

Hacienda and Deep Gulch Remediation Project  
Almaden Quicksilver County Park

Final Initial Study/  
Mitigated Negative Declaration  
September 14, 2010

SCH# 2010072049

County of Santa Clara  
Parks and Recreation Department  
Los Gatos, CA

Prepared by  
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TRA Environmental

## INITIAL STUDY

### Environmental Evaluation Checklist for County of Santa Clara

**Project Title:** Hacienda and Deep Gulch Remediation Project      **Date:** July 13, 2010

**File Number:** None      **APN(s):** 583-20-004 and 583-23-019

**500" Map #:** 169      **Zoning:** 'H1' Historic Preservation Zoning District

**General Plan Designation:** Regional Park

**Project Type:** Mercury Remediation and Restoration      **USA (if any):** None

**Lead Agency Name & Address:** County of Santa Clara, Parks and Recreation Department  
298 Garden Hill Drive, Los Gatos, CA 95032-7669

**Applicant Name & Address:** County of Santa Clara, Parks and Recreation Department  
298 Garden Hill Drive, Los Gatos, CA 95032-7669

**Owner Name & Address:** County of Santa Clara, Parks and Recreation Department  
298 Garden Hill Drive, Los Gatos, CA 95032-7669

**Contact Person and Phone Number:** Mohamed Assaf, Senior Facilities Engineer  
408-355-2200

**Project Location** (address or description): Almaden Quicksilver County Park  
21785 Almaden Road, San Jose, CA 95196

**Project Description** (attach additional sheets if necessary): The project includes the removal of remnant mining waste material, grading to create stable creek banks at Alamitos Creek and Deep Gulch areas, stabilizing and hydroseeding all disturbed areas, and revegetation of the creek banks along Alamitos Creek and Deep Gulch within Almaden Quicksilver County Park in Santa Clara County, CA.

**Environmental Setting / Surrounding Land Uses:** The proposed project site is within Almaden Quicksilver County Park. The historic community of New Almaden is slightly downstream of the Hacienda park entrance.

**Other public agencies whose approval is required** (e.g., permits, financing approval, or participation agreement): Permits, agreements and consultations will be required from U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration - National Marine Fisheries Service, California Regional Water Quality Control Board - San Francisco Bay Region, California Department of Fish and Game, California Department of Toxic Substance Control and County of Santa Clara.

The environmental factors checked below would be potentially affected by this project, involving at least one impact as indicated by the checklist on the following pages.

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED**

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Aesthetics                | <input checked="" type="checkbox"/> Agriculture and Forestry Resources             | <input checked="" type="checkbox"/> Air Quality                        |
| <input checked="" type="checkbox"/> Biological Resources      | <input checked="" type="checkbox"/> Cultural/ Historical/ Archaeological Resources | <input type="checkbox"/> Energy  |
| <input checked="" type="checkbox"/> Geology / Soils           | <input type="checkbox"/> Greenhouse Gas Emissions                                  | <input checked="" type="checkbox"/> Hazards & Hazardous Materials      |
| <input checked="" type="checkbox"/> Hydrology / Water Quality | <input checked="" type="checkbox"/> Land Use & Planning                            | <input type="checkbox"/> Mineral Resources                             |
| <input checked="" type="checkbox"/> Noise                     | <input type="checkbox"/> Population / Housing                                      | <input type="checkbox"/> Public Services/ Utilities                    |
| <input type="checkbox"/> Recreation                           | <input checked="" type="checkbox"/> Transportation / Traffic                       | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

**Section 4: Environmental Checklist and Discussion of Impacts**

A. AESTHETICS						
WOULD THE PROJECT:	IMPACT					SOURCE
	NO	YES				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. If subject to ASA, be generally in non-compliance with the Guidelines for Architecture and Site Approval?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35,36
2. Create an aesthetically offensive site open to public view?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,3,37
3. Substantially damage scenic resources, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,3,4,7,10f,37
4. Obstruct scenic views from existing residential areas, public lands, public water body or roads?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,3
5. Be located on or near a ridgeline visible from the valley floor?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,10f,11c,37
6. Adversely affect the architectural appearance of an established neighborhood?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,3
7. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3

## DISCUSSION

AQS County Park is on the National Register of Historic Places and within the County of Santa Clara Historic Preservation Zoning District. This special zoning district is used to protect and conserve sites and areas that are of special character, architectural value, or aesthetic interest, if such areas contain at least one registered historic place or resource.

## IMPACTS AND MITIGATION

### ***1) If subject to ASA, be generally in non-compliance with the Guidelines for Architecture and Site Approval?***

This project is a remediation of mining waste material in accordance with the Consent Decree between the Trustees and the County of Santa Clara. Architecture and Site Approvals are required when altering buildings or signs or changing the use of a facility in a historic preservation zoning district. This project will not result in any of these actions. No impact.

### ***2) Create an aesthetically offensive site open to public view?***

The project area is visible from Alamos Road, a County designated scenic road, and from the trails within AQS County Park. Access and excavation of the calcine deposits would remove approximately 75 trees along Alamos Creek and Deep Gulch, some of which are very large (See Table 5 – Tree Loss By Species). Several mature oak trees that line the Mine Hill Trail adjacent to Deep Gulch will be removed. These are the most visible of the planned tree removals. Removing these trees will disrupt the natural character of the views and potentially degrade the aesthetic quality of this area as observed from this road and the park trails.

These impacts would be mitigated by replanting trees and ultimately trees will again occur in areas where they are removed. All tree removals will be mitigated through the replanting of native tree species (See Mitigation Measures **BIO-8** and **BIO-9**). The restoration of the old mining deposit sites would enhance views of the area in the long term. Impacts that would occur during construction would be adverse, but would be less than significant with Mitigation Measures **BIO-8** and **BIO-9**. Less than significant with mitigation incorporated.

### ***3) Substantially damage scenic resources, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?***

Alamos Road is considered a County of Santa Clara Scenic Road, but it not a state scenic highway (§ 3.30.050. Scenic Roads Inventory). Thus, the project would not substantially damage a scenic resource within a state scenic highway. No impact.

### ***4) Obstruct scenic views from existing residential areas, public lands, public water body or roads?***

The project will not obstruct views in any manner. No impact.

### ***5) Be located on or near a ridgeline visible from the valley floor?***

The project is not located on a ridgeline. No impact.

### ***6) Adversely affect the architectural appearance of an established neighborhood?***

The project includes earth moving and habitat restoration within a County Park. No structures are included within the construction limits (See Figure 3 – Site Map). No impact.

