Date Made Active in Reports: 03/25/2013
Number of Days to Update: 32

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 04/29/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 18

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 31

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/15/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county?s Certified Unified Program Agency database. California?s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 04/16/2013
Date Made Active in Reports: 05/17/2013
Number of Days to Update: 31

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 11/26/2012
Date Data Arrived at EDR: 11/28/2012
Date Made Active in Reports: 01/21/2013
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/28/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/25/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 06/04/2013
Date Data Arrived at EDR: 06/05/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 40

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/14/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 05/29/2013
Date Data Arrived at EDR: 05/30/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 46

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 08/15/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2013
Date Data Arrived at EDR: 05/15/2013
Date Made Active in Reports: 06/12/2013
Number of Days to Update: 28

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2013
Date Data Arrived at EDR: 05/15/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 41

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2013
Date Data Arrived at EDR: 05/15/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 41

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/12/2013
Date Data Arrived at EDR: 03/13/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 14

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/18/2013
Date Data Arrived at EDR: 07/18/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 6

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/18/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/23/2013
Date Data Arrived at EDR: 04/24/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 22

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/18/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/03/2013
Date Data Arrived at EDR: 07/08/2013
Date Made Active in Reports: 07/24/2013
Number of Days to Update: 16

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/05/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/04/2013
Date Data Arrived at EDR: 04/12/2013
Date Made Active in Reports: 05/16/2013
Number of Days to Update: 34

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/05/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/30/2013
Date Data Arrived at EDR: 05/31/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 45

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 08/17/2012
Date Data Arrived at EDR: 08/20/2012
Date Made Active in Reports: 10/03/2012
Number of Days to Update: 44

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 07/15/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012
Date Data Arrived at EDR: 11/06/2012
Date Made Active in Reports: 11/30/2012
Number of Days to Update: 24

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/24/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/25/2013
Date Data Arrived at EDR: 03/25/2013
Date Made Active in Reports: 04/18/2013
Number of Days to Update: 24

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/18/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 06/04/2013
Date Data Arrived at EDR: 06/05/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 40

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 04/09/2013
Date Data Arrived at EDR: 04/10/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 34

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/13/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/18/2013
Date Data Arrived at EDR: 03/19/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 8

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/17/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 06/10/2013
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 06/03/2013
Date Data Arrived at EDR: 06/04/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 41

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 06/03/2013
Date Data Arrived at EDR: 06/06/2013
Date Made Active in Reports: 07/15/2013
Number of Days to Update: 39

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 06/03/2013
Next Scheduled EDR Contact: 09/16/2013
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/16/2013
Date Data Arrived at EDR: 05/17/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 39

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/08/2013
Next Scheduled EDR Contact: 11/25/2013
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 05/28/2013
Date Data Arrived at EDR: 05/29/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 29

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 03/15/2013
Date Data Arrived at EDR: 03/15/2013
Date Made Active in Reports: 03/27/2013
Number of Days to Update: 12

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/17/2013
Date Data Arrived at EDR: 06/20/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 53

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/12/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/20/2013
Date Data Arrived at EDR: 03/28/2013
Date Made Active in Reports: 05/13/2013
Number of Days to Update: 46

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/12/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 04/01/2013
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/14/2013
Number of Days to Update: 41

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/02/2013
Date Data Arrived at EDR: 07/05/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 38

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/25/2013
Next Scheduled EDR Contact: 10/14/2013
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/10/2013
Date Data Arrived at EDR: 06/11/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 69

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 06/10/2013
Next Scheduled EDR Contact: 09/23/2013
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/14/2013
Date Data Arrived at EDR: 01/16/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 42

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/26/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 04/26/2013
Date Data Arrived at EDR: 05/22/2013
Date Made Active in Reports: 06/25/2013
Number of Days to Update: 34

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 05/20/2013
Next Scheduled EDR Contact: 09/02/2013
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/03/2013
Next Scheduled EDR Contact: 10/21/2013
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 05/28/2013
Date Data Arrived at EDR: 06/24/2013
Date Made Active in Reports: 08/12/2013
Number of Days to Update: 49

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/30/2013
Next Scheduled EDR Contact: 11/11/2013
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/28/2013
Date Made Active in Reports: 05/13/2013
Number of Days to Update: 46

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/12/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/25/2013
Date Data Arrived at EDR: 03/29/2013
Date Made Active in Reports: 05/13/2013
Number of Days to Update: 45

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/07/2013
Next Scheduled EDR Contact: 10/07/2013
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 05/24/2013
Date Data Arrived at EDR: 05/24/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 34

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/31/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/20/2013
Date Data Arrived at EDR: 05/21/2013
Date Made Active in Reports: 06/27/2013
Number of Days to Update: 37

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2013
Next Scheduled EDR Contact: 12/02/2013
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/19/2013
Next Scheduled EDR Contact: 10/28/2013
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/01/2013
Date Data Arrived at EDR: 05/09/2013
Date Made Active in Reports: 07/10/2013
Number of Days to Update: 62

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2013
Next Scheduled EDR Contact: 11/18/2013
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 07/24/2013
Date Made Active in Reports: 08/19/2013
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/18/2013
Next Scheduled EDR Contact: 11/04/2013
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 06/21/2013
Date Made Active in Reports: 08/05/2013
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/28/2013
Next Scheduled EDR Contact: 09/09/2013
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 09/27/2012
Number of Days to Update: 70

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 07/17/2013
Next Scheduled EDR Contact: 09/30/2013
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

13575 EMPIRE GRADE ROAD
13575 EMPIRE GRADE ROAD
SANTA CRUZ, CA 95060

TARGET PROPERTY COORDINATES

Latitude (North):	37.1314 - 37˚ 7' 53.04''
Longitude (West):	122.1702 - 122˚ 10' 12.72''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	573707.6
UTM Y (Meters):	4109567.8
Elevation:	2648 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	37122-B2 BIG BASIN, CA
Most Recent Revision:	1999
South Map:	37122-A2 DAVENPORT, CA
Most Recent Revision:	1999

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

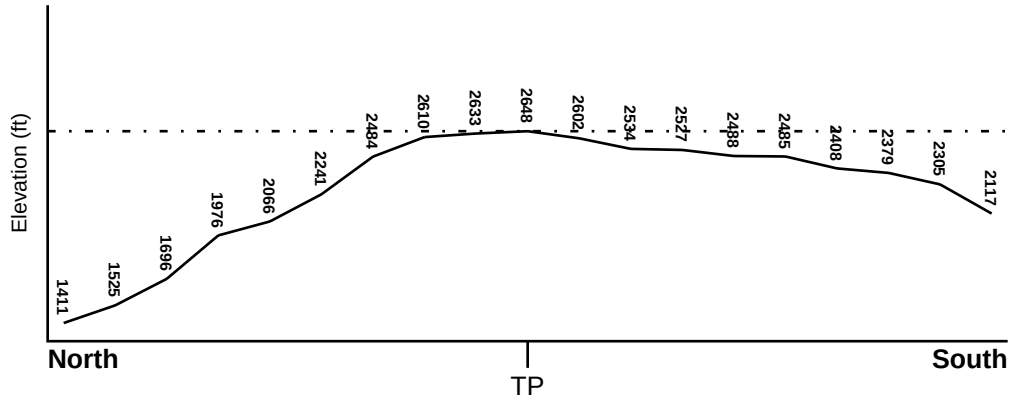
TOPOGRAPHIC INFORMATION

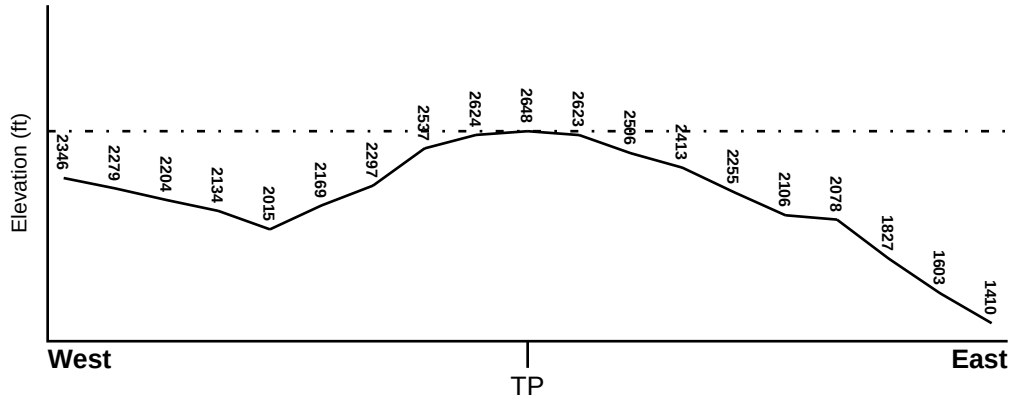
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 2648 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SANTA CRUZ, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06087C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BIG BASIN	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

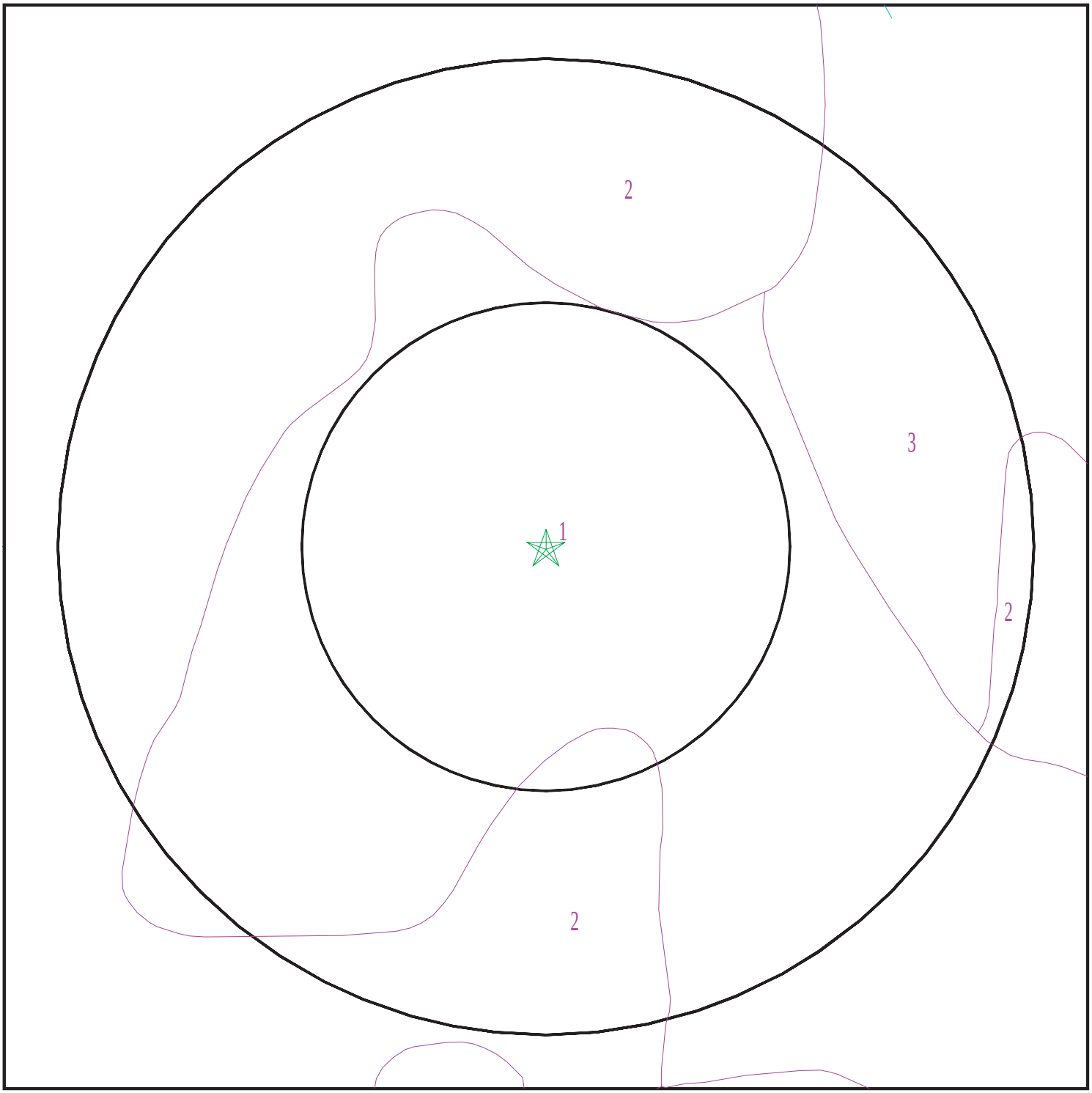
Era:	Mesozoic
System:	Cretaceous
Series:	Cretaceous granitic rocks
Code:	Kg *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 3700789.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	13575 Empire Grade Road	CLIENT:	Engeo
ADDRESS:	13575 Empire Grade Road Santa Cruz CA 95060	CONTACT:	Morgan Johnson
		INQUIRY #:	3700789.2s
LAT/LONG:	37.1314 / 122.1702	DATE:	August 19, 2013 3:52 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: BEN LOMOND

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
2	18 inches	46 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
3	46 inches	50 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: SUR

Soil Surface Texture: stony sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 77 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	stony sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	18 inches	35 inches	stony sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	35 inches	38 inches	unweathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: BEN LOMOND

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 77 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
2	18 inches	46 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:
3	46 inches	50 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

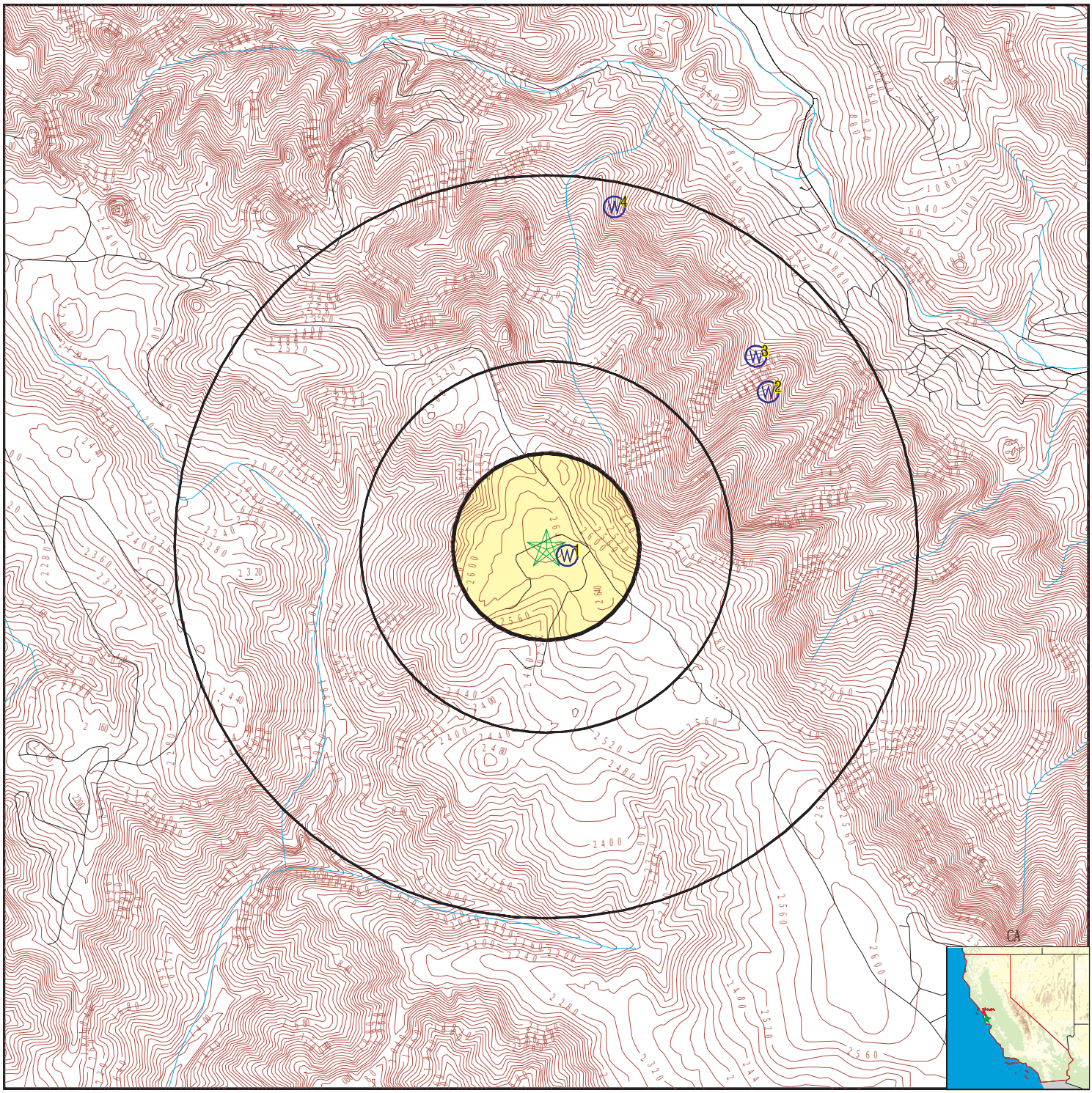
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	9418	0 - 1/8 Mile ESE
2	9417	1/2 - 1 Mile NE
3	22522	1/2 - 1 Mile NE
4	22521	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 3700789.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
Indeterminate Groundwater Flow at Location
Groundwater Flow Varies at Location
Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME: 13575 Empire Grade Road	CLIENT: Engeo
ADDRESS: 13575 Empire Grade Road Santa Cruz CA 95060	CONTACT: Morgan Johnson INQUIRY #: 3700789.2s
LAT/LONG: 37.1314 / 122.1702	DATE: August 19, 2013 3:52 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
1 **ESE** **0 - 1/8 Mile** **Lower**	**CA WELLS**	**9418**

Water System Information:

Prime Station Code:	09S/03W-23N01 M	User ID:	HEN
FRDS Number:	4410800001	County:	Santa Cruz
District Number:	05	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	370752.0 1221005.0	Precision:	100 Feet (one Second)
Source Name:	CAMP WELL		
System Number:	4410800		
System Name:	Ben Lomond Youth Conserv. Camp		
Organization That Operates System:			
	13575 Empire Grade		
	Santa Cruz, CA 95060		
Pop Served:	150	Connections:	10
Area Served:	Not Reported		
Sample Collected:	04/21/2011	Findings:	0.27 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/21/2011	Findings:	3.e-002 PCI/L
Chemical:	GROSS ALPHA MDA95		

---

2 **NE** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**9417**

Water System Information:

Prime Station Code:	09S/03W-23B01 M	User ID:	HEN
FRDS Number:	4410001007	County:	Santa Cruz
District Number:	05	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Untreated
Source Lat/Long:	370815.0 1220930.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 04		
System Number:	4410001		
System Name:	Big Basin Water Company		
Organization That Operates System:			
	P.O. BOX 197		
	BOULDER CREEK ROAD, CA 95006		
Pop Served:	1500	Connections:	546
Area Served:	UNINCORPORATED BOULDER CREEK		
Sample Collected:	10/18/2011	Findings:	1.3 UG/L
Chemical:	BROMODICHLORMETHANE (THM)		
Sample Collected:	10/18/2011	Findings:	5.3 UG/L
Chemical:	CHLOROFORM (THM)		
Sample Collected:	10/18/2011	Findings:	270. US
Chemical:	SPECIFIC CONDUCTANCE		

Sample Collected:	10/18/2011	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	10/18/2011	Findings:	130. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	10/18/2011	Findings:	150. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	10/18/2011	Findings:	110. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	10/18/2011	Findings:	27. MG/L
Chemical:	CALCIUM		
Sample Collected:	10/18/2011	Findings:	10. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	10/18/2011	Findings:	16. MG/L
Chemical:	SODIUM		
Sample Collected:	10/18/2011	Findings:	2.4 MG/L
Chemical:	POTASSIUM		
Sample Collected:	10/18/2011	Findings:	6.6 MG/L
Chemical:	CHLORIDE		
Sample Collected:	10/18/2011	Findings:	0.13 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	10/18/2011	Findings:	110. UG/L
Chemical:	IRON		
Sample Collected:	10/18/2011	Findings:	92. UG/L
Chemical:	ZINC		
Sample Collected:	10/18/2011	Findings:	160. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	10/18/2011	Findings:	0.57 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	10/23/2012	Findings:	270. US
Chemical:	SPECIFIC CONDUCTANCE		

3
NE **CA WELLS** **22522**
1/2 - 1 Mile
Lower

Water System Information:

Prime Station Code:	E44/001-FORESTS	User ID:	HEN
FRDS Number:	4410001002	County:	Santa Cruz
District Number:	05	Station Type:	SPRING/AMBNT/MUN/INTAKE
Water Type:	Surface Water	Well Status:	Active Raw
Source Lat/Long:	370820.0 1220932.0	Precision:	100 Feet (one Second)
Source Name:	FOREST SPRING - SURFACE INFLUENCE		
System Number:	4410001		
System Name:	Big Basin Water Company		
Organization That Operates System:			
	P.O. BOX 197		
	BOULDER CREEK ROAD, CA 95006		
Pop Served:	1500	Connections:	546
Area Served:	UNINCORPORATED BOULDER CREEK		

Map ID Direction Distance Elevation	Database	EDR ID Number
4 **NNE** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**22521**

Water System Information:

Prime Station Code:	E44/001-CORVINO	User ID:	HEN
FRDS Number:	4410001001	County:	Santa Cruz
District Number:	05	Station Type:	STREAM/AMBNT/MUN/INTAKE
Water Type:	Surface Water	Well Status:	Active Raw
Source Lat/Long:	370841.0 1220957.0	Precision:	100 Feet (one Second)
Source Name:	CORVIN CREEK		
System Number:	4410001		
System Name:	Big Basin Water Company		
Organization That Operates System:			
	P.O. BOX 197		
	BOULDER CREEK ROAD, CA 95006		
Pop Served:	1500	Connections:	546
Area Served:	UNINCORPORATED BOULDER CREEK		
Sample Collected:	08/24/2010	Findings:	250. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	10/18/2011	Findings:	8. UNITS
Chemical:	COLOR		
Sample Collected:	10/18/2011	Findings:	240. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	10/18/2011	Findings:	8.
Chemical:	PH, LABORATORY		
Sample Collected:	10/18/2011	Findings:	120. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	10/18/2011	Findings:	150. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	10/18/2011	Findings:	100. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	10/18/2011	Findings:	30. MG/L
Chemical:	CALCIUM		
Sample Collected:	10/18/2011	Findings:	7.4 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	10/18/2011	Findings:	9. MG/L
Chemical:	SODIUM		
Sample Collected:	10/18/2011	Findings:	3.1 MG/L
Chemical:	POTASSIUM		
Sample Collected:	10/18/2011	Findings:	6. MG/L
Chemical:	CHLORIDE		
Sample Collected:	10/18/2011	Findings:	0.11 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		

Sample Collected:	10/18/2011	Findings:	150. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	10/18/2011	Findings:	1.8 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	10/23/2012	Findings:	240. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	10/23/2012	Findings:	5. UNITS
Chemical:	COLOR		
Sample Collected:	10/23/2012	Findings:	260. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	10/23/2012	Findings:	8.2
Chemical:	PH, LABORATORY		
Sample Collected:	10/23/2012	Findings:	120. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	10/23/2012	Findings:	150. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	10/23/2012	Findings:	110. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	10/23/2012	Findings:	31. MG/L
Chemical:	CALCIUM		
Sample Collected:	10/23/2012	Findings:	7.9 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	10/23/2012	Findings:	9.4 MG/L
Chemical:	SODIUM		
Sample Collected:	10/23/2012	Findings:	3.2 MG/L
Chemical:	POTASSIUM		
Sample Collected:	10/23/2012	Findings:	6.3 MG/L
Chemical:	CHLORIDE		
Sample Collected:	10/23/2012	Findings:	150. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	10/23/2012	Findings:	1.3 NTU
Chemical:	TURBIDITY, LABORATORY		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95060	482	28

Federal EPA Radon Zone for SANTA CRUZ County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 95060

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	4.800 pCi/L	0%	100%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX B

ENVIRONMENTAL DATA RESOURCES, INC.

Sanborn Map Report

APPENDIX B

13575 Empire Grade Road
13575 Empire Grade Road
Santa Cruz, CA 95060

Inquiry Number: 3700789.3
August 19, 2013

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

8/19/13

Site Name:
13575 Empire Grade Road
13575 Empire Grade Road
Santa Cruz, CA 95060

Client Name:
Engeo
2213 Plaza Drive
Rocklin, CA 95765

EDR Inquiry # 3700789.3

Contact: Morgan Johnson

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Engeo were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name:	13575 Empire Grade Road
Address:	13575 Empire Grade Road
City, State, Zip:	Santa Cruz, CA 95060
Cross Street:	
P.O. #	P2013000555
Project:	P2013000555
Certification #	A097-4078-A703

Sanborn® Library search results
Certification # A097-4078-A703

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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APPENDIX C

ENVIRONMENTAL DATA RESOURCES, INC.

Historical Topographic Map Report

APPENDIX C

13575 Empire Grade Road
13575 Empire Grade Road
Santa Cruz, CA 95060

Inquiry Number: 3700789.4
August 19, 2013

EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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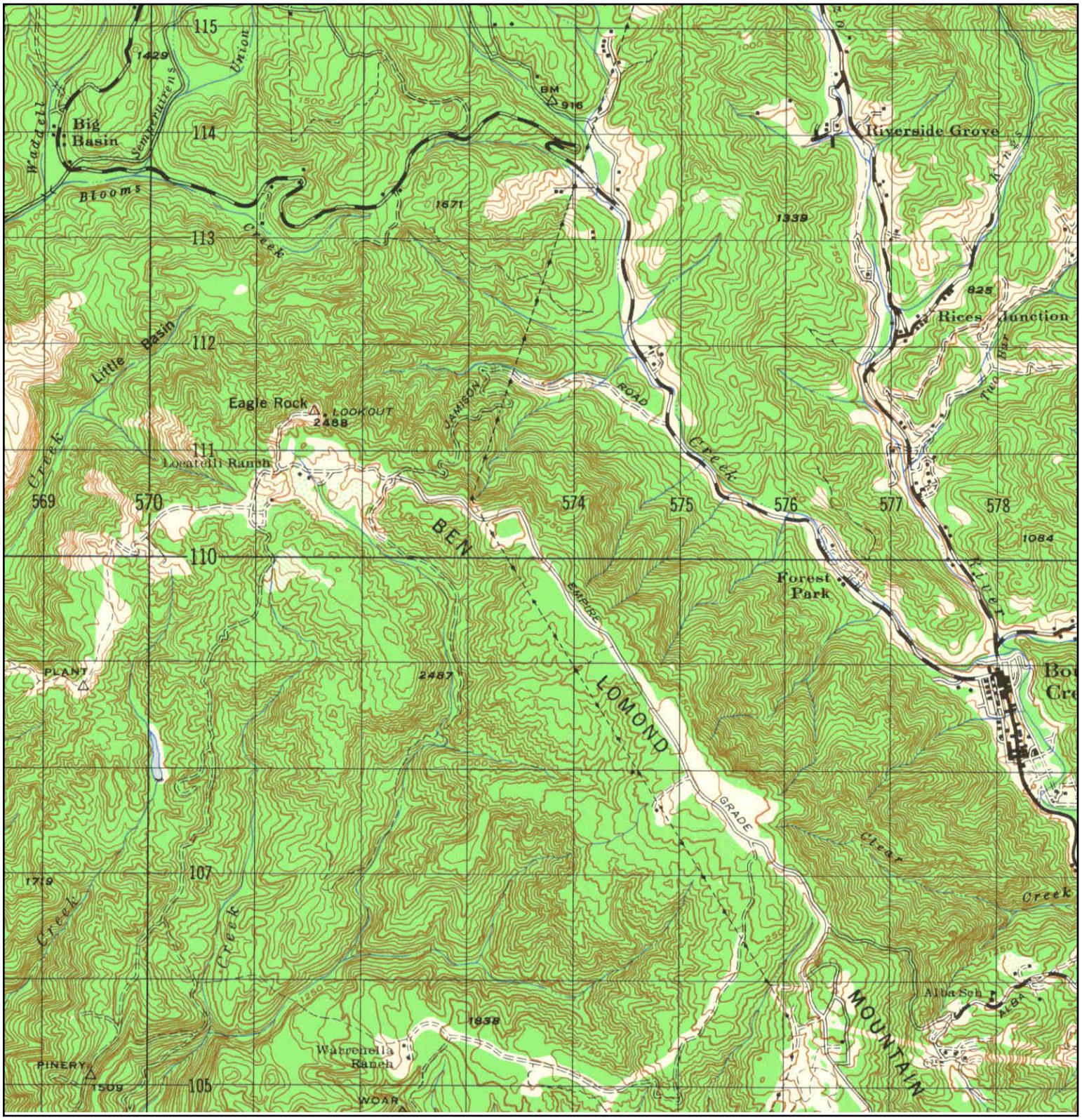
Historical Topographic Map

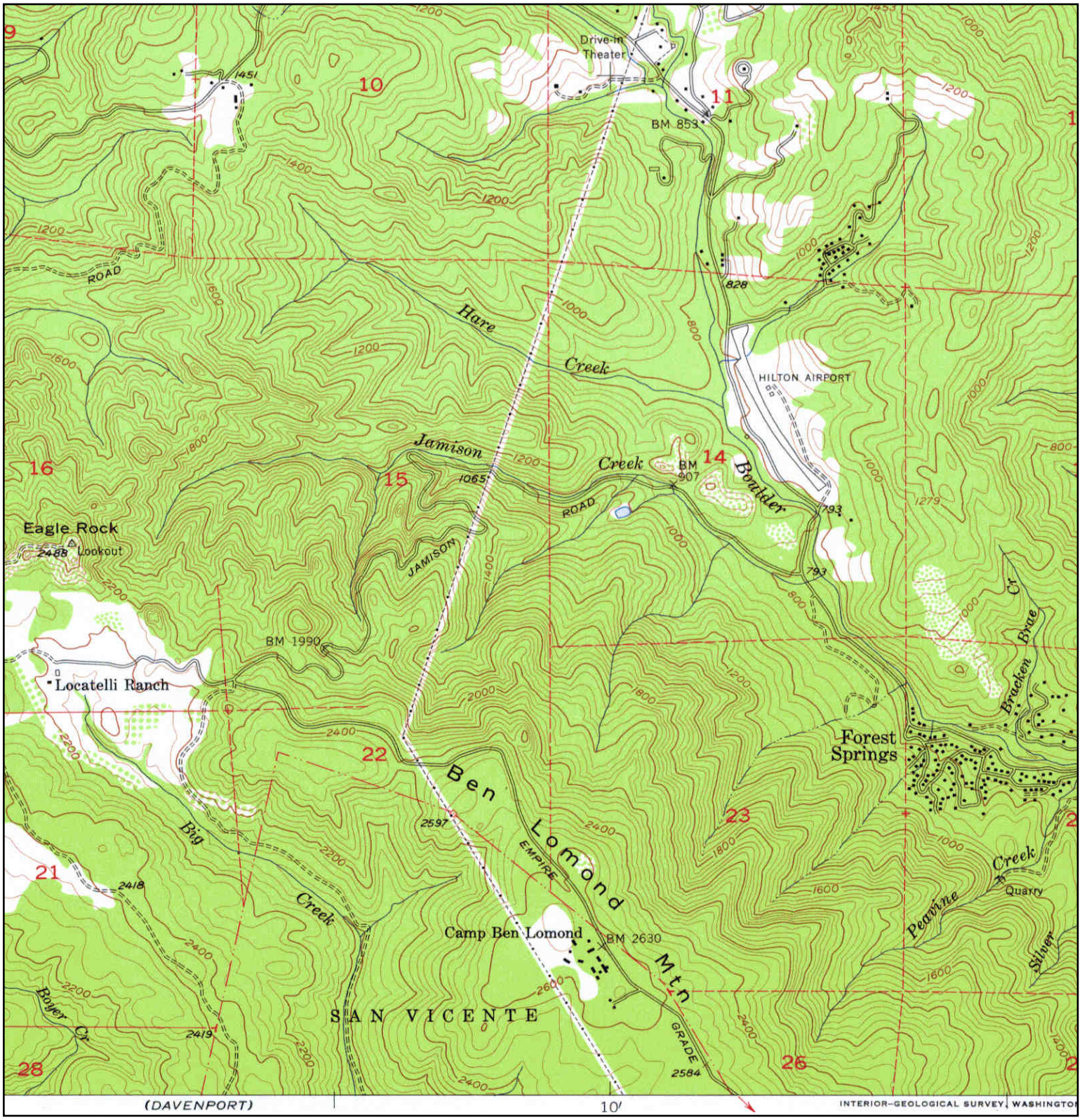
N	TARGET QUAD NAME: SANTA CRUZ MAP YEAR: 1902 SERIES: 30 SCALE: 1:125000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map