**7) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

The project would not create any new sources of light or glare which would adversely affect day- or nighttime views in the area. No impact.

<b>B. AGRICULTURE AND FOREST RESOURCES</b>						
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.						
WOULD THE PROJECT:	IMPACT					SOURCE
	NO	YES				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,20, 21, 23,24,26
2. Conflict with existing zoning for agricultural use?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9,21
3. Conflict with an existing Williamson Act Contract or the County's Williamson Act Ordinance?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 49
4. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,4,26
5. 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 definite by Government Code section 51104(g)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5, 33
6. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	33

**IMPACTS AND MITIGATIONS**

**1) 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?**

**2) Conflict with existing zoning for agricultural use?**

**3) Conflict with an existing Williamson Act Contract or the County's Williamson Act Ordinance?**

There is no agricultural or farmland in the project area. Thus, there are no Williamson Act contracts and no agricultural or farmland will be converted from those uses. No impact.

**4) 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?**

No agricultural or farmlands exist in the project area to be converted to another use. However, over half of the project area is forested. Foothill oak woodland, in the Deep Gulch area and along Alamitos Creek, is dominated by coast live oaks (*Quercus agrifolia*), valley oak (*Quercus lobata*), California bay laurel (*Umbellularia californica*) and California buckeye (*Aesculus californica*). Foothill riparian woodland lines Alamitos Creek and Deep Gulch. Dominant tree and shrub species include coast live oaks (*Quercus agrifolia*), valley oak (*Quercus lobata*), California bay laurel (*Umbellularia californica*), and California sycamore (*Platanus racemosa*), willows (*Salix spp.*), box elder (*Acer negundo*) and big-leaf maple (*Acer macrophyllum*). While up to 75 trees will be removed for the project the current forest lands not be converted to a non-forest use. Native foothill oak and riparian forest plants will either naturally recolonize or be replanted. No impact.

**5) 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))?**

The project does not conflict with existing zoning nor will any rezoning of any type occur. No impact.

**6) Result in the loss of forest land or conversion of forest land to non-forest use?**

The project will require removing up to 75 trees, including 47 trees with diameters 12 inches or larger; approximately 51,000 SF (~0.75 acres) of foothill oak and riparian woodland will be impacted by calcine removal and construction access. These impacts could be construed as a loss of forest land. Tree and vegetation loss will be mitigated as described in measures **BIO-8** and **BIO-9** in the Biological Resources section, resulting in functional replacement of habitat in the near future for woodland understory and ground cover plants and in the longer term for trees. In general, mitigation areas will be equal in size to the area impacted and will be revegetated with native woodland species; trees will be replanted on a 3:1 ratio, including oak species. This impact is less than significant with mitigations incorporated. As noted above, forest lands will not be converted to a non-forest use.

<b>C. AIR QUALITY</b>						
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.						
<b>WOULD THE PROJECT:</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. Conflict with or obstruct implementation of the applicable air quality plan?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5,34
2. Violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	2,3,4
3. 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)?	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5,29
4. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Create objectionable dust or odors affecting a substantial number of people?	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Alter air movement, moisture, or temperature, or cause any change in climate?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**DISCUSSION**

**Criteria Pollutants**

Air quality is determined by measuring ambient concentrations of six criteria pollutants, which are air pollutants for which acceptable levels of exposure can be determined and for which standards have been set. The degree of air quality degradation is then compared to the current National and California Ambient Air Quality Standards (NAAQS and CAAQS). Historic differences of opinion by medical panels established by the California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (U.S. EPA) cause considerable diversity between State and Federal standards in California. In general, the CAAQS are more stringent than the corresponding NAAQS. The air quality standards currently in effect in California are shown in Table 2 – Ambient Air Quality Standards.

**Attainment Status and Air Quality Plans**

The U.S. EPA, CARB, and the local air district classify an area as attainment, unclassified, or nonattainment, depending on whether or not the monitored ambient air quality data show compliance, insufficient data available, or non-compliance with the ambient air quality standards, respectively.

The project site is located within the County of Santa Clara under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). This portion of the Bay Area is downwind of many urban sources of pollution in San Jose and further upwind in San Francisco, San Mateo, and Alameda Counties. Applying the

State standards the project area is in nonattainment for ozone (1-hour), PM<sub>10</sub> and PM<sub>2.5</sub>. The area is in attainment for carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>) and sulfur dioxide (SO<sub>2</sub>).

**Table 2 – Ambient Air Quality Standards**

<b>Ambient Air Quality Standards</b>				
<b>Pollutant</b>	<b>Averaging Time</b>	<b>California Standards</b>	<b>National Standards</b>	
			<b>Primary</b>	<b>Secondary</b>
<b>Ozone</b>	8-hour	0.07 ppm	0.08 ppm	---
	1-hour	0.09 ppm	---	Same as primary
<b>Carbon Monoxide</b>	8-hour	9 ppm	9 ppm	---
	1-hour	20 ppm	35 ppm	---
<b>Nitrogen Dioxide</b>	Annual	0.03 ppm	0.053 ppm	Same as primary
	1-hour	0.18 ppm	0.030 ppm	---
<b>Sulfur Dioxide</b>	Annual	---	0.03 ppm	---
	24-hour	0.04 ppm	0.14 ppm	---
	3-hour	---	---	0.5 ppm
	1-hour	0.25 ppm	---	---
<b>PM<sub>10</sub></b>	Annual	20 µg/m	---	Same as primary
	24-hour	12 µg/m	150 µg/m	Same as primary
<b>PM<sub>2.5</sub></b>	Annual	12 µg/m	15 µg/m	---
	24-hour	---	35 µg/m	---
<b>Lead</b>	Calendar quarter	---	1.5 µg/m	Same as primary
	30 day average	1.5 µg/m	---	---

**Rules and Regulations**

The responsibility for developing regional air quality plans within the project area lies with the Bay Area Air Quality Management District (BAAQMD). BAAQMD exercises permit authority through its Rules and Regulations by requiring that new stationary sources secure a permit to construct and a permit to operate through the New Source Review (NSR) program (Regulation 2, Rule 2). This ensures that such sources would not interfere with progress in attaining State and national ambient air quality standards. Mobile and portable sources and temporary activities that cause emissions of air contaminants are managed through a range of State and federal programs mentioned below.

- U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program. The California Clean Air Act mandates CARB achieve the maximum degree of emission reductions from all off-road mobile sources in order to attain the state ambient air quality standards. Off-road mobile sources include construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996.
- CARB Portable Equipment Registration Program. This program allows owners or operators of portable engines and associated equipment commonly used for construction or farming to register their units under a statewide portable program to operate their equipment throughout California without having to obtain individual permits from local air districts.
- BAAQMD Regulation 2 Rule 1 – General Requirements. This regulation prohibits any source from causing a public nuisance and defines what equipment is subject to permitting/new source review requirements and exempts portable stationary equipment (e.g., generators or soil screeners) from permitting if they comply with all applicable requirements of the Statewide Portable Equipment Registration Program.

Other general rules such as Regulation 6 – Particulate Matter and Visible Emissions (for dust control) would also apply to all project activities.

The CEQA Guidelines also recommend that the criteria established by the local air district should be relied upon to make determinations of significance. The BAAQMD recommends controlling dust (PM<sub>10</sub>) during construction to minimize nuisance conditions and avoid violations of the ambient air quality standards. The BAAQMD recommends that a standard set of feasible dust control measures be implemented for all construction activities. Emissions of other contaminants (NO<sub>x</sub>, VOC, CO, SO<sub>2</sub>, and diesel-related PM<sub>10</sub>) that would occur in the exhaust from heavy equipment are included in the regionwide inventory that is the basis for regional attainment and are not expected to impede attainment of maintenance of the ambient air quality standards. The BAAQMD does not recommend quantification of construction-related emissions but rather recommends implementation of specific measures that can reduce the potential impacts to a level that would be considered less than significant (BAAQMD, 2010).

## **IMPACTS AND MITIGATION**

### ***1) Conflict with or obstruct implementation of the applicable air quality plan?***

The project would not lead to population or job growth such a housing or commercial development, and would not cause an increase in long-term employment since construction would be temporary. Therefore, the proposed project would not impact or obstruct the implementation of the applicable air quality plans. No impact.

### ***2) Violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation?***

The project would involve earthmoving and construction-type activities including the removal of calcine, land grading, contouring, restoration of slopes and revegetation of stream banks. Construction activities would require the use of equipment. Construction would be temporary, lasting approximately 6 months. This activity would not occur near land uses that would be considered sensitive to air quality impacts (residences, schools, children's day care centers, hospitals, and convalescent homes where population groups may have increased susceptibility to respiratory distress).

Project activities would generate emissions at the work sites and along the haul routes. The impacts would principally consist of exhaust emissions from heavy-duty diesel and gasoline powered construction equipment (e.g., ozone precursors, NOx and VOC, other criteria pollutants, such as CO and PM10, and toxic exhaust emissions) and fugitive particulate matter (dust) from earthmoving activities and travel on unpaved surfaces. Beyond the project area, exhaust emissions would also be caused by workers commuting to and from the work sites and from trucks hauling equipment and supplies to the work sites. This impact is less than significant with mitigations incorporated to meet BAAQMD recommendations as follows.

**AIR-1 Measures:**

Implement the following BAAQMD BMPs to reduce this impact to a less than significant level.

- Bay Area Air Quality Management District Basic Dust Control Measures (all construction sites)
- Bay Area Air Quality Management District Enhanced Dust Control Measures (sites greater > 4 acres in size)
- Bay Area Air Quality Management District Optional Dust Control Measures

Implementation: County Parks staff to include BMPs in construction documents and contractor to implement measures on site

Timing: During design and construction

Monitoring: County Parks Inspector to inspect contractor work for compliance with dust control measures

**3) *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)?***

Construction activities, including heavy truck traffic and worker vehicle traffic, would cause emissions during the limited duration of work. Upon completion of construction of the project, project-related emissions would cease. Because emissions would be temporary, they would not result in a cumulatively considerable net increase that could impede attainment or maintenance of the ambient air quality standards. Less than significant impact.

**4) *Expose sensitive receptors to substantial pollutant concentrations?***

The proposed project site is located in regional park. Construction activities would not occur near land uses that would be considered sensitive to air quality impacts (residences, schools, children's day care centers, hospitals, and convalescent homes where population groups may have increased susceptibility to respiratory distress). Construction impacts are most significant adjacent to the construction area and the impacts decrease rapidly with distance. While the pollutant concentrations from the project activities may be notable, the distance to the nearest sensitive receptors is such that their impacts would be less than significant.

**5) *Create objectionable dust or odors affecting a substantial number of people?***

The proposed project area is located in a regional park, away from residential, commercial, or other land uses with large numbers of users. Normally occurring odors from diesel equipment operation would not have the potential to affect a substantial number of people, and the proposed project's activities would have less than significant odor impacts. Less than significant impact.

**6) *Alter air movement, moisture, or temperature, or cause any change in climate?***

The project will slightly alter the existing topography and tree cover in an effort to restore the creek corridor and valley to a more natural state. This project will temporarily effect air movement, soil moisture and ground temperature over the project site, but this area is too small to have an impact on climate. No impact.

<b>D. BIOLOGICAL RESOURCES</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 7, 1, 17
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,7, 8a, 17 33
3. 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.) or tributary to an already impaired water body, as defined by section 303(d) of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 7, 17, 32
4. Have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conversion/loss of oak woodlands) – Public Resource Code 21083.4?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 30, 31
5. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,7, 17, 17o
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,4
7. Impact a local natural community, such as a fresh water marsh, oak forest or salt water tide land?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,10b, 11d,e
8. Impact a watercourse, aquatic, wetland, or riparian area or habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,3,12b,3 9,45, 46
9. Adversely impact unique or heritage trees or a large number of trees over 12" in diameter?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,25
10. Conflict with any local policies or ordinances protecting biological resources:						
i) Tree Preservation Ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,31, 49
ii) Wetland Habitat?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 5, 8a
iii) Riparian Habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 5, 8a,

## DISCUSSION

Natural communities in the project area include stream/aquatic, freshwater wetland, foothill riparian woodland, foothill oak woodland, chaparral, and open grassland. Several of these communities as well as species or individuals within these communities are protected by law. Stream and wetland communities are protected by the Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act. California Department of Fish and Game (CDFG) Code Section 1602 requires that lead agencies work with CDFG to develop a Stream Alteration Agreement when stream habitats and riparian zones are impacted by a project. Riparian zone protection is also required by the County of Santa Clara General Plan (1994). The Regional Water Quality Control Board (RWQCB) has regulatory authority over wetlands and waterways under both the federal Clean Water Act (CWA) and the State of California's Porter-Cologne Water Quality Control Act (California Water Code, Division 7). Under the CWA, the RWQCB has regulatory authority over actions in waters of the United States, through the issuance of water quality certifications (certifications) under Section 401 of the CWA, which are issued in combination with permits issued by the Army Corps of Engineers (ACOE), under Section 404 of the CWA. When the RWQCB issues Section 401 certifications, it simultaneously issues general Waste Discharge Requirements for the project, under the Porter-Cologne Water Quality Control Act. Activities in areas that are outside of the jurisdiction of the ACOE (e.g., isolated wetlands, vernal pools, or stream banks above the ordinary high water mark) are regulated by the RWQCB under the authority of the Porter-Cologne Water Quality Control Act. Activities that lie outside of ACOE jurisdiction may require the issuance of either individual or general waste discharge requirements (WDRs) from the Water Board.