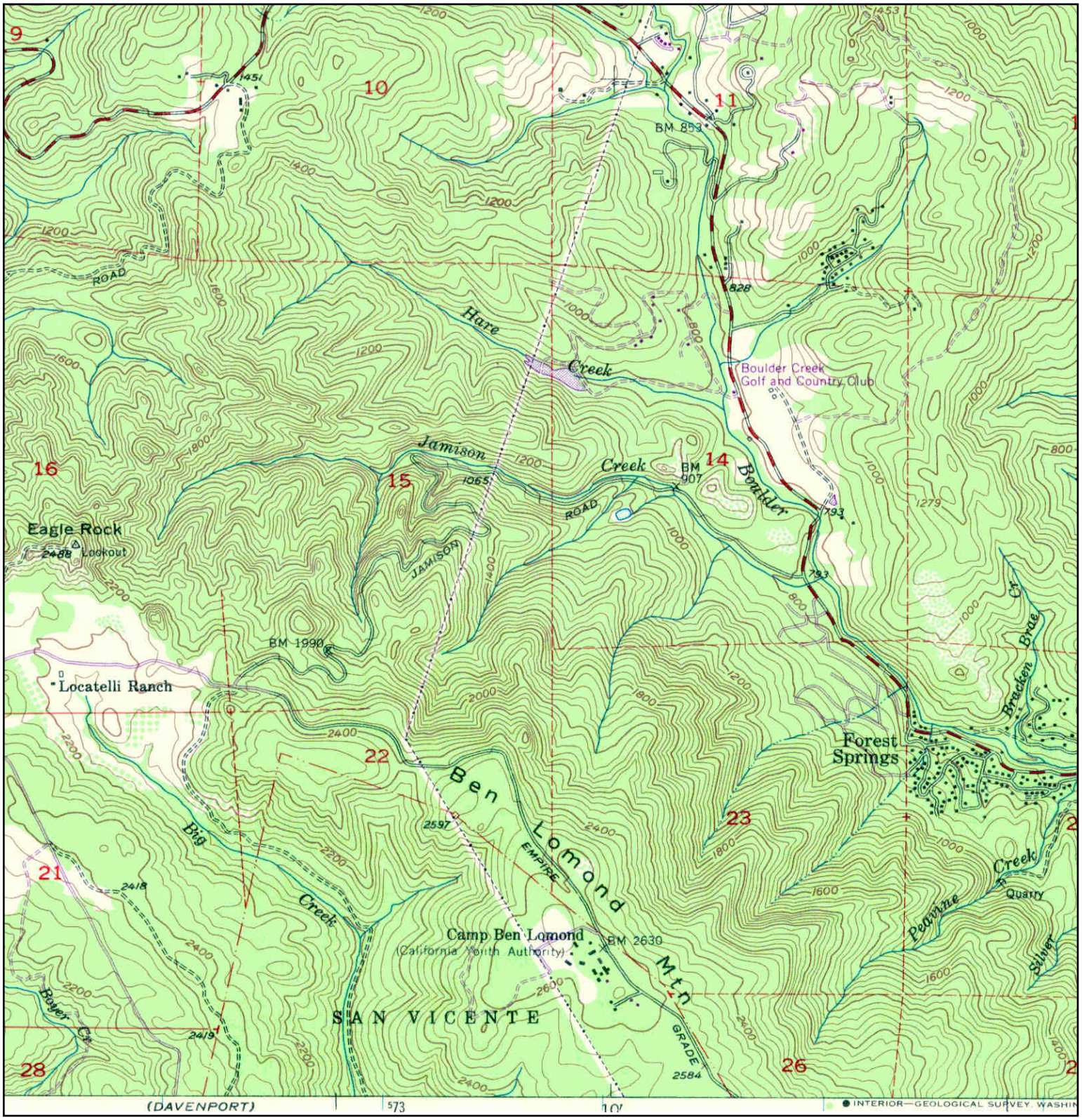
N	TARGET QUAD NAME: BEN LOMOND MAP YEAR: 1948 SERIES: 15 SCALE: 1:50000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map



N	TARGET QUAD NAME: BIG BASIN MAP YEAR: 1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map

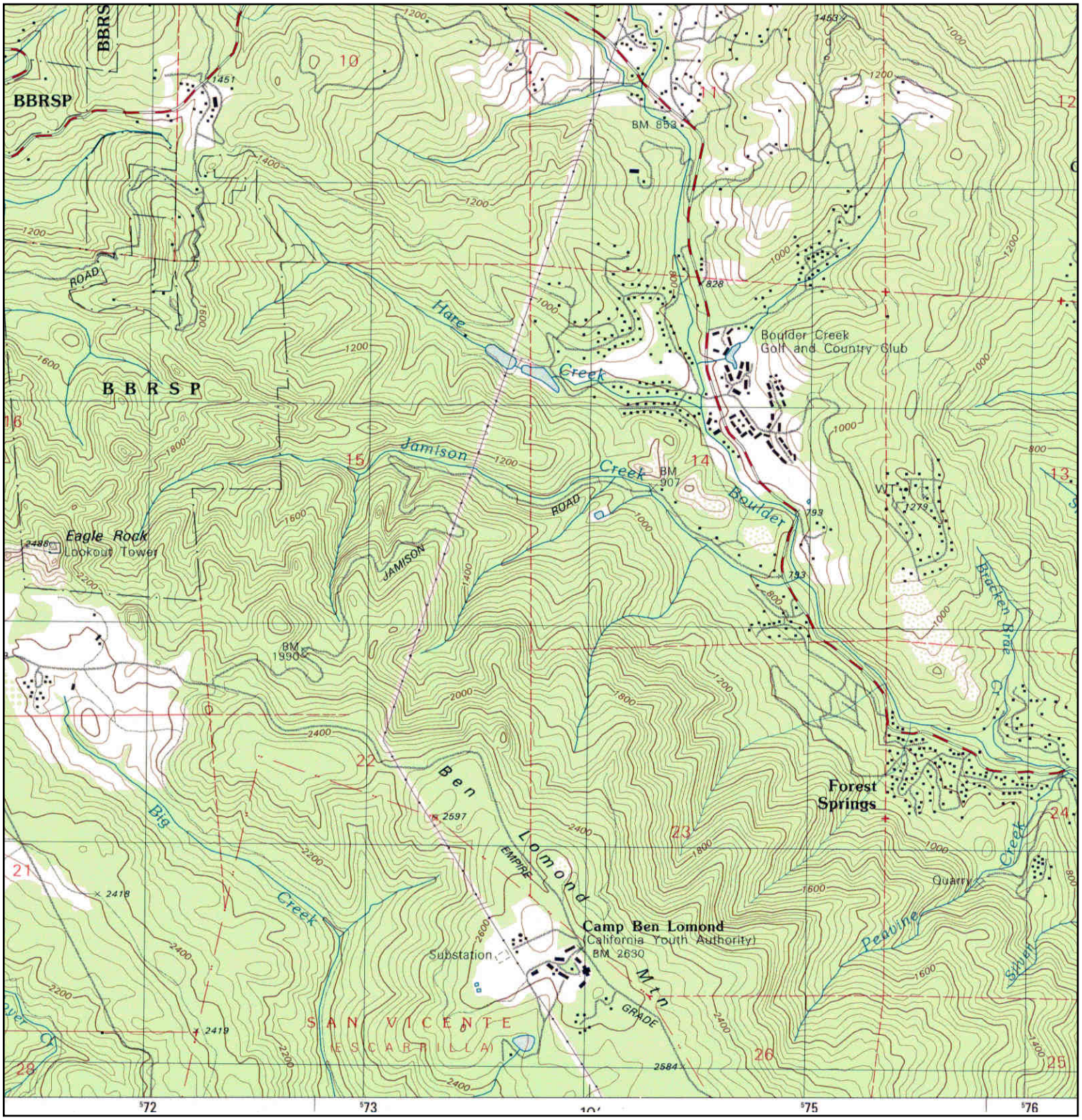


N	TARGET QUAD NAME: BIG BASIN MAP YEAR: 1968 PHOTOREVISED FROM :1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map

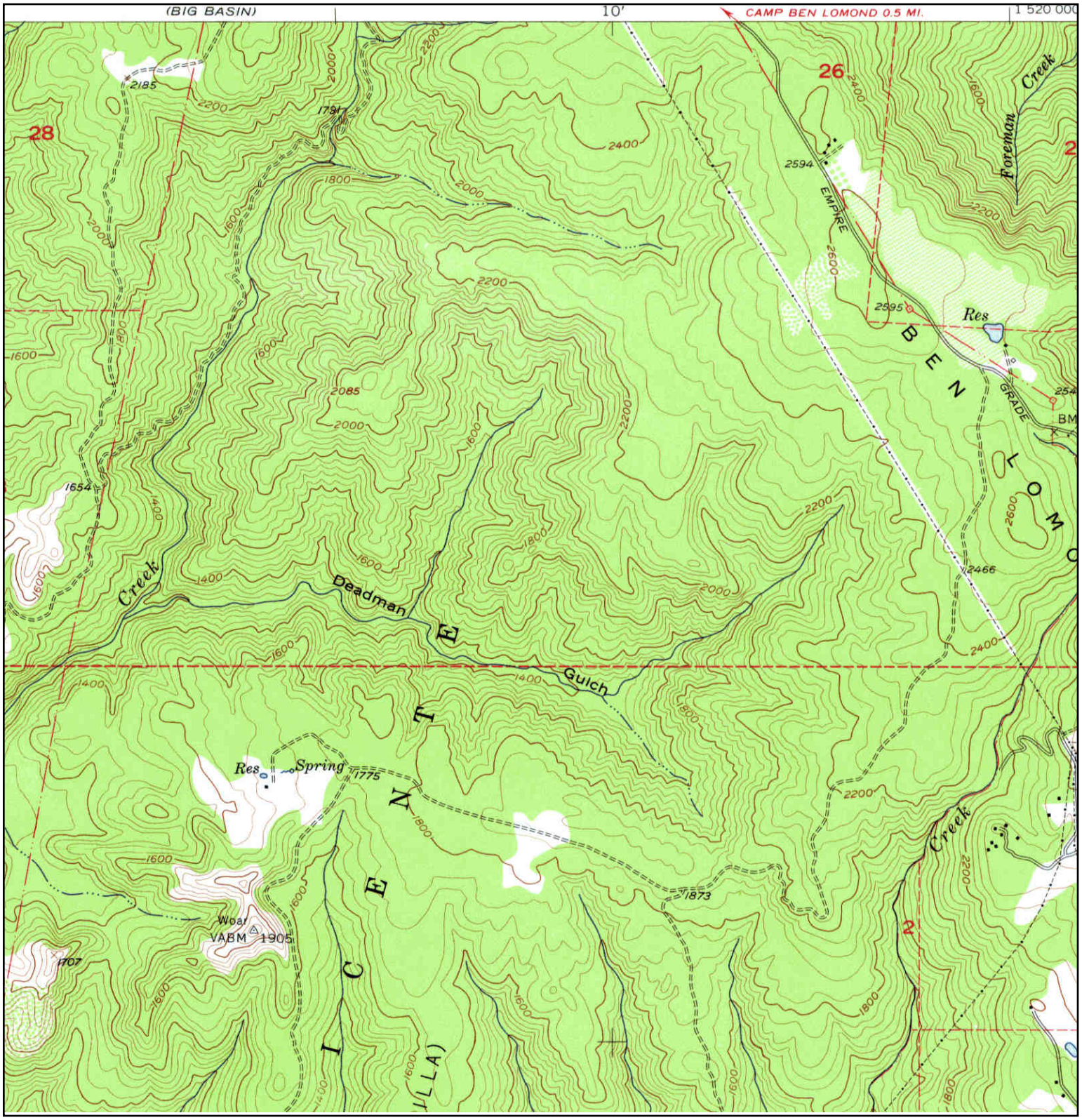
N	TARGET QUAD NAME: BIG BASIN MAP YEAR: 1991 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map



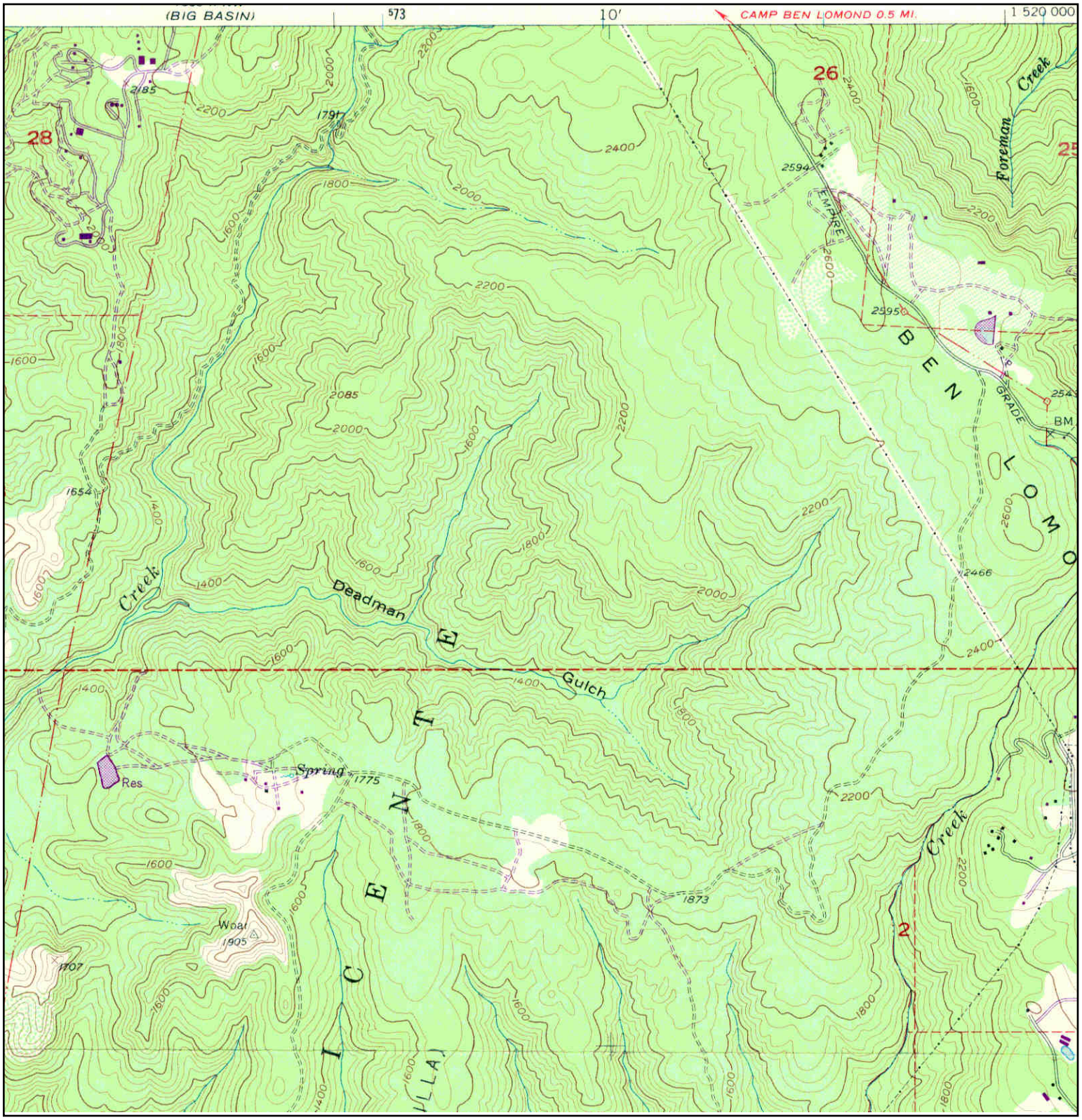
N	TARGET QUAD NAME: BIG BASIN MAP YEAR: 1997 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map



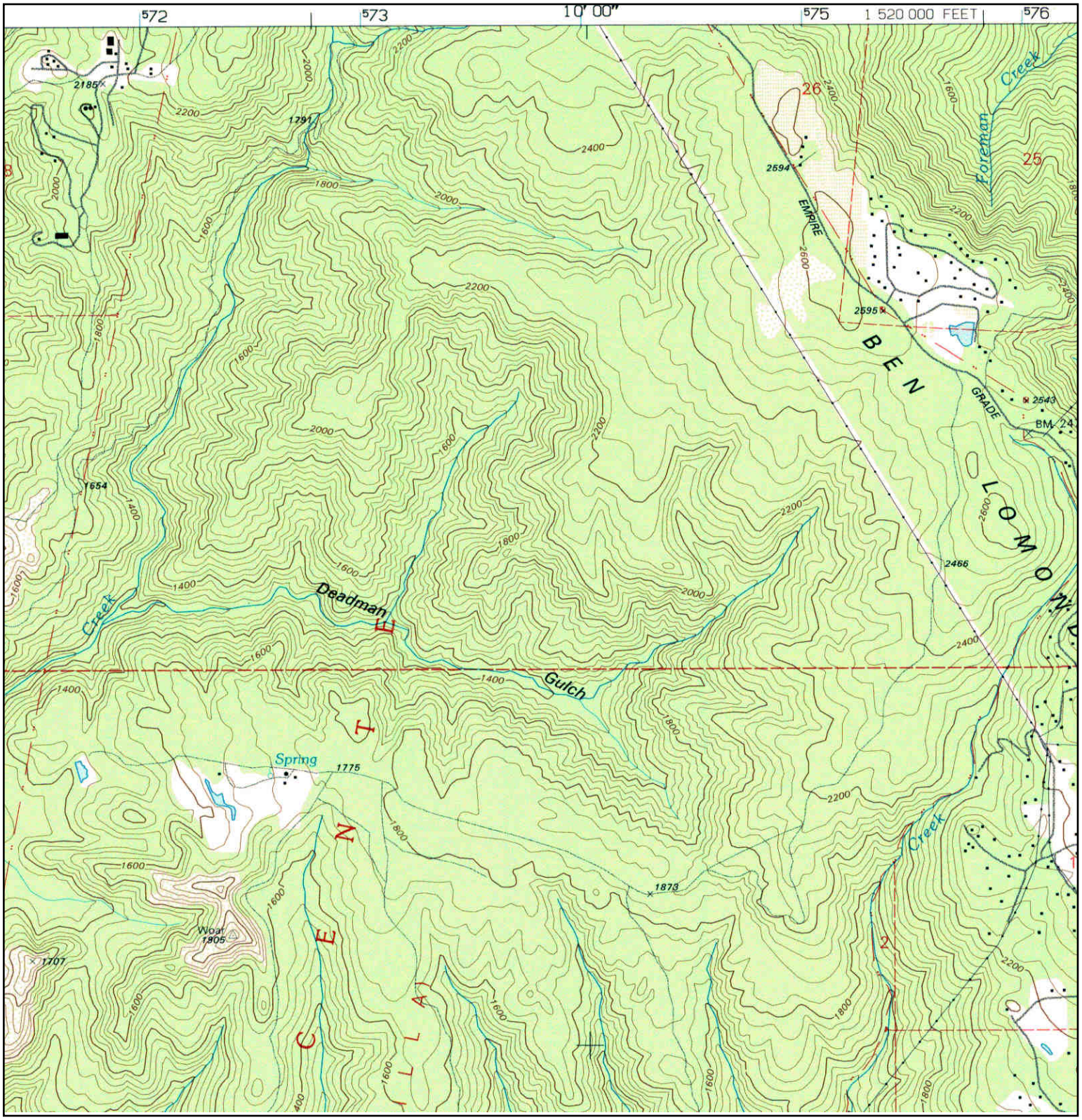
N	ADJOINING QUAD NAME: DAVENPORT MAP YEAR: 1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map