The Federal Endangered Species Act (FESA) requires agencies to consult with the Secretary of the Interior through the US Fish and Wildlife Service (USFWS) for terrestrial listed species and NOAA, National Marine Fisheries Service (NMFS), for aquatic listed species to ensure that projects do not jeopardize the continued existence of endangered or threatened species or destroy or adversely modify critical habitats that support such species. California Endangered Species Act (CESA) under the jurisdiction of the CDFG protects state listed and sensitive species.

The US Fish and Wildlife Service (USFWS) protects migratory birds and their nests through the Migratory Bird Treaty Act. State Fish and Game Code protects birds of prey and their nests (CDFG Code 3503.5). Trees with diameters 6 inches or larger are protected under provisions of the New Almaden Historic Conservation Zoning District. Impacts to oaks and woodlands must be mitigated as per Public Resources Code 21083.4.

The project will remove approximately 9,000 CY (estimate includes a 50% contingency) of calcine and associated materials from locations in Deep Gulch and along Alamos Creek. Grading to remove calcines will impact approximately 35,500 SF and access to the sites will impact an additional 40,500 SF for a total of approximately 76,000 SF. Included in this total is the construction staging and material stockpiling area of approximately 25,000 SF; this will occur in non-native grassland areas that are previous remediation sites. Project activities will impact approximately 52,000 SF of woodlands (19,000 SF of oak woodlands and 32,000 SF of riparian woodlands) as well as approximately 900 SF of wetlands (500 SF associated with temporary grading and 400 SF associated with temporary construction access) located with Alamos Creek and the Deep Gulch drainage. A maximum of 75 trees with diameters 6" or greater will be removed; 23 of these are oaks (See Table 3 – Summary of Construction Effects). A number of sensitive species occur or have the potential to occur in the project area.

**Table 3 - Summary of Construction Effects**

<b>Summary of Construction Effects</b>						
<b>Location</b>	<b>Estimated Grading + Access = Total (~SF)</b>	<b># Trees Removed</b>	<b>Trees &gt;12" DBH</b>	<b>Freshwater Wetland Area Impacts (~SF)</b>	<b>Riparian Vegetation Impacts (~SF)</b>	<b>OHW Area Impacts (~LF)</b>
Deep Gulch 1	4,500 + 2,900 = <b>7,400</b>	3	2	100 (grading)	3800	50
Deep Gulch 2	2,400 + 700 = <b>3,100</b>	0	0	100 (grading)	0	0
Retort Area	<b>1,500</b>	0	0	0	0	0
Upper Furnace Yard	8,250 + 23,000 = <b>31,250</b>	0	0	300 (access) + 300 (grading)	500	300
Upper Hacienda 1		37	21		9,500	
Upper Hacienda 2					2,700	
Lower Hacienda 1	11,750 + 17,000 = <b>28,750</b>	7	4	0	5,300	0
Lower Hacienda 2		1	1	0	5,300	0
Alamitos Ck 2		27	19	100 (access)	10,200	300
Alamitos Creek Bridge 1	1,950 + 2,050 = <b>4,000</b>	0	0	0	0	50
Alamitos Creek Bridge 2		0	0	0	0	
<b>TOTALS</b>	<b>76,000</b>	<b>75</b>	<b>47</b>	<b>900</b>	<b>32,000</b>	<b>700</b>

**Habitat Types and Common Species**

There are six primary habitat types in the Project area:

Foothill oak woodland is dominated by coast live oaks (*Quercus agrifolia*), valley oak (*Quercus lobata*), California bay laurel (*Umbellularia californica*) and California buckeye (*Aesculus californica*); understory species include poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), bush monkeyflower (*Diplacus aurantiacus*), and coffeeberry and other *Rhamnus* spp. Impacts to oak woodlands must be mitigated under Public Resources Section 21083.4.

Foothill riparian woodland, which lines Alamitos Creek and Deep Gulch, is populated by coast live oaks (*Quercus agrifolia*), valley oak (*Quercus lobata*), California bay laurel (*Umbellularia californica*), California sycamore (*Platanus racemosa*), willows (*Salix spp.*), box elder (*Acer negundo*) and big-leaf maple (*Acer macrophyllum*). Riparian habitat is necessary habitat for nesting birds and many listed species. The County of Santa Clara General Plan (1994) requires a riparian set-back from streams of at least 100 feet in disturbed areas and 150 feet in less disturbed areas. The CDFG requires a Riparian Mitigation and Monitoring Plan to be prepared as part of the Streambed Alteration Agreement application under CDFG Code 1602.

Key species in Chaparral habitat on the hillsides in drier areas are chamise (*Adenostoma fasciculatum*), buckbrush (*Ceanothus cuneatus*), California sagebrush (*Artemisia californica*), and California buckwheat (*Eriogonum fasciculatum*).

Non-native grasslands are found in the project area primarily where previous remediation actions took place in the Hacienda Furnace Yard and between Alamitos Creek (AC-2) and Alamitos Road. These grasslands support annual European grasses from Mediterranean areas and native annual wildflowers; few if any native grass species grow in these areas.

Freshwater wetlands are characterized by hydric soils, water at or near the surface for some or all of the year, and wetland-adapted plant species such as sedges (*Carex* spp.), *Juncus* spp., horsetails and water cress. Wetlands are protected by Section 404 of the Clean Water Act.

Stream/Aquatic zones are moving water habitat with little to no emergent vegetation. They provide habitat for aquatic animals from invertebrates to steelhead to various amphibian life forms. This habitat is found year-round in Alamitos Creek and during the rainy season in Deep Gulch. Streams can be protected by the Rivers and Harbors Act, Section 10 and the Clean Water Act, Section 404. CDFG Code 1602 requires a Stream Alteration Agreement for changes to rivers and streams and their riparian zones.

Typical reptiles and amphibians found in some or all of these habitats are Pacific tree frogs (*Hyla regilla*), western rattlesnakes (*Crotalus viridis*), gopher snakes (*Pituophis catenifer*), and southern alligator lizards (*Cerrhonotus multicarinatus*). Common birds include scrub jays (*Aphelocoma coerulescens*), California quail (*Callipepla californica*), western bluebirds (*Sialia mexicana*), and acorn woodpeckers (*Melanerpes formicivorus*) as well as a diversity of nesting song birds and birds of prey such as red-shouldered hawks (*Buteo lineatus*). Mammals, including as black-tailed deer (*Odocoileus hemionus*), coyotes (*Canis latrans*), and raccoons (*Procyon lotor*), are common, as are a number of mouse (*Reithrodontomys*, *Microtus* and *Peromyscus* spp.) and bat species (*Myotis* and other genera). Special status species that occur or potentially occur in the project are discussed below and listed in Table 4.

### **Special Status Plants**

No surveys for special status plants were conducted in the planning stage of this project. A search of California Natural Diversity Database (CNDDDB) records showed no rare plant species in the project area. Four rare plant species occur within 1 mile of the project area: Mt. Hamilton thistle (*Cirsium fontinale* var. *campylon*), smooth lessingia (*Lessingia micradenia* var. *glabrata*), most beautiful jewel flower (*Streptanthus albidus* ssp. *peramoenus*), and the Santa Clara dudleya (*Dudleya setchellii*). All of these species are predominantly found on serpentine soils and habitats associated with serpentine soils (SCC, 2006a) and are not expected to occur in the project area, which has no serpentine soils or outcrops.

The Loma Prieta hoita (*Hoita strobolina*) was found at Jacques Gulch, a few miles up the watershed from the Hacienda/Deep Gulch site (Santa Clara Valley Water District, 2008); this species is not mentioned in the Habitat Restoration and Monitoring Plan for the Hacienda/Deep Gulch remediation (H.T. Harvey, 2009) or the RP/EA (USFWS and CDFG, 2008). The plant is found —an understory element of coast live oak forest and woodland, generally in riparian woodland or on shaded slopes, between 100 and 2,000 feet elevation...The species sometimes occurs in chaparral or on serpentine” (California Natural Diversity Database 2006 cited in SCC, 2006b). Since such conditions are found in the Hacienda/Deep Gulch project area, this species could potentially occur on the project site.

### **Special Status Fish, Amphibians and Reptiles**

No surveys for these taxa were conducted during the planning stage of this project. Information on occurring or potentially-occurring fish, amphibians and reptiles was gained from a search of the CNDDB and other literature.

Steelhead (*Oncorhynchus mykiss*). Steelhead, is a salmonid species found along the Pacific coast. NMFS has determined that steelhead using Santa Clara County streams are part of the Central California Coast Evolutionarily Significant Unit (ESU). This ESU is listed as threatened under the Federal Endangered Species Act (FESA) and the Guadalupe River up to the confluence of Guadalupe Creek and Alamitos Creek is designated as critical habitat (NOAA, 2005). Alamitos Creek is listed as occupied by steelhead, but excluded from the critical habitat designation (NOAA, 2005). Although Alamitos Creek is not critical habitat, steelhead in the Creek are protected; harming or harassing steelhead at any point in their life cycle is considered "take" under FESA.

Guadalupe Creek and Alamitos Creek join at Lake Almaden and become the Guadalupe River, where steelhead have been found regularly during at least the last 100 years (Leidy, et al., 2005). Citing Abel (1997), Leidy et al. (2005) note that 21 steelhead were found in a 120 m stretch of Alamitos Creek, just downstream of the McKean Road-Alamitos Creek crossing in July and August 1997. This site is approximately 3 miles downstream from the project site. In a field trip exercise in 2000, Dr. Jerry Smith and his students from San Jose State University collected approximately 24 steelhead smolts in Lake Almaden (Leidy, et al., 2005). The RP/EA states that steelhead have been documented to occur in the area.

Steelhead primary use shaded pools in small, cool, low-flow streams. They may also use warm water habitats below some dams or at pipeline outfalls as foraging areas. Fish spawn in gravelly-stream substrate. Water temperatures in excess of 75°F are lethal to the fish. Steelhead migrate beginning in October and spawn between January and May. Juveniles may stay in streams for 2 years before heading to sea. Some steelhead are anadromous (going from fresh to salt water and back), but others will be resident trout, residing in streams their entire lives.

California Red-legged Frog (*Rana aurora draytonii*). The RP/EA states that California red-legged frogs have been irregularly documented in the project area. Jacques Gulch assessments concluded that there was potential breeding habitat and adequate dispersal habitat for this species at that site, which is just upstream from Hacienda/Deep Gulch. Habitat requirements for larvae, tadpoles, and metamorphs include streams, deep pools and stream backwaters more than 2 feet deep. Breeding adults typically use still or slow-moving water with dense, shrubby riparian or emergent vegetation. Adult frogs are also found in shallow, non-shaded sections of streams or in upland locations when water is not available (SCC, 2006c).

Foothill Yellow-legged Frog (*Rana boylei*). Research by H.T. Harvey and Associates (1999) indicates the foothill yellow-legged frog is not found below major reservoirs. The species is rare in much of Santa Clara County, but is still fairly abundant in the foothill and mountain ranges of eastern Santa Clara County. Since the project site is below a dam and there are no records of occurrences in the area, it is very unlikely that this species occurs in the project area.

California Tiger Salamander (*Ambystoma californiense*). California tiger salamanders require aquatic breeding sites and upland refuge sites for aestivation (summer hibernation). They are typically found in valley and foothill grasslands and the grassy understory of open woodlands, usually near ponded water such as stock ponds, reservoirs and lakes. Streams are rarely used for reproduction. Adult salamanders spend most of their time underground, typically in California ground squirrel (*Spermophilus beechyii*) burrows. California tiger salamander numbers are limited in many areas by the number of small-mammal burrows available. Since

there are no ponds on site and few ground squirrels in the project area, it is very unlikely that this species is found on site.

Western Pond Turtle (*Clemmys marmorata*). The western pond turtle, a California Species of Special Concern, is found in rivers, streams, lakes, ponds, wetlands, reservoirs, and many other aquatic habitats. This is the only native turtle in northern California. They prefer habitats with large logs, algae, and vegetation for cover and seek boulders or other suitable surfaces as basking sites. Females lay eggs in open grasslands near streams from April to July and hatchlings disperse from July through September. Young or adults are likely inhabitants of Alamitos Creek in the project area.