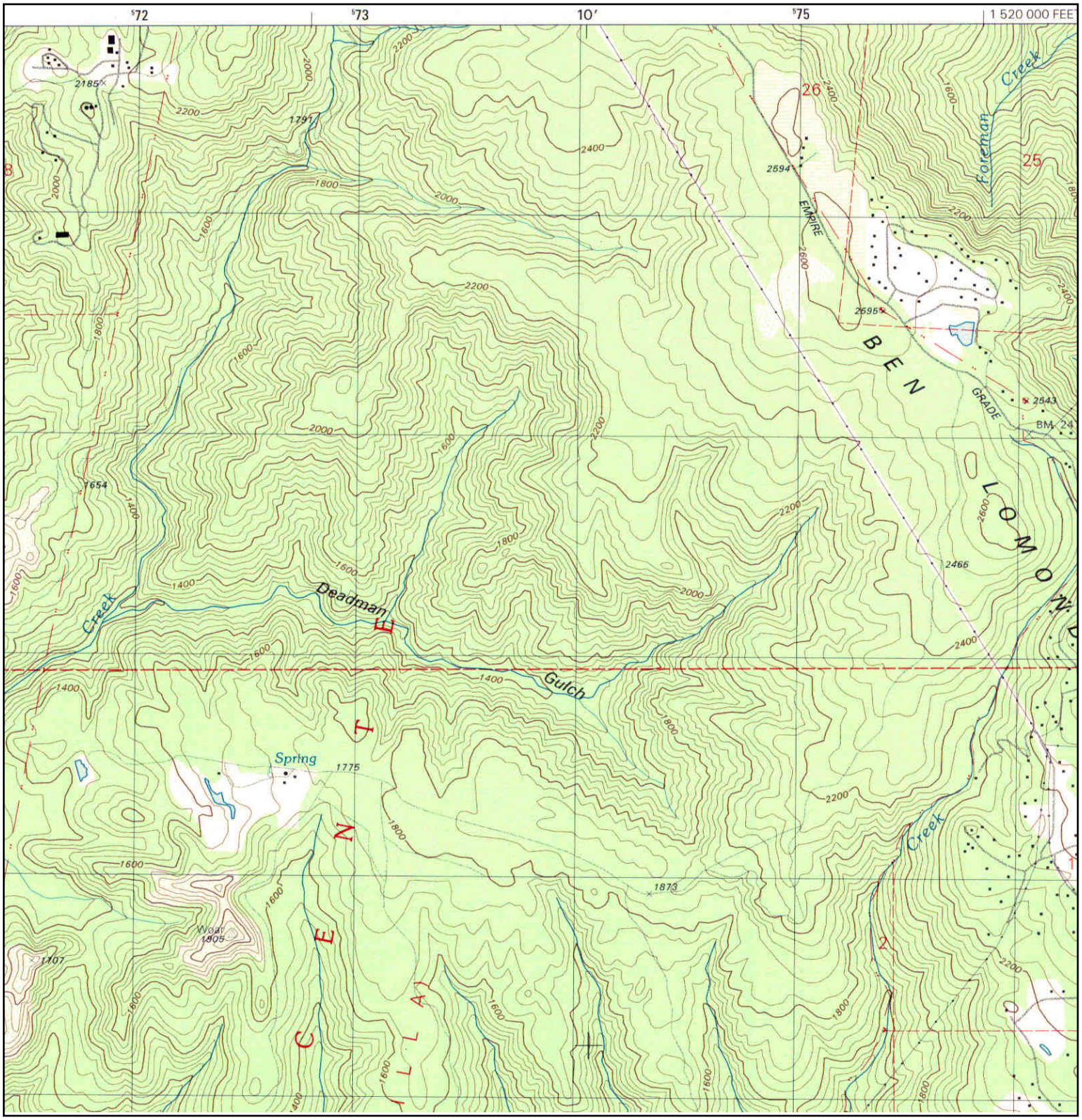
N	ADJOINING QUAD NAME: DAVENPORT MAP YEAR: 1968 PHOTOREVISED FROM :1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map



N	ADJOINING QUAD NAME: DAVENPORT MAP YEAR: 1991 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

Historical Topographic Map



N	ADJOINING QUAD NAME: DAVENPORT MAP YEAR: 1997 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 13575 Empire Grade Road ADDRESS: 13575 Empire Grade Road Santa Cruz, CA 95060 LAT/LONG: 37.1314 / -122.1702	CLIENT: Engeo CONTACT: Morgan Johnson INQUIRY#: 3700789.4 RESEARCH DATE: 08/19/2013

APPENDIX D

ENVIRONMENTAL DATA RESOURCES, INC.

Aerial Photo Decade Package

APPENDIX D

13575 Empire Grade Road

13575 Empire Grade Road

Santa Cruz, CA 95060

Inquiry Number: 3700789.5

August 22, 2013

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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Date EDR Searched Historical Sources:

Aerial Photography August 22, 2013

Target Property:

13575 Empire Grade Road

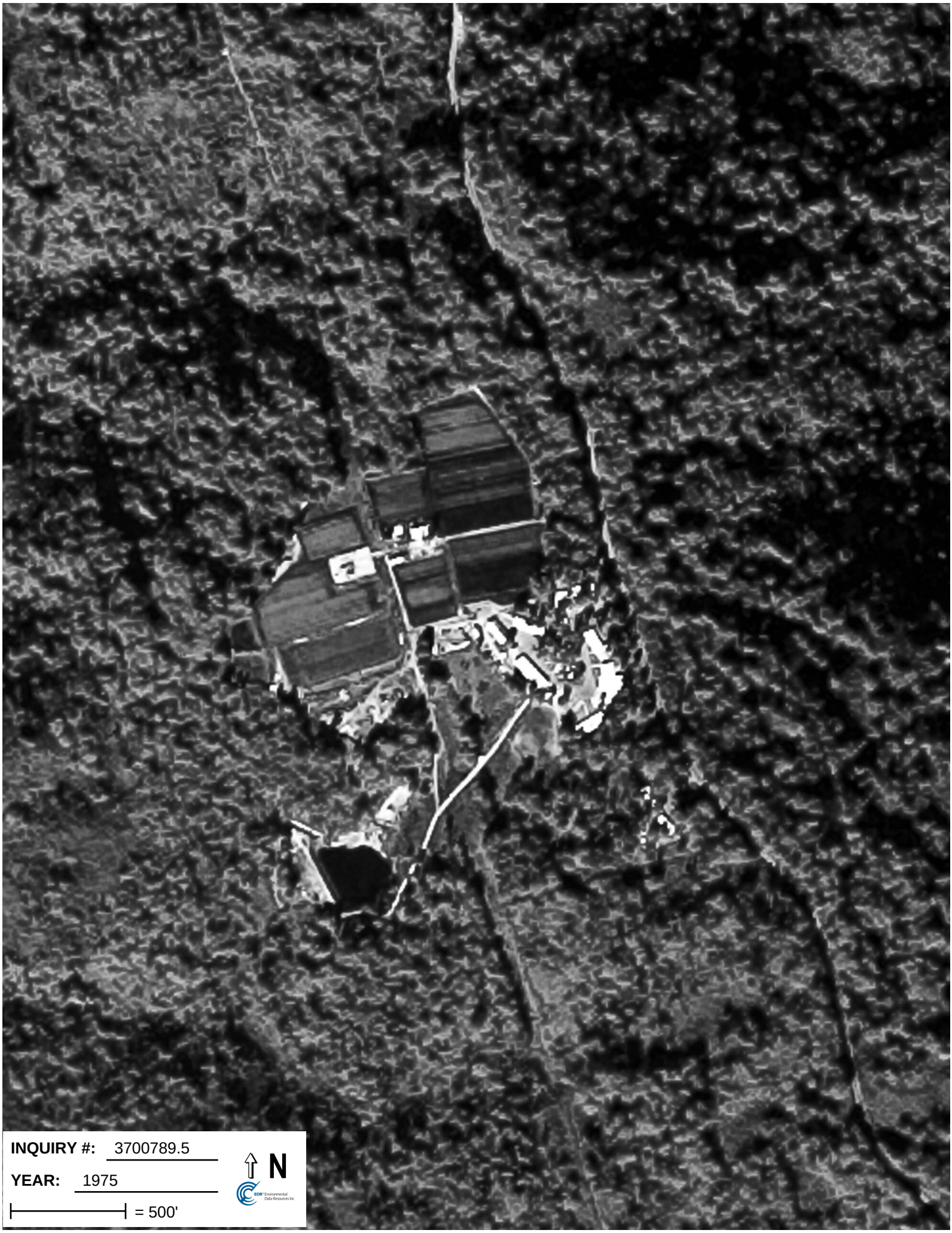
Santa Cruz, CA 95060

Year	***Scale***	***Details***	***Source***
1948	Aerial Photograph. Scale: 1"=500'	Flight Year: 1948	Exxon
1956	Aerial Photograph. Scale: 1"=500'	Flight Year: 1956	Aero
1963	Aerial Photograph. Scale: 1"=500'	Flight Year: 1963	Cartwright
1975	Aerial Photograph. Scale: 1"=500'	Flight Year: 1975	NASA
1982	Aerial Photograph. Scale: 1"=500'	Flight Year: 1982	USGS
1991	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1991	EDR
1998	Aerial Photograph. Scale: 1"=500'	Flight Year: 1998	USGS
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	EDR
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	EDR
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	EDR
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	EDR

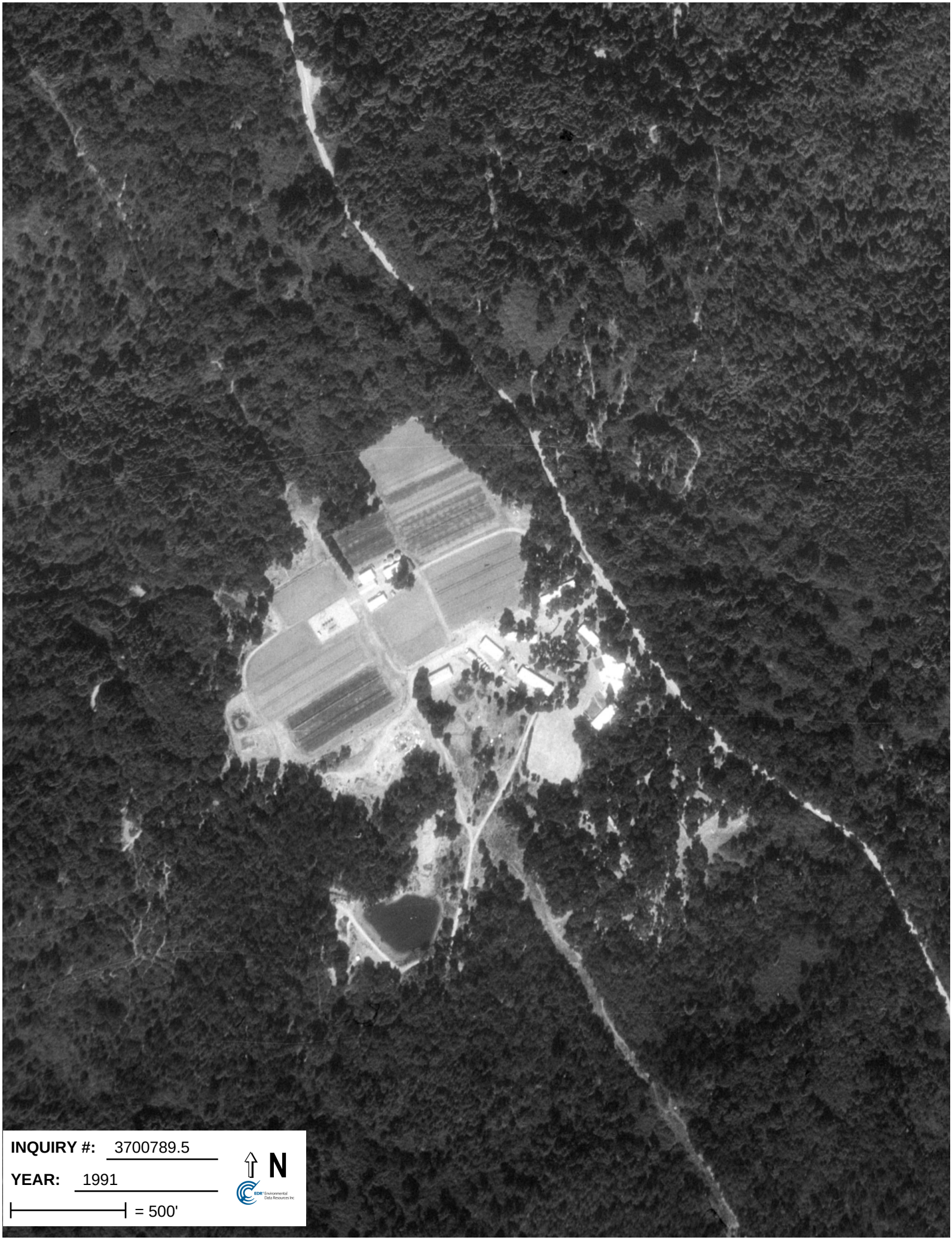
INQUIRY #: 3700789.5
YEAR: 1948
= 500'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3700789.5
YEAR: 1956
= 500'
N

INQUIRY #: 3700789.5
YEAR: 1963
= 500'
N
EDR Environmental Data Resources Inc


INQUIRY #: 3700789.5
YEAR: 1975
= 500'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3700789.5
YEAR: 1982
= 500'
N
EDR Environmental Data Resources Inc


INQUIRY #: 3700789.5
YEAR: 1991
= 500'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3700789.5
YEAR: 1998
= 500'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3700789.5
YEAR: 2005
= 500'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3700789.5
YEAR: 2006
= 500'
N

INQUIRY #: 3700789.5
YEAR: 2009
= 500'
N

INQUIRY #: 3700789.5
YEAR: 2010
= 500'
N
EDR Environmental Data Resources Inc

INQUIRY #: 3700789.5
YEAR: 2012
= 500'
N

APPENDIX E

ENVIRONMENTAL DATA RESOURCES, INC.

City Directory

APPENDIX E

13575 Empire Grade Road

13575 Empire Grade Road
Santa Cruz, CA 95060

Inquiry Number: 3700789.6
August 22, 2013

The EDR-City Directory Image Report

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

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Executive Summary

Findings

City Directory Images

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2010	☑	☐	Haines Criss-Cross Directory
2005	☑	☐	Haines Criss-Cross Directory
2000	☑	☐	Haines Criss-Cross Directory
1995	☑	☐	Haines Criss-Cross Directory
1990	☑	☐	Haines Criss-Cross Directory
1985	☑	☐	Haines Criss-Cross Directory
1980	☑	☐	Haines Criss-Cross Directory
1975	☑	☐	Haines Criss-Cross Directory

RECORD SOURCES

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FINDINGS

TARGET PROPERTY STREET

13575 Empire Grade Road
Santa Cruz, CA 95060

Year	***CD Image***	***Source***
Empire Grade Road		
2010	pg A1	Haines Criss-Cross Directory
2005	pg A2	Haines Criss-Cross Directory
2000	pg A3	Haines Criss-Cross Directory
1995	pg A4	Haines Criss-Cross Directory
1990	pg A5	Haines Criss-Cross Directory
1985	pg A6	Haines Criss-Cross Directory
1980	pg A7	Haines Criss-Cross Directory
1975	pg A8	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 2010

11680	● BERTA Steven	831-426- 4203	
11720	● PHILLIPS Jerrald	OO	
11900	● KUGLER Bill	831-423- 3200	5
12200	● JENSEN Fred	OO	
12500	★ **CREST RNCH CHSE&CUT CHRSTMS**	**831-426- 1522**	8
	● JENSEN Fred	831-426- 1522	
13400	● WOLBERT Robert	OO	4
13575	★ **STATE OF CA BEN LMND CNSRVTN**	**831-426- 1610**	8
	★ **STATE OF CA BEN LMND YTH**	**831-423- 1652**	8
13665	XXXX	OO	
16000	★ **LEHI PARK**	**831-454- 9034**	+0
16001	● LOCATELLI Albert	831-425- 0726	
	● LOCATELLI Harry	831-425- 0726	
16020	XXXX	OO	

★ 10 BUS 231 RES 19 NEW

ENCINA AVE 93940
MONTEREY

WEALTH CODE 3.8

X PALO VERDE AVE

5	● CONTE Larry	OO	2
7	● OGATA Ayako	OO	2

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 2005

11720	● PHILLIPS Jerrald	OO	+5
11900	● GORDON Robin	OO	2
12500	**★ CREST RANCH CHOOSE&CUT TREES**	**831-426-1522**	
	● JENSEN Fred	831-426-1522	
	● JENSEN Harriet	831-426-1522	
13400	● WOLBERT Robert	OO	4
13475	ARRIAGA Martin S	831-469-4277	4
	TISCARENO Angelina	831-423-8516	+5
13573	**★ CA ST FORSTRY&FIRE PRTCTN CMP**	**831-426-1610**	
13575	**★ CA ST YTH AUTH CONSERVATN CAMP**	**831-423-1652**	
16000	**★ LEHI RECREATION PK**	**831-454-9034**	
16001	● LOCATELLI Albert	831-425-0726	
	● LOCATELLI Harry	831-425-0726	
NO #	KIM Christopher	831-423-5941	4

★ 8 BUS 262 RES 39 NEW

EMPIRE RD 95012
CASTROVILLE

WEALTH CODE 3

X ELKHORN RD

5	XXXX	OO	
26	XXXX	OO	
37	**★ SIGN DESIGN**	**831-633-3277**	+5

★ 1 BUS 2 RES 1 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 2000

11400	●YSSELSTEIN Jan	OO	9
11530	●PITMAN William	OO	9
11900	XXXX	OO	
12500	★ CREST RANCH CHOOSE&CUT TREES	831-426-1522	
	★ JENSEN FRED	831-426-1522	
	★ JENSEN HARRIET	831-426-1522	
13475	XXXX	OO	
13573	★ CA ST FORESTRY CAMP	831-426-1610	2
13575	★ CA ST YOUTH AUTH	831-423-1652	
13665	XXXX	OO	
16000	★ LEHI RECREATION PK	831-454-9034	4
16001	LOCATELLI Albert	831-425-0726	
	LOCATELLI Harry	831-425-0726	
	MARELLO Fred	831-459-7234	9
16020	XXXX	OO	
NO #	★ LOCKHEED MISSLES CO	831-425-6157	
NO #	★ LOCKHEED MISSLES CO	831-425-6000	
NO #	★ LOCKHEED MISSLES CO	831-425-6375	
★	20 BUS 208 RES 25 NEW		

ENCINA AV 93940 MONTEREY

WEALTH CODE 4 0

9	●LAVALLEURRUS Julie	OO	8
11	ALDRETE Rich	831-646-3136	+0

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 1995

11211	XXXX	00	
11345	WILLIAMS James B	427-2250	
11386	●HEIDHOFF John	00	
11900	GOES Alan G	459-8750	+5
12500	★CREST RANCH TREES	426-1522	
	★JENSEN FRED	426-1522	+5
	★JENSEN HARRIET	426-1522	+5
13573	★CA ST FORESTRY CAMP	426-1610	2
13575	★CA ST YOUTH AUTH	423-1652	
13665	★CA ST FORESTRY NRSY	423-6551	
16000	★LEHI RECREATION PK	454-9034	4
16001	HOPSON John	425-5449	
	HOPSON John	425-5450	4
	HOPSON Opal	425-5450	
	HOPSON Opal	425-5449	4
	LOCATELLI Albert	425-0726	
	LOCATELLI Harry	425-0726	
NO #	★LOCKHEED MISSLES CO	425-6375	8
NO #	★LOCKHEED MISSLES CO	425-6157	8
NO #	★LOCKHEED MISSLES CO	425-6220	8
NO #	★LOCKHEED MISSLES CO	425-6000	7

★ 23 BUS 206 RES 25 NEW

ENCINA AV 93940 MONTEREY

WEALTH CODE 3.2

5	●CONTE Frank	00
7	●OGATA Ayako	00
9	●CHOPYK Robin	00

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 1990

11035	MAGUIRE Eileen J	426-0100	
11211	XXXX	00	
11345	WILLIAMS James B	427-2250	4
11440	XXXX	00	
12500	★CREST RANCH TREES	426-1522	
13475	BOUCHARD George W	425-4889	4
13575	★CA ST FORESTRY CAMP	426-1610	3
	★CA ST YOUTH AUTH	423-1652	3
	ROGERS Reginald	458-3238	7
13665	★CA ST FORESTRY NRSY	423-6551	3
16000	XXXX	00	
16001	LOCATELLI Albert	425-0726	
	LOCATELLI Harry	425-0726	
NO #	★EAGLE ROCK GUN CLUB	426-0623	
NO #	★LEHI RECREATION PRK	425-9417	2
NO #	★LOCKHEED MISSLES CO	425-6375	8
NO #	★LOCKHEED MISSLES CO	425-6157	8
NO #	★LOCKHEED MISSLES CO	425-6220	8
NO #	★LOCKHEED MISSLES CO	425-6000	7
NO #	SMITH Merwyn V	423-1368	
★	16 BUS 207 RES	11 NEW	

ENCINA AV 93940 MONTEREY

5	XXXX	00	
9	XXXX	00	
11	CURTIS Adam	372-2167	+0
	CURTIS Bonnie	372-2167	+0

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 1985

11035	MAGUIRE EILEEN J	426-0100	
11211	IVERSEN CHRIS	425-4943	+5
	MCRAE CHRISTOPHER	423-6179	+5
11345	WILLIAMS JAMES B	427-2250	4
11440	ALERT SAFETY PROD	423-6306	4
12500	CREST RANCH TREES	426-1522	
13475	BOUCHARD GEORGE W	425-4889	4
	BROWN BENJAMIN	458-2902	4
	SCHNEIDER PAT	458-1096	+5
13575	CA ST FORESTRY CAMP	426-1610	3
	CA ST YOUTH AUTH	423-1652	3
	PRIMM SCOTT	429-8793	4
	TAVERNELLI TOMALYN	426-4789	+5
13665	CA ST FORESTRY NRSY	423-6551	3
NO #	EAGLE ROCK GUN CLUB	426-0623	
NO #	LEHI RECREATION PRK	425-9417	2
NO #	LOCKHEED MSSLS&SPCE	426-2410	
NO #	SMITH MERWYN V	423-1368	

* 14 BUS 180 RES 31 NEW

ENCINA AV 93940
MONTEREY

5	MANNING W D	373-0018	
9	XXXX	00	
11	EBEL DAVID M	372-0540	+5
15	XXXX	00	
17	XXXX	00	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 1980

10909	XXXX	00	
11035	MAGUIRE EILEEN J	426-0100	
11345	HALL HAROLD	423-0987	
11440*	BUILDINGS INTRNTL	429-1415	9
12006	COOK VICKY	338-6807	9
	COOK WARREN-3D	338-6807	9
12500*	CREST RANCH TREES	426-1522	5
13575*	CALIF ST FORESTRY	426-1610	
*	CALIF ST YOUTH AUTH	423-1652	5
13665*	CALIF ST FORESTRY	423-6551	6
16000	XXXX	00	
16001*	SUNRISE WINERY	423-8226	+0
NO #*	EAGLE ROCK GUN CLUB	426-0623	
NO #*	LOCKHEED MSSLS&SPCE	426-2410	
NO #	SMITH MERWYN V	423-1368	
NO #	WADE W J	426-1823	
*	13 BUS 154 RES	37 NEW	

ENCINA AV 93940 MONTEREY

5	MANNING W D	373-0018	
9	MALLON PAUL J	646-9347	+0
11	MCGRATH MARTY J	375-4854	+0

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

Empire Grade Road 1975

```
10849 HONEYCUTT WILLIAM   426-4652
10851  XXXX               00
10909 SCOFIELD JACK K     423-0270
11035 MAGUIRE EILEEN J    426-0100
11345 HALL HAROLD         423-0987
12500*CREST RANCH TREES   426-1522+5
13575*CAL ST YTH AUTH CMP423-1652+5
      *CALIF ST FORESTRY  426-1610
       WHITE FRANK R      423-8632
13665*CALIF ST FORESTRY   426-6551
 NO  #*CALIF ST FORESTRY  426-1823
 NO  # DONALDSON ALAN     426-7478
 NO  #*EAGLE ROCK GUN CLUB426-0623
 NO  # ENGLEMAN EPHRAIM DR423-1455
 NO  #*LOCKHEED MSSLS&SPCE426-2410
 NO  # SMITH MERWYN V     423-1368
 NO  # WADE W J           426-1823
      *  14 BUS  110 RES   38 NEW
```

APPENDIX F

Environmental Site Assessment Questionnaires (2)

APPENDIX F

Project Name:
Project No.

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☐ 332 Pine Street ▪ Suite 300 ▪ San Francisco, CA 94104 (415) 284-9900 ▪ Fax (888) 279-2698
☐ 6399 San Ignacio Avenue ▪ Suite 150 ▪ San Jose, CA 95119 (408) 574-4900 ▪ Fax (888) 279-2698
☐ 580 N. Wilma Avenue▪ Suite A ▪ Ripon, CA 95366 (209) 835-0610 ▪ Fax (888) 279-2698
☐ 17675 Sierra Highway ▪ Santa Clarita, CA 91351 (661) 257-4004 ▪ Fax (888) 279-2698
☐ 13211 Pusan Way ▪ Suite 16 ▪ Irvine, CA 92618 (949) 529-3479 ▪ Fax (888) 279-2698

ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE FOR "KEY SITE MANAGER"

To evaluate the potential for possible environmentally related impacts and site contamination the following information is requested. This questionnaire is to be preferably completed by the current property owner, or owner representative, leasing agent, or other person having good knowledge of the uses and physical characteristics of the property (Key Site Manager).

PART I

1. Property Address/Location and Assessor's Parcel Number (APN): Two sites: 13575 Empire Grade Road, Santa Cruz (Ben Lomond) AND 6059 State Route 9, Felton (Felton)

1. Current property owner (name, address, voice/fax number): State of California, Department of Forestry and Fire Protection (CAL FIRE). Project Director representing CAL FIRE: Leia Riley, Department of General Services, 707 3rd Street, 3rd Floor, West Sacramento, CA leia.riley@dgs.ca.gov

2. Date current property owner assumed title of property:
   a. Ben Lomond: late 1940's
   b. Felton: 1930's

3. Current property development/improvements:

   Ben Lomond: Conversation camp (Corrections) combined with a Cal Fire fire camp
   Felton: Headquarters

4. Past property use, development/improvements:

   Ben Lomond: plant nursery and CYA (California Youth Authority
   Felton: once had a small pond

5. Neighboring property uses:
   Ben Lomond: forest and lumber operation
   Felton: residential

PART II - The following questions should be answered to the best of your knowledge.

1.	Is/has the *property* or any adjoining property used/been used for industrial purposes?	☐ Yes	☒ No
2.	Has the *property* or any adjoining property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? FELTON	☒ Yes	☐ No
3.	Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal in volume or 50 gal in the aggregate, stored on or used at the *property* or at the facility?	☐ Yes	☒ No
4.	Has undocumented soil been brought onto the property at any time? If yes, estimated quantity is _____ cubic yards.	☐ Yes	☒ No
5.	Has soil been brought onto the property that originated from a contaminated site or that is of an unknown origin?	☐ Yes	☒ No
6.	Are there currently, or have there been previously, any pits, ponds, or lagoons located on the *property* in connection with waste treatment or waste disposal?	☐ Yes	☒ No
7.	Is there currently, or has there been previously, any stained soil on the *property*? FELTON – clean- up operation, now cleared	☒ Yes	☐ No
8.	Are there currently, or have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*? Small quantities of auto fluids	☒ Yes	☐ No
9.	Are there currently, or have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* or adjacent to any structure located on the *property*?	☐ Yes	☒ No
10.	Are there currently, or have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	☐ Yes	☒ No
11.	Are there any domestic, irrigation or monitoring wells on the property? BEN LOMOND	☒ Yes	☐ No
12.	If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency?	☐ Yes	☒ No
13.	Have you been informed of the past or current existence of *hazardous substances* or *petroleum products* or environmental violations with respect to the *property* or any facility located on the *property*? FELTON	☒ Yes	☐ No
14.	Have there been any *environmental site assessments* of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*? FELTON	☒ Yes	☐ No
15.	Have there been any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property*?	☐ Yes	☒ No
16.	Has there been any past agricultural use of the *property*, such as orchards or seed crop cultivation? BEN LOMOND	☒ Yes	☐ No
17.	Have any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*?	☐ Yes	☒ No
18.	Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs? FELTON, no records	☒ Yes	☐ No

If a "Yes" response was provided to any of the above questions, please provide details below:

See after each 'yes' response

I certify that the information herein is true and correct to the best of my knowledge as of the date signed below.

Name (Printed/Typed): Leia Riley – Project Director II, State of California in conversation with Robert Gutierrez, Cal Fire Ben Lomond and Felton ADM

Signature: _____ Date: 9-7-13

Project Name: Santa Cruz Auto Shop
Project No. 124683

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☐ 13211 Pusan Way ▪ Suite 16 ▪ Irvine, CA 92618 (949) 529-3479 ▪ Fax (888) 279-2698

ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE FOR CLIENT

To evaluate the potential for possible environmentally related impacts and site contamination the following information is requested. This questionnaire is to be completed by the user of the phase one environmental site assessment, or their authorized representative.

PART I

1. Property address and Assessor's Parcel Number (APN): Two sites: 13575 Empire Grade Road, Santa Cruz (Ben Lomond) AND 6059 State Route 9, Felton (Felton)

2. Current property owner (name, address, voice/fax number): State of California, Department of Forestry and Fire Protection (CAL FIRE). Project Director representing CAL FIRE: Leia Riley, Department of General Services, 707 3rd Street, 3rd Floor, West Sacramento, CA leia.riley@dgs.ca.gov

3. Date current property owner assumed title of property:
   Ben Lomond: late 40's
   Felton: 1930'S

4. Current property development/improvements:
   Ben Lomond: Conversation camp (Corrections) combined with a Cal Fire fire camp
   Felton: Headquarters

5. Past property use, development/improvements:

   Ben Lomond: plant nursery and CYA (California Youth Authority
   Felton: once had a small pond

6. Neighboring property uses:

   Ben Lomond: forest and lumber operation
   Felton: residential

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PART II

1. Are you aware of any environmental cleanup liens against the *property* that are filed under federal, tribal, local or state law? ☒ Yes ☐ No

2. Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, tribal, state or local law? ☐ Yes ☒ No

3. Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example are you involved in the same line of business as the current or former occupants of the *property* or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? ☒ Yes ☐ No

4. If a property transaction is occurring in conjunction with this environmental assessment, does the purchase price of this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property?* ☐ Yes ☐ No

5. Are you aware of any commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, ☒ Yes ☐ No

   (a) do you know of specific chemicals that are present or once were present at the *property*?
   (b) do you know of spills or other chemical releases that have taken place at the *property*?
   (c) do you know of any environmental cleanups that have taken place at the *property*?

6. Based on your knowledge and experience related to the *property* are there any obvious indicators that point to the presence or likely presence of contamination at the *property*? ☐ Yes ☒ No

If a "Yes" response was provided to any of the above questions, please provide details below:
1. At the Felton site, however all clean-up operations are complete.
3. Engine oil, anti-freeze, spray paint – all in small quantities – both sites
5. b: all contamination from gasoline and oil in soil has been cleared from Felton site

I certify that the information herein is true and correct to the best of my knowledge as of the date signed below.

Name (Printed/Typed): Leia Riley – Project Director II,
State of California in conversation

Signature: Date: 9/6/13

APPENDIX G

Qualification of Environmental Professional

APPENDIX G

SHAWN MUNGER, CHG
PRINCIPAL GEOLOGIST

EDUCATION

BS, Geology, U.C. Davis, 1985

EXPERIENCE

Years with ENGEO: 25
Years with Other Firms: 0

REGISTRATIONS & CERTIFICATIONS

Certified Hydrogeologist, CA, 413
40 Hour HAZWOPER Training, CA
Certified Environmental Manager, NV, 1332
Registered Environmental Assessor II, CA, 20201
Professional Geologist, CA, 5810

SPECIALIZATIONS

- Environmental Assessments and Remediation
- Environmental Restoration
- Water Quality Studies
- Water Wells/Hydrogeology

Since joining ENGEO in 1985, Mr. Munger has been managing groundwater supply evaluations, hydrogeologic studies, chemical assessments, phase I and II site assessment projects, UST site investigations, risk based corrective action (RBCA), VOC remediation, and agricultural impact evaluations. He serves as Principal-in-Charge or Project Manager for environmental and hazardous materials projects involving groundwater hydrology, contaminant fate and transport, and remediation. He is Principal-in-Charge of our on-call contract with DTSC and the environmental components of our on-call contracts with the City of Sacramento and the County of Sacramento.

Selected Project Experience

Seacliff Estates—Richmond, CA
Principal in Charge. Mr. Munger provided oversight, review, and consultation during preparation of phase I and II site assessments and soil remediation. The 12-acre site was formerly part of Kaiser Shipyard No. 3 and was used for ship repair and maintenance along with scrap metal and salvage yards. The property was developed as a single-family residential subdivision.