Silvery Legless Lizard (*Anniella pulchra pulchra*). The East Contra Costa County HCP/NCCP, citing many researchers, states that silvery legless lizards —occur primarily in areas with sandy or loose loamy soils such as under sparse vegetation of beaches, chaparral, or pine-oak woodland; or near sycamores, cottonwoods, or oaks that grow on stream terraces (Gorman 1957, Cunnigham 1959), Banta and Morafka 1968, Stebbins 1985, Jennings and Hayes 1994). The sandy loam soils of stabilized dunes seem to be especially favorable habitat (Grinnell and Camp 1917, Miller 1944, Smith 1946, Bury 1985). The species is often found under or in the close vicinity of logs, rocks, old boards, and the compacted debris of woodrat nests (Jennings and Hayes 1994). Soil moisture is essential for legless lizards to conserve energy at high temperatures; it also allows shedding to occur (Jennings and Hayes 1994).” Some of these conditions--especially oaks and sycamores near streams and woodrat nests--occur in the project area and this species could potentially be present in riparian areas especially near woodrat houses.

California Horned Lizard (*Phrynosoma coronatum frontale*). The California horned lizard, a California Species of Special Concern, can occur in many habitat types, including grassland, oak woodland, and riparian habitats. The presence of this species may be limited by the extent of exposed gravelly-sandy substrate such as clearings in riparian woodlands, or annual grassland with scattered perennial species (BCAG, 2007). According to CDFG, this species was most abundant in lake sand dunes and old alluvial fans bordering the San Joaquin Valley (CDFG 2006). It is unlikely this species is present in the project area as favorable habitat conditions do not seem to be present.

#### **Special Status Avian Species, Nesting Birds and Birds of Prey**

All nesting birds are protected by CDFG Code and migratory birds are protected by the federal Migratory Bird Treaty Act. Tree cavity nesting species, such as the oak titmouse (*Baeolophus inornatus*), nest in trees in the project area. Other species such as Allen’s hummingbird (*Selasphorus sasin*) and California yellow warbler (*Dendroica petechia brewsteri*) have the potential to build nests in understory plants the project site. Vaux’s swifts (*Chaetura vauxi*) and black swifts (*Cypseloides niger*) may occur in the Park, but not within the project area as these are cliff-nesting species.

The white-tailed kite (*Elanus caeruleus*), a state fully-protected raptor, nests at the top of trees in oak woodlands or along marsh edges. They may use any suitable tree that is of moderate height, such as eucalyptus, cottonwoods, toyons, and even coyote bush with the nests placed near the tops of these shrubs or trees. Other birds of prey such as red-shouldered hawks, may nest in tall trees in the project area and forage in the vicinity. All birds of prey and their nests are protected by CDFG Code. While nearly all nesting birds use trees, tree cavities and shrubs, the belted kingfisher (*Ceryle alcyon*) nests in cavities dug in tall stream banks. This bird was observed in the project area in April 2010 and potential nesting habitat for this species occurs along Alamitos Creek in the project area.

Federally- and state-protected golden eagles (*Aquila chrysaetos*) and bald eagles (*Haliaeetus leucocephalus*) have been recorded within several miles of the project area. Golden eagles prefer cliffs and secluded overhangs as nesting sites, but they will occasionally nest in tall trees in oak woodlands near open grasslands

where they hunt squirrels and rabbits. Suitable habitat exists in the Park, so it is possible that this species could nest in the project area. Bald eagles nest near large open water bodies, such as reservoirs and wide rivers free from overhanging vegetation, where they then hunt or scavenge for fish. These birds have been recorded at the Almaden Reservoir, but there is no suitable habitat for this species on the project site.

**Special Status Mammals**

Houses built by the San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), a CDFG Species of Special Concern, have been detected on the site. This species inhabits hardwood forests of moderate canopy with a moderate to dense understory. Nests (houses) are constructed out of leaves, shredded grass, and other material.

A number of bat species such as the western small-footed myotis (*Myotis leibii*), long-eared myotis (*Myotis evotis*), pallid bat (*Antrozous pallidus*), Townsend's western big-eared bat (*Corynorhinus townsendii townsendii*) and Yuma myotis (*Myotis yumanensis*) all have the potential to occur in or near the project area and are protected species. The CNDDDB lists *Yuma myotis* as present within a mile of the project area.

**Table 4 - Rare and Sensitive Species Occurring or Potentially-Occurring in the Project Area**

<b>Rare and Sensitive Species Occurring or Potentially-Occurring in the Project Area</b>				
<b>Listed or Sensitive Species Present or Potentially Present</b>	<b>Species Legal Status</b>	<b>Natural Communities where Found</b>	<b>Potential to Occur in Project Area</b>	<b>Mitigations</b>
Steelhead—Central Coast ESU	USFWS Threatened	Stream/Aquatic	Occurs in Alamos Creek	BIO-2
California Red-legged Frog	USFWS Threatened (ESA); California Species of Special Concern (CESA)	Stream/Aquatic; Freshwater Wetland	Occurs irregularly	BIO-3
Foothill Yellow-legged Frog	California Species of Special Concern (CESA)	Stream/Aquatic; Freshwater Wetland; not below dams	Highly unlikely; no suitable habitat on site	None needed
California Tiger Salamander	USFWS Threatened (ESA); California Species of Special Concern (CESA)	Ponds and Grasslands (abundant ground squirrels)	Highly unlikely; no suitable habitat on site	None needed
Western Pond Turtle	California Species of Special Concern (CESA)	Stream/Aquatic; Freshwater Wetland	Very likely; good quality habitat exists	BIO-3
Silvery Legless Lizard	California Species of Special Concern (CESA)	Foothill Riparian; Foothill Oak Woodland	Potential unknown; habitat exists	BIO-3
California Horned Lizard	California Species of Special Concern (CESA)	Gravelly-sandy habitat in Foothill Riparian; Foothill Oak Woodland	Highly unlikely; no habitat exists on site	None needed

<b>Rare and Sensitive Species Occurring or Potentially-Occurring in the Project Area (cont.)</b>				
<b>Listed or Sensitive Species Present or Potentially Present</b>	<b>Species Legal Status</b>	<b>Natural Communities where Found</b>	<b>Potential to Occur in Project Area</b>	<b>Mitigations</b>
Bald Eagle	Federally-protected (The Bald and Golden Eagle Protection Act); State Endangered (CESA)	Nest near and forage on large open waters such as reservoirs	Highly unlikely; no habitat exists on site	None needed
Golden Eagle	Federally-protected (The Bald and Golden Eagle Protection Act); State Fully-Protected (CDFG Code 3511)	Nests on ledges, cliffs, overhanging, sometimes in tall trees in oak woodlands	Possible; suitable habitat exists on site	BIO-4
White-tailed Kite	State Fully-Protected (CDFG Code 3511)	Foothill Oak Woodland	Possible; suitable habitat exists on site	BIO-4
Nesting Raptors	State Protected (CDFG Code 3503.5)	Foothill Riparian; Foothill Oak Woodland	Very likely; good quality habitat exists	BIO-4
Vaux's Swift & Black Swift	California Species of Special Concern (CESA)	Cliffs for nesting	Nesting birds are highly unlikely; no suitable habitat on site; birds may forage in the area	None needed
Nesting Birds, including Belted Kingfisher	Federally Protected (Migratory Bird Treaty Act); State Protected (CDFG Code 3503)	Foothill Riparian; Stream Banks; Foothill Oak Woodland	Very likely; good quality habitat exists	BIO-4
Roosting Bats, such as Yuma Myotis ( <i>Myotis yumamensis</i> )	State Protected (CDFG Code 4150)	Foothill Riparian; Foothill Oak Woodland, especially cavities in Sycamores and other large trees	Very likely; good quality habitat exists	BIO-5
San Francisco Dusky-footed Woodrat	CDFG Species of Special Concern (CESA)	Foothill Riparian, especially in Deep Gulch	Occurs in the project area	BIO-6
Loma Prieta Hoita	Seriously endangered (CNPS List 1B.1)	Foothill Oak Woodland	Possible	BIO-7
Oak spp.	Public Resources Code 21083.4	Foothill Riparian; Foothill Oak Woodland	Occurs in the project area	BIO-8
Trees >6"DBH	County of Santa Clara New Almaden Historic Conservation Zoning District	Foothill Riparian; Foothill Oak Woodland	Occurs in the project area	BIO-8

## IMPACTS AND MITIGATIONS

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

**BIO IMPACT 1.** A number of sensitive species and biological resources occur in the area. Nesting birds, steelhead, wetlands and stream quality can be easily damaged by construction activities and personnel who are not aware of the presence of these species, their protected status, and the methods to protect them. Incorporating the following measures will reduce this impact to less than significant.

### **BIO-1 Measures:**

a. *Employees and Contractor Education Program.* An employee education program will be conducted prior to the initiation of project activities. The program will consist of a brief presentation by persons knowledgeable in federally-listed and state special status species biology and legislative protection to explain concerns to contractors and their employees. The program would include: a) a description each rare species, nesting bird species, and plant communities; b) information on their status and protection under state and federal laws; and c) a list of measures required during the project to reduce impacts to natural communities and protect species. Crews will be instructed what to do if an animal is found, including notifying the project foreman and County Parks staff immediately. County Parks staff will notify the appropriate wildlife agency. Likewise, if a nest of any type is found in the project footprint, it is to be left alone and the project foreman and County Parks staff must be notified immediately. Educational materials will also provide information on protecting the creeks and wetlands from construction damage.

Implementation: Qualified County natural resources staff or biological monitor

Timing: During a pre-construction field meeting with contractors and subcontractors

Monitoring: County staff will require contractor and subcontractors to have each employee attend training session and sign training materials indicating attendance at education program.

b. *Daily Monitoring.* During the construction phase of the project, a qualified biologist will check the site every morning prior to the start of construction activities for the presence of rare species such as nesting birds, western pond turtles, red-legged frogs, woodrats or other wildlife. If any species is found, the monitor shall have the authority to halt construction in the area and immediately notify appropriate County staff. The biologist will have the authority to notify the appropriate regulatory agency for guidance when sensitive species issues arise. Subsequent recommendations made by the USFWS or CDFG shall be followed. The biological monitor would not handle or try to relocate any special-status species.

Implementation: Qualified biologist

Timing: During project work

Monitoring: Biological monitor to submit a letter report of survey results to project manager.

c. *Speed Limit.* Vehicles shall not drive more than 5 miles per hour within the construction area. If any animal is seen in the path of a vehicle, the vehicle shall stop until the animal is out of the path. Parked vehicles shall be thoroughly inspected underneath before they are moved to ensure that no animals are on the ground below the vehicle.

Implementation: County Parks staff

Timing: During project work

Monitoring: County Parks staff will keep records of any wildlife findings and any impacts to biological resources as well as how the organisms or resources were protected.

**BIO IMPACT 2.** *Steelhead* could be present in Alamos Creek as adults or juveniles between April 15 and October 15 when this project will occur. Project work will not occur between December and mid-April when steelhead migrate and spawn. To access and remove calcine deposits, this project will require dewatering approximately 300 feet of Alamos Creek at Upper Hacienda and 300 feet of stream at Alamos Creek (AC-2). At the Alamos Creek Bridge sites, the creek will be constricted into a pipe for approximately 75 feet and earth will be placed around the pipe so that trucks can drive over it. At Deep Gulch, approximately 75 feet of stream will be dewatered. These project elements could trap and kill steelhead in the dewatered or filled areas. A dewatering and fish relocation plan would be prepared for the project in consultation with NMFS. Relocation activities have the potential to take steelhead. Therefore, a Section 7 consultation with the National Oceanic Atmospheric Administration Fisheries Service (NOAA) through the Army Corps of Engineers (Corps) would most likely be initiated to address potential impacts to steelhead. The Corps is responsible for determining impacts to existing wetlands and Waters of the U.S. Fish will be prevented from moving through the area and using these parts of Alamos Creek during the course of the project. These habitat impacts will be temporary; when the project is completed, the stream will be restored to its original course. Incorporating the following mitigations will reduce this impact to less than significant.

**BIO-2 Measures:**

a. Develop a dewatering and fish relocation plan in consultation with NMFS. Participate in a Section 7 consultation with the NMFS through the Army Corps of Engineers (Corps), if required. Implement all dewatering and fish protection measures required by agencies.

Implementation: Qualified biologist

Timing: Before and during project work

Monitoring: Qualified biologist to submit a letter report of dewatering and fish relocation results to project manager, Corps, and NMFS.

b. County Parks will follow Best Management Practices (BMPs) from the Santa Clara Valley Water District (District) 2005 BMP Handbook and Stream Maintenance Program (2002) during project implementation to avoid impacts to steelhead due to dewatering and to prevent sediment runoff from entering the creek because of vegetation removal and bank layback (See Appendix E for full text of BMPs). A Stormwater Pollution Prevention Plan (See **HYD-1**) will be implemented to control erosion during construction and erosion after construction is completed will be controlled with measures specified by the Guidelines and Standards for Land Use Near Streams will be implemented (See **HYD-2**). Specific sections of the 2005 BMP Handbook that will be followed are:

- WQ-12 Dewater/ Bypass Water at Non-tidal Sites
- WQ-16 Avoid Erosion When Restoring Flows
- WQ-18 Erosion and Sediment Control Measures
- WQ-3 Pump/Generator Set Operations and Maintenance
- WQ-5 Soil Stockpiles
- WQ-10 Concrete Use Near Waterways
- BI-7 Minimize Stream Access Impacts
- BI-2 Salvage Native Aquatic Vertebrates from Dewatered Channels
- BI-3 Conduct In-Channel Work During the Dry Season
- BI-8 Remove Temporary Fills as Appropriate
- WQ-6 Stabilized Construction Entrance
- HM-10 Vehicle and Equipment Fueling
- HM-11 Vehicle and Equipment Maintenance

These measures may be modified depending on the outcome of the NOAA Biological Opinion.