Renaissance Square—Concord, CA
Project Manager. Mr. Munger provided consultation, data analysis, and field observation. This former automotive dealership was redeveloped as a five-story multi-family residential structure supported on slab-on-grade foundations, with two levels of below-grade parking. Petroleum hydrocarbon-impacted soil was encountered during excavation of the parking structure, which required characterization and remediation. Soil impacts were attributed to former sumps, USTs and hydraulic lifts.

Pleasant Hill BART Station—Walnut Creek, CA
Principal in Charge. Mr. Munger provided oversight, data analysis and consultation during the preparation of a phase II environmental site assessment. The property is an existing BART station that encompasses 20 acres, including the platform/station area, electrical facilities, a parking garage and additional paved parking areas.

Mills Ranch—King City, CA
Principal in Charge. Mr. Munger provided principal oversight of phase I and II environmental site assessments and risk evaluations. The approximate 80-acre property is used for agricultural cultivation and commercial uses. The proposed mixed-use development includes over 400 single-family residential lots.

Select Foods Site/Cross Creek—Hayward, CA
Principal in Charge. Mr. Munger provided principal oversight, consultation, and data analysis. The property was a former processed food facility, a drum recycling business, battery manufacturing operation and a bus assembly plant. Following completion of soil remediation under RWQCB oversight, the property was developed into a single-family residential subdivision.

Southchase Property—West Sacramento, CA
Project Manager. Mr. Munger provided environmental consultation regarding soil contamination and site characterization work. The property is a former farm headquarters with storage structures and orchards.

Westshore—Richmond, CA
Project Manager. Mr. Munger conducted phase I and II site assessments, risk evaluations and prepared a soil management plan. The property was a former automotive manufacturing plant proposed for a multi-unit condominium development, including a 6-story podium structure to include five residential floors with 269 units and one parking floor.

Union Pacific Railroad Corridor—San Jose, CA.
Project Manager. Mr. Munger prepared a phase I and II environmental assessment. Work included a site reconnaissance, historical records research and recovery of soil samples with laboratory analysis. Lead impacted soil was identified which required risk evaluation. This former 1800 lineal foot section of the former Union Pacific Railroad Corridor was proposed for mixed-use development.

Sparklizing Cleaners and Laundry—Fremont, CA
Principal in Charge. Mr. Munger provided principal review and data analysis for this former dry cleaning facility which had released tetrachloroethylene (PCE) to site soil and groundwater. The project site consists of a drycleaning facility located within a commercial/retail center. Drycleaning operations have been conducted at the facility since 1974 and have resulted in chlorinated solvent impacts to soil and groundwater beneath the site. As a result, the CRWQCB opened a Spills, Leaks, Investigations, and Cleanups (SLIC) case and the site was referred to the Alameda County Water District (ACWD) for lead agency oversight. A series of soil and groundwater investigations identified a source area beneath the drycleaner suite and an adjoining retail suite. A CAP submitted to ACWD in 2009 involves using in-situ chemical oxidation (ISCO) to remediate groundwater and vadose zone soil impacts within the source area.

Mare Island, 3rd and Connelly Utility Corridor—Vallejo, CA
Principal in Charge. Mr. Munger provided principal oversight during demolition and soil excavation activities. The project consisted of utility demolition and soil excavation activities

required to prepare for construction of a 300 – foot water and sewer utility corridor along Connelly Street between 3rd Street and Azuar Drive.

Ivy Glen (Former Tredegar)—Fremont, CA
Principal in Charge. Mr. Munger provided oversight of site characterizations, risk evaluations and groundwater monitoring for this for this former industrial facility. The property was a former industrial facility with documented soil and groundwater contamination. Risk assessments allowed redevelopment of the site as a single-family residential subdivision. Groundwater monitoring continues to date as a result of residual docs beneath the property.

County Crossings Property—Antioch, CA
Principal in Charge. Mr. Munger provided environmental consultation and data review with regard to soil and groundwater contamination. Constituents of concern include petroleum hydrocarbons, nitrates and manganese. The approximately 264 acre site includes several former industrial facilities and petroleum pipelines. Soil and groundwater at the site has been impacted with petroleum hydrocarbons, nitrates and manganese. Planned uses include commercial, residential, retail, and a BART-oriented transit village. The center, which is currently in the entitlement phase, is estimated to break ground in 2011.

Arroyo Crossing—Livermore, CA
Principal in Charge. Mr. Munger provided oversight, data analysis and regulatory consultation while ENGEO provided geotechnical and environmental engineering services for this 34-acre site. This former corporation yard and quarry site was developed into a single-family residential subdivision.

620 North Ninth Street—San Jose, CA
Principal in Charge. Mr. Munger provided oversight of soil, groundwater and soil gad characterizations, risk evaluations and remedial action plan preparation. Mr. Munger also closely interacted with RWQCB staff to achieve approval for residential development. The property is a former fruit packing plant and food preparation facility. The proposed development consists of a single-family residential subdivision.

Former SFPP Alignment—Concord, CA
Project Manager. Mr. Munger prepared a Phase I and II environmental assessment for a ± 6,500-foot corridor formerly occupied by the Southern Pacific Railroad (SPRR). Kinder Morgan petroleum pipelines existed within an easement along the property. Work included the recovery of soil and groundwater samples along the SP right of way. The site was a former ± 6,500-foot corridor formerly occupied by the Southern Pacific Railroad. Kinder Morgan petroleum pipelines existed within an easement along the property. The southern portion of the site was crossed by East Bay Municipal Utilities District water distribution lines and a multi-lane highway overpass. The corridor was developed as a self-storage facility.

Gale Ranch Middle School—San Ramon, CA
Principal in Charge. Mr. Munger provided review and supervision of a Preliminary Endangerment Assessment prepared for this school site under the oversight of DTSC. This former site was developed into a public middle school.

Highlands Ranch—Antioch, CA
Principal in Charge. Mr. Munger provided oversight, data analysis, and collaboration with RWQCB personnel. The project site consists of a 140-acre portion of the former Chevron Los Medanos Tank Farm located in Pittsburg, California. The site was historically occupied by 24 crude oil tanks and four wax ponds. Remediation of the crude oil tank and wax pond locations was conducted according to a remedial action plan (RAP) and oversight was provided by the CRWQCB. Remediation was performed over a period of four months and consisted of excavating approximately 110,000 cubic yards of impacted soil and placing the material in windrows for ex-situ bioremediation.

Hercules Property—Hercules, CA
Project Manager. Mr. Munger provided oversight of a phase I environmental site assessment, site asbestos survey, site characterization, and demolition observation/contaminant assessment. The project area consists of ± 167 acres located near and along the southeastern shore of San Pablo Bay in Hercules. The property was once a portion of a 1300-acre manufacturing facility that was operated by DuPont from 1879 to 1913 and Hercules Incorporated from 1913 to 1979. The planned development includes single/multi family residential development with some commercial components.

Gold Rush Ranch and Golf Resort—Sutter creek, CA
Principal in Charge. Mr. Munger provided principal oversight during the preparation of a preliminary endangerment report, including soil, groundwater and surface water sampling. The project site consists of 945 acres of undeveloped land located near the City of Sutter Creek, California. The proposed development plan for the site involves the Gold Rush Ranch and Golf Resort, which includes an 18-hole championship golf course, 1,334 new homes, a commercial center, and open space. The client has entered into a VCA with the Department of Toxic Substances Control (DTSC) to address historic mine tailings at the site. A PEA was prepared to evaluate human health risks associated with elevated arsenic in tailings, soil, and surface water at the site. The PEA was approved by DTSC in 2009. Based on the findings of the PEA, a removal action workplan (RAW) will be prepared to address the human health risks associated with the arsenic impacts.

1000 Howe Road—Martinez, CA
Principal in Charge. Mr. Munger provided oversight and analysis for this soil remediation project. Mr. Munger worked closely with RWQCB personnel to develop a cost effective and timely closure for site closure and approval for residential development. The site is occupied by a general engineering contractor and was a former bus leasing company. Improvements at the property included an office/warehouse structure and an equipment yard. The proposed development consists of a single-family residential subdivision.

APPENDIX F

Noise Assessment

Project:
Santa Cruz Auto Shop New Construction Noise Assessment

Santa Cruz County, CA
December 10, 2013

Job # 2013-171

Lead Agency:

Prepared for:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Attn: Chris Stabenfeldt
2525 Warren Drive
Rocklin, CA 95677

1287 High Street, Auburn, California 95603 * 530-823-0960 (p) * (530)823-0961 (f)

j.c. brennan & associates
consultants in acoustics

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Appendix A – Acoustical Terminology

INTRODUCTION

The Proposed Project is located in Santa Cruz County, California. The Project consists of the construction of the new auto shop and replacement of an existing fuel storage facility adjacent to the Ben Lomond Conservation Camp (BLCC).

The new auto shop would be located adjacent to the California Department of Corrections and Rehabilitation (CDCR) BLCC, located approximately 5 miles northwest of the unincorporated Town of Ben Lomond. The BLCC is located at 13575 Empire Grade Road, Santa Cruz County, California.

The Proposed Project would be located adjacent to the Ben Lomond Training Center on a portion of the BLCC property managed by CAL FIRE, north of the main BLCC facilities which are managed by CDCR.

Figure 1 shows the site plans.

In the case of the proposed project, construction at the new site will result in construction-related noise impacts. Development of the new site will also result in operational noise levels which will also be evaluated.

ENVIRONMENTAL SETTING

Noise Background

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective. Often, someone's music is described as noise by another.

Figure 1
San Mateo Santa Cruz UHQ Auto Shop Relocation
Phase I - New Auto Shop Location

Source: ECORP Consulting, Inc.

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consultants in acoustics

j.c. brennan & associates
consultants in acoustics

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dBA. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dBA, and changes in levels (dBA) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels.

There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but may be expressed as dBA, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dBA apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The day/night average level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. Table 1 lists several examples of maximum noise levels associated with common noise sources.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction

- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

Table 1
Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source:Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. November 2009.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dBA per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

A complete listing of acoustical terminology is provided in Appendix A.

EXISTING NOISE ENVIRONMENT IN PROJECT VICINITY

The existing noise environment in the vicinity of the proposed new auto shop can be described as a rural area with relatively low ambient noise levels. The primary noise source in the vicinity of the proposed project is roadway traffic on Empire Grade Road, and activities associated with the Ben Lomond Conservation Camp (BLCC). Those noise sources would include parking lot activities and general site maintenance. Typical hourly daytime and nighttime noise levels at the property lines are expected to be in the 45 dBA to 60 dBA range during the daytime hours, and between 35 dBA and 45 dBA during the nighttime hours. Daytime hours are defined as 7:00 a.m. to 10:00 p.m., and the nighttime hours are defined as 10:00 p.m. to 7:00 a.m.

REGULATORY FRAMEWORK

Federal

There are no federal regulations related to noise that apply to the Proposed Project.

State

There are no state regulations related to noise that apply to the Proposed Project.

Santa Cruz County General Plan Noise Element

The Goals and Policies of the Santa Cruz County General Plan Noise Element establish criteria for new commercial or industrial development. The following are the relevant policies from the Noise Element:

Policy 6.9.4 Commercial and Industrial Development

*For all new commercial and industrial developments which would increase noise levels above the maximum allowable standards of the Land Use Compatibility Guidelines in Figure 6-1 (*Table 2 of this report*), or Figure 6-2* (Table 3 of this report), *the best available control technologies will be used to minimize noise levels. In no case shall the noise levels exceed the standards of Figure 6-2* (Table 3 of this report).

Policy 6.9.7 Construction Noise

Require mitigation of construction noise as a condition of future project approval.

Table 2

Santa Cruz County Land Use Compatibility Table

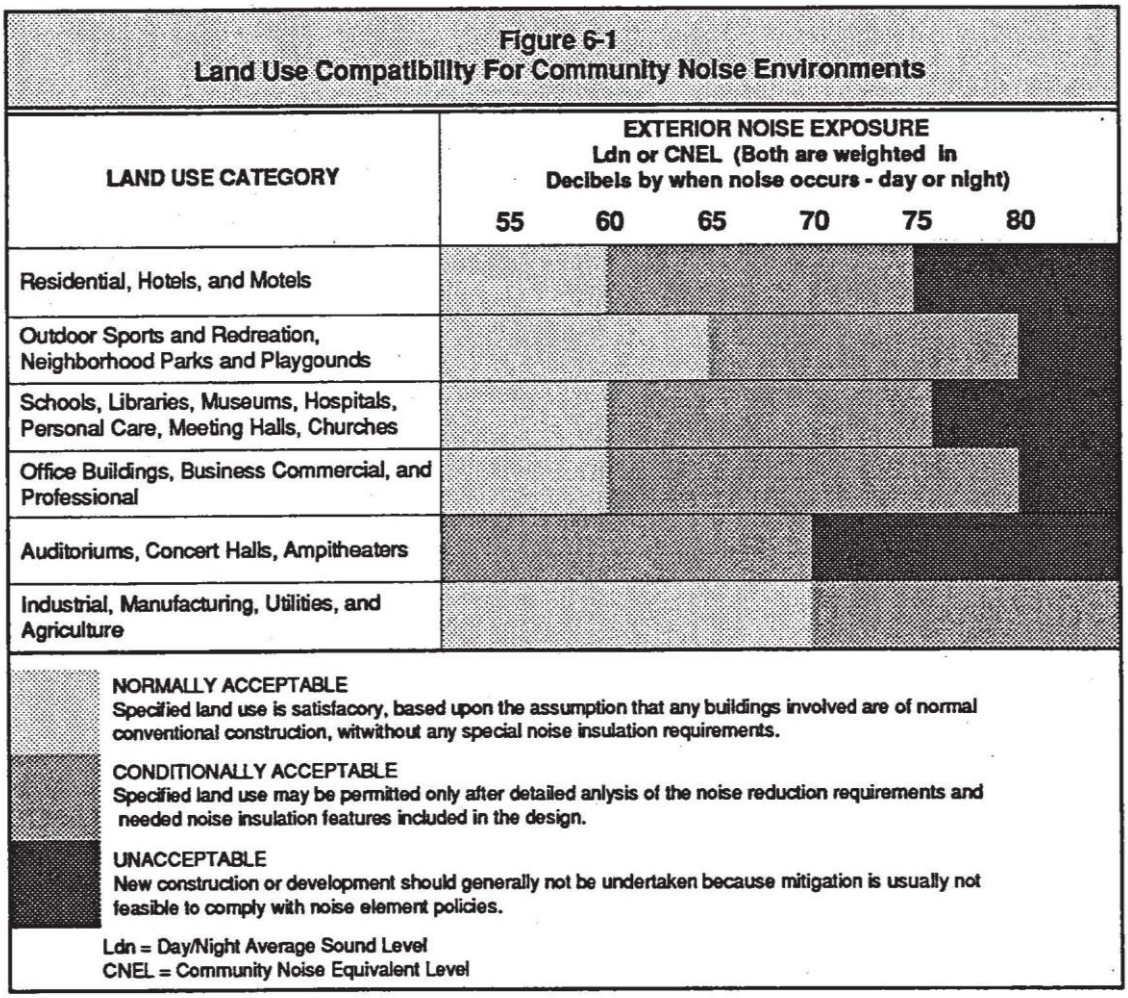


Table 3 (*Figure 6-2 of the General Plan Noise Element*) Maximum Allowable Noise Exposure Stationary Noise Sources (1)		
	Acceptable Noise Level, dBA	
Noise Metric	Daytime (5) (7 a.m. – 10 p.m.)	Nighttime (2,5) (10 p.m. – 7 a.m.)
Hourly Leq (3)	50	45
Maximum level, Lmax (3)	70	65
Maximum Level - Impulsive Noise (4)	65	60

(1) As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures

(2) Applies only where the receiving land use operates or is occupied during nighttime hours.

(3) Sound level measurements shall be made with slow meter response.

(4) Sound level measurements shall be made with fast meter response.

(5) Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly level is at least 10 dB lower than the allowable level.

Source: Santa Cruz County General Plan Noise Element

Santa Cruz County Noise Ordinance

THE FOLLOWING IS THE SANTA CRUZ COUNTY NOISE ORDINANCE SECTIONS:

8.30.010 Curfew—Offensive noise.

8.30.020 Subsequent offense within 48 hours.

8.30.030 Exceptions.

8.30.010 Curfew—Offensive noise.

(A) No persons shall, between the hours of 10:00 p.m. and 8:00 a.m., make, cause, suffer, or permit to be made any offensive noise:

(1) Which is made within 100 feet of any building or place regularly used for sleeping purposes; or

(2) Which disturbs any person of ordinary sensitivities within his or her place of residence.

(B) "Offensive noise" means any noise which is loud, boisterous, irritating, penetrating, or unusual, or that is unreasonably distracting in any other manner such that it is likely to disturb people of ordinary sensitivities in the vicinity of such noise, and includes, but is not limited to, noise made by an individual alone or by a group of people engaged in any business, meeting, gathering, game, dance, or amusement, or by any appliance, contrivance, device, structure, construction, ride, machine, implement, instrument or vehicle. [Ord. 4001 § 1, 1989].

8.30.020 Subsequent offense within 48 hours.

Any person who violates any section of this chapter and is cited for such a violation, and who within 48 hours after receiving such a citation again violates the same section, is guilty of a misdemeanor. A person is cited for a violation when he or she is issued and signs an infraction or misdemeanor citation, or when he or she is arrested and booked, or when a complaint is filed and the person is notified of the filing of such a complaint. [Ord. 4001 § 1, 1989].

8.30.030 Exceptions.

(A) The provisions of this chapter shall not apply to any noise from any specific type of activity for which special noise regulations are provided by any other provision of the County Code.

(B) The provisions of this chapter shall not apply to any noise caused by farming operations carried

PROJECT IMPACT NOISE ASSESSMENT

Construction Noise

During the construction of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 4, ranging from 78 to 85 dBA at a distance of 50

feet. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

Table 4

Construction Equipment Noise

Type of Equipment	Maximum Level, dBA at 50 feet
Backhoe	78
Compactor	83
Compactor	80
Dozer	82
Dump Truck	76
Excavator	81
Paver	85
Grader	85
Roller	80
Trencher	81

Source: *Roadway Construction Noise Model User's Guide*. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

As a means of determining the construction noise impacts for the project, j.c. brennan & associates, Inc. used the Federal Highway Administration Construction Noise Model. The model has typical maximum noise levels associated with individual pieces of construction equipment. It also has typical use factors to determine the hourly average (Leq) noise levels associated with each individual piece of equipment.

Table 5 shows the list of equipment which is expected to operate during the construction of the Project. This assumption was provided in the Draft Initial Study and Mitigated Negative Declaration for the project.

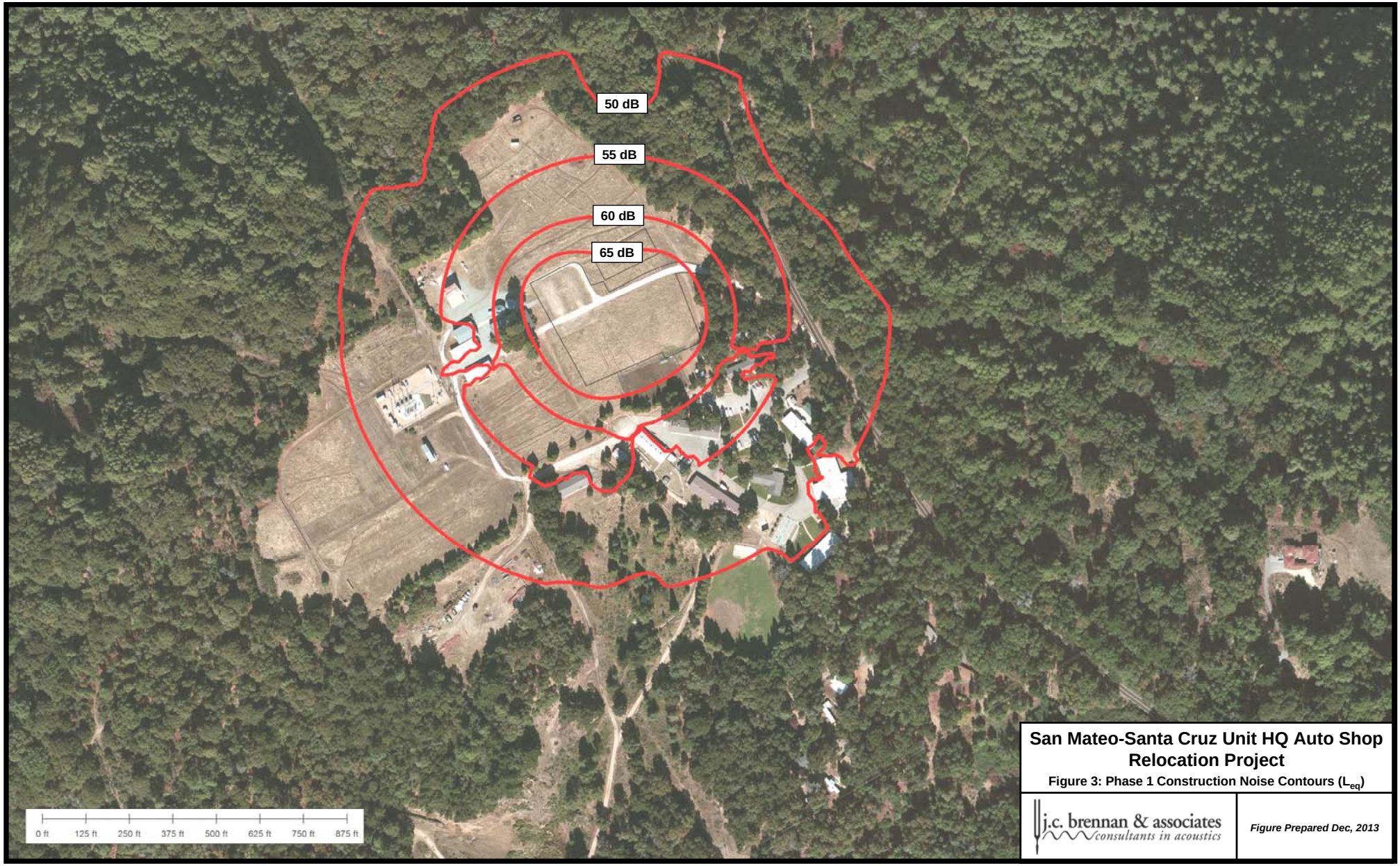
Table 5 **Construction Equipment List - Per Construction Phase**	
Construction Phase (10 months)	Equipment List
Months 1 to 6	• Excavators (1) • Back hoes (2) • Riding compactors (1) • Hand held portable compactors (2) • Grader (1) • Dump truck (1 per day) • Water truck (1)
Months 6 to8	• Paving Machine • Roller
Months 8 to 10	• Landscape trencher

Based upon the results of the Construction Noise Model, the predicted overall noise levels are shown in Table 6. The construction noise levels represent the noisiest construction periods. Figures 3 and 4 show the construction noise contours for the Project. The construction noise contours were developed using the CadnaA noise prediction model with direct inputs from the FHWA Construction Noise Model. The CadnaA model can develop noise contours while accounting topography, intervening buildings, multiple noise sources and ground type.

Table 6 Predicted Construction Noise Levels (Worst Case Period)		
Construction Phase (10 months)	Equipment List	Hourly Sound Levels @ Nearest Property Line Leq / Lmax (dBA)
Months 1 to 6	• Excavators (1) • Back hoes (2) • Riding compactors (1) • Grader (1) • Dump truck (1 per day)	55 dBA Leq / 59 dBA Lmax 55 dBA Leq / 56 dBA Lmax 55 dBA Leq / 62 dBA Lmax 59 dBA Leq / 63 dBA Lmax 51 dBA Leq / 55 dBA Lmax **Cumulative 62.5 dBA Leq - 63.4 dBA Lmax**
Source: j.c. brennan & associates, Inc. - 2013 Federal Highway Roadway Construction Model		

The Santa Cruz County Noise Ordinance, is a nuisance ordinance which restricts a "nuisance" type of noise between the hours of 10:00 p.m. and 8:00 a.m. Since the construction phases of the project will not occur during the nighttime periods, this is not considered significant, as compared to the ordinance.

The Santa Cruz County General Plan Noise Element does have a policy (Policy 6.9.7) which requires mitigation of construction noise as a condition of future project approval. Practical mitigation measures will be proposed which will minimize construction noise.



San Mateo-Santa Cruz Unit HQ Auto Shop Relocation Project

Figure 3: Phase 1 Construction Noise Contours (L_{eq})

j.c. brennan & associates
consultants in acoustics

Figure Prepared Dec, 2013

j.c. brennan & associates
consultants in acoustics

Auto Shop Operations Noise Levels

Typical noise sources associated with the new auto shop will include pneumatic air wrenches, compressors, impact tools, grinders, and panel cutters. As a means of evaluating noise levels associated with the new auto shop, j.c. brennan & associates, Inc. utilized noise measurement data collected at an existing auto shop in Grass Valley, California. The noise measurements were conducted at a distance of 20 feet from the bays. The noise sources inside the bays of the auto body shop and the measured noise levels are shown in Table 7.

Table 7
Measured Hourly Noise Levels from Inside the Body Shop &
Predicted Noise Levels at the Nearest Property Line
(Body Shop was Located in Grass Valley California)

Equipment	Measured Noise Level	Predicted Maximum Noise Level at Property Line	Typical Hourly Use	Predicted Leq at the Property Line
Compressor	53 dBA at 20 feet	30 dBA Lmax	5 minutes	20 dBA Leq
Impact Tools	54 dBA at 20 feet	21 dBA Lmax	10 minutes	15 dBA Leq
Panel Cutter	62 dBA at 20 feet	39 dBA Lmax	5 - 10 minutes	33 dBA Leq
Grinder	55 dBA at 20 feet	32 dBA Lmax	5 - 10 minutes	26 dBA Leq
			Cumulative Hourly Leq	**34 dBA Leq**

Source: j.c. brennan & associates, Inc. 2013

Based upon Table 7, maximum noise levels could be as high as 40 dBA Lmax, assuming that several pieces of equipment were operating at any given time. The cumulative hourly Leq is predicted to be 34 dBA at the nearest property line. The noise levels would comply with the stationary noise source standards contained in Table 3.

Traffic Noise Levels

Based upon trip generation levels and existing traffic counts along Empire Grade Road provided by the project traffic consultant, the existing traffic along Empire Grade Road is 1,094 trips per day (ADT). The proposed project will increase overall traffic between 20 and 30 trips per day. The overall increase in roadway traffic is less than 2 percent.

Using the Federal Highway Administration (FHWA RD77-108) traffic noise prediction model, there will not be an overall increase in traffic noise along the primary roadway (Empire Grade Road). Table 8 shows the results of the FHWA traffic noise prediction model. Noise levels will comply with the Table 2 Land Use Compatibility noise level standards.

Table 8

Predicted Empire Grade Road Traffic Noise Levels

New Auto Shop

Scenario	ADT	Traffic Noise Level @ 50 feet*	Distance to Traffic Noise Contours*	
			60 dBA Ldn	65 dBA Ldn
Existing Traffic	1,094	57 dBA Ldn	31 feet	15 feet
Existing Plus Project	1,124	57 dBA Ldn	32 feet	15 feet

* Distances to traffic noise levels and contours are relative to the roadway centerline.

Source: j.c. brennan & associates, Inc. - 2013

Construction Vibration Levels

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities. Santa Cruz County does not contain specific policies pertaining to vibration levels. However, vibration levels associated with construction activities can be of concern.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Vibration criteria developed by Caltrans indicate that the threshold for damage to structures ranges from 2 to 6 in/sec. One-half this minimum threshold or 1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is notes as 0.1 in/sec p.p.v.

Table 9 shows the typical vibration levels produced by construction equipment.

TABLE 9 VIBRATION LEVELS FOR VARYING CONSTRUCTION EQUIPMENT		
Type of Equipment	Peak Particle Velocity @ 25 feet	Approximate Velocity Level @ 25 feet
Large Bulldozer	0.089 (inches/second)	87 (VdB)
Loaded Trucks	0.076 (inches/second)	86 (VdB)
Small Bulldozer	0.003 (inches/second)	58 (VdB)
Auger/drill Rigs	0.089 (inches/second)	87 (VdB)
Jackhammer	0.035 (inches/second)	79 (VdB)
Vibratory Hammer	0.070 (inches/second)	85 (VdB)
Vibratory Compactor/roller	0.210 (inches/second)	94 (VdB)
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006		

Based upon the distances to the nearest residential receivers, it is not expected that vibration due to construction during the Project will result in human annoyance or architectural damage.

MITIGATION

Mitigation should be included in the Project. Hourly average (Leq) levels approaching 80 dBA would be considered loud.

The following mitigation measures are recommended:

1. Mitigation for construction should limit construction to between the hours of 8:00 a.m. and 8:00 p.m. on weekdays;

2. Allow exceptions to the specified construction hours only for construction emergencies and when requested by the Department of Public Works and approved by the County Planning Department;

1. During construction, temporary sound barriers should be considered which shields homes from direct line of sight to equipment. Temporary sound barriers can be erected on scaffolding or angle iron framing.

APPENDIX G

Traffic Assessment

KD Anderson & Associates, Inc.
Transportation Engineers

December 17, 2013

Mr. Chris Stabenfeldt, Senior Environmental Planner / Project Manager
ECORP CONSULTING, INC.
2525 Warren Drive
Rocklin, CA 95677

RE: TRAFFIC ASSESSMENT FOR CDF SANTA CRUZ AUTO SHOP NEW CONSTRUCTION PROJECT, SANTA CRUZ, CA

Dear Mr. Stabenfeldt:

Thank you for contacting our firm regarding the CDF Santa Cruz Auto Shop New Construction Project (#124683). This letter summarizes our focused traffic impact assessment for the project.

Overview. A new auto shop will be constructed at the Ben Lomond Conservation Camp (BLCC) located about eight miles north of Felton at 13575 Empire Grade Road, Santa Cruz, California 95060. The project will be constructed on a two-acre site located upland from the camp area. The project will have new separate access to Empire Grade Road.

Project Characteristics

The characteristics of the project have been identified in terms of activities associated with Construction and with Regular operation.

The project will be constructed over a ten month period, with 10 to 20 construction employees on the site at various times. Typical construction equipment associated with the building trades would be transported to the site at various times depending on the nature of construction occurring at any time. On a daily basis, construction could generate 20 to 40 vehicle trips per day, with most of that activity concentrated into the beginning and ending of the work day.

Traffic to and from the site would also occur on a regular basis when the project is in operation, and the amount of traffic will vary seasonally. Day to day operations would include an average of eight to nine employees on-site. During the winter off-season the project would service 5 to 10 vehicles weekly. During the peak fire season, one or two vehicles could be serviced daily. In an emergency situation the facility could be open 24-hrs with 15 to 20 employees on site. Thus the regular daily trip generation could range from 20 to 30 daily trips, and most of this activity would be concentrated into typical morning and evening commute hours.

The directional distribution of the trips associated with the project will reflect the project's location

towards the northern end of the project's service area. As a result, most of the project's trips will be oriented to the south on Empire Grade Road.

The project will include a new access drive onto Empire Grade Road. The new access will be 30 feet wide and will be roughly 75 feet north of the existing BLCC access. A maximum grade of 14% is expected on the new access route, which will have a 60 foot radius horizontal curve immediately off of Empire Grade Road.

Environmental Setting

Existing Roadway Network. The project would be developed adjoining the BLCC, and both regional and direct access to the site is provided by Empire Grade Road. Empire Grade Road links the site with SR 1 in Santa Cruz and with SR 9 and SR 17 via Felton Empire Road. Other local roads to the north and east can be used to reach the site, including Jamison Creek Road which links the area with Big Basin Highway.

Empire Grade Road is a two lane rural Collector highway that originates at the Santa Cruz city limits north of SR 1 and continues northerly for roughly 15 miles along terrain that would be classified as rolling to mountainous. The most recent traffic volume information available from Santa Cruz County Council of Governments (SC) suggests that Empire Grade Road carries 1,094 vehicles per day.

Jamison Creek Road is a two lane rural road that originates at an intersection on Empire Grade Road roughly 1½ miles north of the project site and extends easterly for two miles to an intersection on SR 236 (Big Basin Highway). The alignment of Jamison Creek Road is mountainous with numerous tight horizontal curves and narrow pavement sections.

Traffic Impact Analysis Methodology. Quantitative Level of Service (LOS) analysis was performed for study area roadway segments based on the methodologies contained in the *2010 Highway Capacity Manual (2010 HCM)* published by the Transportation Research Board. LOS analysis is used to identify the relative delay experienced by motorists traveling on two lane rural highways. A grading scale of LOS "A" to LOS "F" is used to describe the quality of traffic flow, with LOS A representing free-flowing conditions along facilities with adequate passing opportunities and LOS F representing conditions where travel speeds are constrained by factors such as truck traffic, limited passing opportunities and roadway alignment. For this analysis the *Generalized Daily Service Volumes for Two-Lane Highways* shown in 2010 HCM Exhibit 15-30 have been employed.

This analysis addresses the capacity and Level of Service on Empire Grade Road in the area from the project south towards Santa Cruz.

Existing Traffic Operations. The daily traffic volume on Empire Grade Road is reported to be 1,094 vehicles per day in the area south of the project site, and roughly 10% of that volume would be expected during the highest volume hour (i.e., 110 vph). Based on the roadway width (i.e., 11-

KDA

12 foot wide travel lanes), width of paved shoulders (1-3 feet), limited passing opportunities (100% no passing), and truck percentage (2-4%) the roadway would operate at LOS B during the peak traffic hour.

Regulatory Background

The *County of Santa Cruz General Plan and Local Coastal Program (General Plan)* was adopted by the Board of Supervisors in May 1994 and includes policies that are applicable to circulation and transportation. **Policy 3.12.1 Level of Service (LOS) Policy** notes that LOS C should be considered the objective, but LOS D is the minimum acceptable where costs, right-of-way requirements or environmental impacts to maintain LOS under policy are excessive capacity enhancement may be considered infeasible. Proposed development projects that would cause LOS on an uninterrupted roadway segment to fall below D during the weekday peak hour will be required to mitigate their traffic impacts. Proposed projects that would add traffic on a segment already at LOS E or F shall also be required to mitigate any traffic volume resulting in a 1% increase in the volume / capacity ratio.

Project Impacts

The impacts of the proposed project have been assessed based on roadway Level of Service and safety at the new access.

Level of Service. The project may add 15 to 20 trips to Empire Grade Road during typical commute hours. While this may represent a 13% to 18% increase from the current volume (i.e., total 125 to 130 vph), the resulting daily traffic volume would still be indicative of LOS B conditions on this two lane rural road based on HCM 2010 exhibit 15-30.

Sight Distance. The adequacy of the proposed access has been evaluated within the context of sight distance and the need for ancillary improvements to handle the vehicles using this access. Sight distance was observed in the field and compared to applicable minimum standards identified in the Caltrans Highway Design Manual (HDM). The speed limit on Empire Grade Road is 55 mph, and at that speed the minimum safe stopping sight distance (HDM Table 201.1) is 500 feet. While it is clear from field review that the sight distance looking south from the new driveway will satisfy that standard, it is not possible to establish the sight distance looking north due to the existing embankment located near the point of construction. Empire Grade Road curves roughly 600 feet from the new access, and there is a slight embankment in the general area north of the existing access. Thus, while it is likely that adequate sight distance can be developed, it is not possible to confirm this availability with existing information. When construction plans are developed and the exact nature of finished elevations is determined then sight distance can be determined and confirmed by the applicable reviewing agency.

Left Turn Lane Channelization. The need for a left turn lane at the new access has been considered based on guidelines published by the American Association of State Highway and Transportation Officials (AASHTO) in *Policy on Geometric Design of Highways and Streets*

KDA

(2004). Exhibit 9-75 introduces the combination of opposing and advancing traffic volumes and turning traffic that would justify a left turn lane based on design speed. In this case, the volume of traffic turning left falls far below the level justifying a left turn lane, and a turn lane is not recommended.

Please feel free to contact me at (916) 660-1555 if you have any questions.

Sincerely yours,

KD Anderson & Associates, Inc.

Kenneth D. Anderson, P.E.
President

Attachments: Vicinity Map, Site Plan, 2010 HCM Exhibit 15-30, AASHTO Exhibit 9-75, Traffic Count Record

ECORP CDF Santa Cruz Auto Shop.pro

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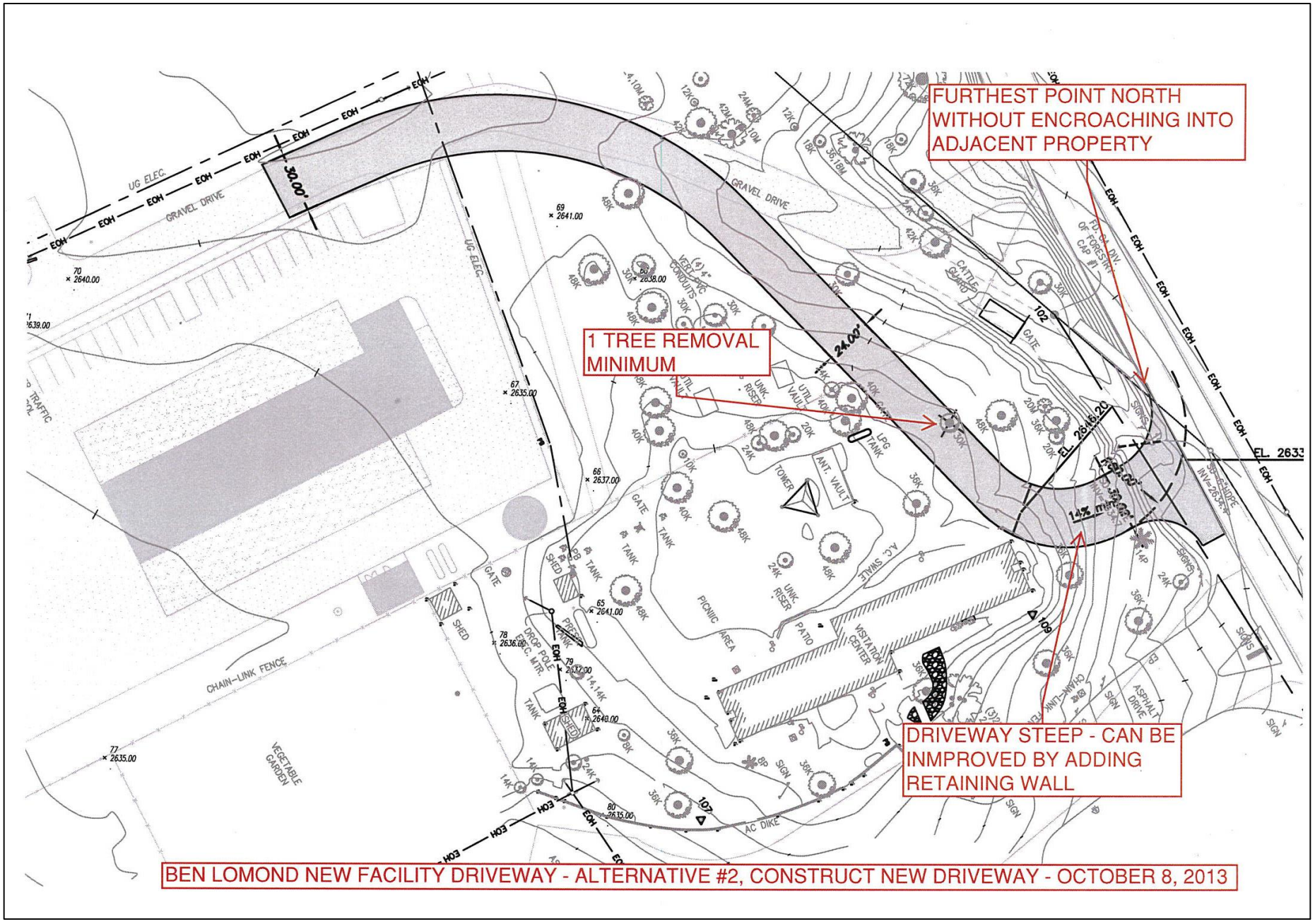
KD Anderson & Associates, Inc.
Transportation Engineers

VICINITY MAP

2610-10 LT.vsd 12/10/2013

figure 1



KD Anderson & Associates, Inc.
Transportation Engineers

SITE PLAN

2610-10 LT.vsd 12/10/2013

Exhibit 15-30
Generalized Daily Service Volumes for Two-Lane Highways

The Class I—level example assumes higher speeds, with significant passing opportunities.

The Class I—rolling example assumes more moderate speeds and reduced passing opportunities because of the terrain.

The Class II—rolling example is similar to a scenic or recreational highway with lower speeds and limited passing opportunities.

K-Factor	*D*-Factor	Class I—Level				Class I—Rolling				Class II—Rolling			
		LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E
0.09	50%	5.5	9.3	16.5	31.2	4.2	8.4	15.7	30.3	5.0	9.8	18.2	31.2
	55%	4.9	8.7	14.9	30.2	3.7	7.9	14.0	29.2	4.1	8.7	16.0	30.2
	60%	4.4	8.1	13.9	27.6	3.7	6.2	12.8	26.8	3.7	7.9	14.6	27.6
	65%	4.1	7.9	12.9	25.5	3.4	5.9	11.4	24.7	3.3	5.9	13.2	25.5
0.10	50%	5.0	8.4	14.8	28.0	3.8	7.6	14.2	27.2	4.4	8.8	16.3	28.0
	55%	4.4	7.9	13.4	27.1	3.3	7.1	12.6	26.3	3.7	7.9	14.4	27.1
	60%	4.0	7.3	12.5	24.9	3.3	5.6	11.5	24.1	3.3	7.1	13.1	24.9
	65%	3.7	7.1	11.6	23.0	3.0	5.3	10.3	22.3	3.0	5.3	11.9	23.0
0.12	50%	4.1	7.0	12.4	23.4	3.1	6.3	11.8	22.7	3.7	7.4	13.6	23.4
	55%	3.7	6.5	11.2	22.6	2.8	5.9	10.5	21.9	3.1	6.5	12.0	22.6
	60%	3.3	6.1	10.4	20.7	2.7	4.7	9.6	20.1	2.7	5.9	10.9	20.7
	65%	3.1	5.9	9.6	19.1	2.5	4.4	8.5	18.5	2.4	4.4	9.9	19.1
0.14	50%	3.5	6.0	10.6	20.0	2.7	5.4	10.1	19.4	3.2	6.3	11.7	20.0
	55%	3.1	5.6	9.6	19.4	2.4	5.1	9.0	18.8	2.6	5.6	10.3	19.4
	60%	2.8	5.2	8.9	17.7	2.3	4.0	8.2	17.2	2.3	5.1	9.4	17.7
	65%	2.6	5.1	8.2	16.4	2.1	3.8	7.3	15.9	2.1	3.8	8.5	16.4

Notes: Volumes are thousands of vehicles per day.
Assumed values for all entries: 10% trucks, PHF = 0.88, 12-ft lanes, 6-ft shoulders, 10 access points/mi.
Assumed values for Class I—level: BFFS = 65 mi/h, 20% no-passing zones.
Assumed values for Class I—rolling: BFFS = 60 mi/h, 40% no-passing zones.
Assumed values for Class II—rolling: BFFS = 50 mi/h, 60% no-passing zones.

A number of interesting characteristics are displayed in Exhibit 15-30:

1. LOS A is not shown. Even in level terrain, it is possible to achieve this level only at very low demand flow rates (almost always lower than 50 veh/h, directional).
2. The range of demand flows falling within LOS E is broad compared with other levels of service. This is because the quality of service on two-lane highways tends to become unacceptable at relatively low *v/c* ratios. Few two-lane highways are observed operating at or near capacity (except for short segments), because most will have been expanded before capacity demand flows develop.

Exhibit 15-30 should be used only in generalized planning and preliminary engineering analysis. It is best used to examine a number of two-lane highways within a given jurisdiction to determine which need closer scrutiny. If anticipated AADTs on a given segment or facility appear to put the segment or facility into an undesirable LOS, then more site-specific data should be obtained (or forecast) and a full operational analysis conducted before any firm commitments to reconstruct or improve the highway are made.

USE OF ALTERNATIVE TOOLS

No alternative deterministic tools are in common use for two-lane highway analysis. Two-lane highway simulation tools are in various stages of development, but user experience with these tools is insufficient to support the formulation of useful guidance for their application to extend the scope of the procedures described in this chapter.

One of the potentially useful features of two-lane highway simulation is the ability to model specific configurations of a series of no-passing zones, exclusive passing lanes, and access points, all of which are now described in general terms (e.g., percent no-passing zones) in this chapter. Network simulation tools can also include traffic control devices at specific points.

- Where fully protected, left-turn phasing is to be provided;
- Where space permits, left-turn lanes should be considered when left-turn volumes exceed 100 vph (left-turn lanes may be provided for lower volumes as well on the basis of the judged need and state of local practice, or both); and
- Where left-turn volumes exceed 300 vph, a double left-turn lane should be considered.

Exhibit 9-75 is a guide to traffic volumes where left-turn facilities should be considered on two-lane highways. For the volumes shown, left turns and right turns from the minor street can be equal to, but not greater than, the left turns from the major street.

Metric					US Customary				
Opposing volume (veh/h)	Advancing volume (veh/h) 5% left turns	10% left turns	20% left turns	30% left turns	Opposing volume (veh/h)	Advancing volume (veh/h) 5% left turns	10% left turns	20% left turns	30% left turns
60-km/h operating speed					40-mph operating speed				
800	330	240	180	160	800	330	240	180	160
600	410	305	225	200	600	410	305	225	200
400	510	380	275	245	400	510	380	275	245
200	640	470	350	305	200	640	470	350	305
100	720	515	390	340	100	720	515	390	340
80-km/h operating speed					50-mph operating speed				
800	280	210	165	135	800	280	210	165	135
600	350	260	195	170	600	350	260	195	170
400	430	320	240	210	400	430	320	240	210
200	550	400	300	270	200	550	400	300	270
100	615	445	335	295	100	615	445	335	295
100-km/h operating speed					60-mph operating speed				
800	230	170	125	115	800	230	170	125	115
600	290	210	160	140	600	290	210	160	140
400	365	270	200	175	400	365	270	200	175
200	450	330	250	215	200	450	330	250	215
100	505	370	275	240	100	505	370	275	240

Exhibit 9-75. Guide for Left-Turn Lanes on Two-Lane Highways (6)

Additional information on left-turn lanes, including their suggested lengths, can be found in published sources (**2**, **11**, **13**). In the case of double left-turn lanes, a capacity analysis of the intersection should be performed to determine what traffic controls are needed in order for it to function properly.

Local conditions and the cost of right-of-way often influence the type of intersection selected as well as many of the design details. Limited sight distance, for example, may make it desirable to control traffic by yield signs, stop signs, or traffic signals when the traffic densities are less than those ordinarily considered appropriate for such control. The alignment and grade of the intersecting roads and the angle of intersection may make it advisable to channelize or use auxiliary pavement areas, regardless of the traffic densities. In general, traffic service, highway design designation, physical conditions, and cost of right-of-way are considered jointly in choosing the type of intersection.

AREA	STREET	Direction	CROSS STREET	MOST RECENT ADT	MONTH YEAR1	ADT2	MONTH YEAR2	ADT3	MONTH YEAR3	ADT4	MONTH YEAR4
C	Commercial Wy	S/O	Soquel Dr.(WB)	1,708	May-07						
W	Corralitos Rd.	S/O	Hames Rd								
W	Corralitos Rd.	N/O	Varni	6,284	Oct-06	7,428	Feb-06	6,173	Nov-04		
W	Corralitos Rd.	S/O	Varni St.	5,158	Nov-86						
W	Coward Rd.	N/O	Hwy 129								
C	Daubenbiss Ave.	N/O	Walnut St.	768	Feb-05						
A	Dolphin Dr.	W/O	Seascape Blvd.	1,474	Aug-88	1,514	Mar-85				
A	Dolphin Dr.	N/O	Sumner Ave.	413	Aug-88						
C	East Cliff Dr.	W/O	17th Ave.	15,784	Jan-09	14,418	Nov-08	16,860	Jul-08	14,464	May-08
C	East Cliff Dr.	E/O	18th Ave.	9,232	Feb-06	7,797	Aug-86				
C	East Cliff Dr.	W/O	23rd Ave.	4,125	Feb-08						
C	East Cliff Dr.	E/O	26th Ave.	4,633	Jan-86						
C	East Cliff Dr.	E/O	36th Ave.	6,456	Jan-86						
C	East Cliff Dr.	E/O	5th Ave	5,116	Jul-04						
C	East Cliff Dr.	E/O	7th Ave.	14,980	Jun-09	15,290	Jun-05	15,322	Jun-01	17,347	May-84
C	East Cliff Dr.	E/O	Lake Ave.	7,672	Jul-01	3,873	May-85				
V	East Zayante Rd.	N/O	Graham Hill Rd	7,558	Jun-09	7,220	Jun-04	7,256	Jun-00	7,117	Jan-89
V	East Zayante Rd.	E/O	Lompico Rd.	1,719	Nov-01	1,966	Dec-85				
V	East Zayante Rd.	S/O	Lompico Rd.	4,312	Jul-06	3,275	Dec-85				
V	East Zayante Rd.	N/O	West Zayante Rd.	5,733	Mar-01	1,855	Feb-85				
V	East Zayante Rd.	S/O	West Zayante Rd.	7,826	Oct-06	5,750	Nov-01	6,721	Nov-00	7,558	Jun-95
C	Eaton St.	W/O	7th Ave.	19,125	Jul-08	17,814	Aug-04	20,537	Jul-01	19,314	Jul-97
C	Eaton St.	E/O	Lake Ave.	18,088	Mar-01	19,345	Mar-86				
C	Eaton St.	W/O	Lake Ave.	20,287	May-84	20,912	Aug-81				
W	Egret Ln	W/O	Ohlone Pkwy	663	Mar-06						
V	El Rancho Dr.	N/O	Carbonera Dr.	4,734	Apr-86						
V	El Rancho Dr.	S/O	Carbonera Dr.	4,552	Apr-86						
SC	Emeline St.	S/O	Wendell St.	3,881	May-11	3,471	Jun-07				
SC	Empire Grade	S/O	Felton-Empire Grd	1,094	Dec-86						
SC	Empire Grade	N/O	Heller Dr.	2,178	Jun-84						
SC	Empire Grade	S/O	Heller Dr.	10,689	Oct-10	9,336	Jun-07	9,372	Oct-95	9,721	Nov-93
V	Empire Grade	E/O	Smith Grade	2,329	May-05						
SC	Empire Grade	S/O	Waldorf School	3,222	Sep-01						
SC	Empire Grade	W/O	Western Dr.	12,175	Nov-03	11,227	Nov-99	10,025	Nov-88	8,582	Oct-86
SC	Encinal St.	at	Post St.	10,341	Sep-97	8,700	Jan-94				
SC	Encinal St.	W/O	River St	5,506	Oct-99						
SC	Escalona Dr.	at	Miramar Dr.	877	Aug-00						
C	Esplanade	E/O	Cliff Dr.	3,055	Jul-07	3,709	May-04	3,607	May-98		
C	Estates Dr	at	RR crossing	141	Aug-04						
W	Fairgrounds	at	Entrance	9,197	Sep-83						