Implementation: Qualified biologist for fish-related mitigations; County Parks staff for construction BMPs

Timing: During project work

Monitoring: County staff to submit a letter report of BMP results to project manager, Corps, and NMFS.

**BIO IMPACT 3.** *Protected amphibians and reptile species* that have the potential to occur on the project site include California red-legged frogs, western pond turtles, and silvery legless lizards (See Table 4). Individuals of any of these species could be killed by construction equipment and project activities to remove calcines. California red-legged frogs and western pond turtles could be killed or harmed by stream dewatering. Incorporating the following mitigations will reduce this impact to less than significant.

**BIO-3 Measures:**

a. Conduct pre-construction surveys in the project area to detect sensitive herpetofauna. One daytime survey will be performed in the two days prior to the start of project implementation activities. The entire work area, including any burrows, rocks and woodpiles that may be disturbed by construction activities, will be inspected for rare species, especially California red-legged frogs and silvery legless lizards. If these species are detected, work will be delayed and the USFWS will be contacted for guidance on how to proceed with respect to the frog and CDFG will be contacted for procedures relative to the turtle and the lizard. If other listed species are found, the appropriate wildlife agency will be contacted for guidance on how to proceed.

b. Conduct during-project surveys each day before construction begins to detect sensitive herpetofauna in the project area. If a red-legged frog or any federally-listed ESA species is found, work in the immediate area of the animal will not proceed and the USFWS will be contacted for information on how to proceed. For western pond turtles and silvery legless lizards, or any state species of special concern, protocols for handling species will be developed and confirmed with CDFG before construction begins or before handling any animal found during construction. CDFG will be notified of the detection of any species of special concern and the protocols will be followed to protect the animal. In the past, CDFG has approved protocols for the western pond turtle state that if a turtle is detected, the turtle will be observed to determine if it is moving through the area in which it was detected or if the animal is occupying the habitat for nesting, foraging, or basking. During construction activities within the immediate area of the turtle detection, an on-site monitor will work with construction crews. If the animal is relocated during construction activities, the monitor will observe the turtle and alert work crews to delay work if it is within the work area or begins to move toward or into the work area. If the turtle appears to be traveling from upland habitat to a nearby aquatic site, work shall cease until the turtle has traveled a safe distance from the immediate project site. The monitor shall observe the animal from a distance to ensure it does not wander back into the work area. If the turtle is relocated and appears to be occupying the habitat within the project footprint for activities such as nesting, basking, or foraging, the County or its representatives will contact CDFG for guidance.

Implementation: Qualified biologist

Timing: Before project implementation and during all phases of project work

Monitoring: Qualified biologist will submit a letter report of survey results and any measures taken to protect species on site to project manager, Corps, USFWS and/or CDFG. Any additional monitoring requirements called out in the Corps permit would also be followed.

**BIO IMPACT 4.** *Birds and their nests* in trees, tree cavities, and understory vegetation in riparian and oak woodlands could be destroyed. The project will remove up to 75 trees and 51,000 SF of oak woodland and riparian vegetation. The white-tailed kite, a fully-protected bird, as well as other birds of prey, other tree and cavity nesting birds and birds that nest in understory vegetation could be harmed if trees and vegetation were removed or damaged during the breeding season. Belted kingfishers, which nest in steep stream banks, could be killed or harmed by construction activity. The area of the Alamitos Creek (AC-2) deposit has a steep bank

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that could be attractive to kingfishers and a bird was observed in this area in April 2010. Incorporating the following mitigations will reduce this impact to less than significant.

**BIO-4 Measures:**

a. To avoid impacts to tree and vegetation nesting birds, vegetation and tree removal activities within the project area will take place outside of the nesting season (February 1 to August 31), in advance of calcine removal activities. A qualified biologist and certified arborist shall direct the removal of all trees and understory vegetation in the project area. In order to avoid impacts to existing raptor nests during pre-nesting season tree removal, a survey of all trees that could support raptor nests shall be completed.

b. For all trees and vegetation that remain after pre-nesting season clearing, a qualified biologist shall conduct an initial pre-construction survey for nesting raptors and other birds, including kingfishers, approximately 30 days before construction begins. This survey area will include the construction footprint and an area equivalent to nest buffer distances adjacent to the project footprint. A final pre-construction survey shall occur no more than 3 days prior to the start of construction activities. If active nests are not present, construction activities can take place as scheduled. If more than 3 days elapse between the final nest search and the beginning of construction activities, another nest survey shall be conducted. If any active nests are detected, a qualified biologist shall determine the appropriate buffer to be established around the nest and monitor the nest until the fledging or until it has been determined to be inactive. CDFG generally accepts a 50-foot radius buffer around passerine and non-passerine land bird nests, and up to a 250-foot radius for most raptors; however, the qualified biologist shall have flexibility to reduce or expand the buffer depending on the species and specific site circumstances.

c. To mitigate for the loss of riparian and oak woodland habitat, an area equivalent in size to the area degraded will be revegetated with native species, maintained and monitored for success. See **BIO-8** and **BIO-9** for more detail on these measures.

Implementation: Qualified biologist and certified arborist

Timing: Before project work begins and during project work

Monitoring: Project manager to schedule removal and/or trimming outside of nesting season. If not feasible, project manager shall ensure that removal/trimming is completed within 3 days of the completion of nest surveys. If nests are found, the qualified biologist would ensure that an adequate buffer is maintained until chicks have fledged. The biologist would provide a memo report on the results of the nest survey and protection to project manager.

**BIO IMPACT 5.** Bats are non-game mammals protected by CDFG Code §4150, which reads, —All mammals occurring naturally in California which are not game mammals, fully protected mammals, or fur-bearing mammals, are nongame mammals. Nongame mammals or parts thereof may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission.” Maternal or day-time bat roosts could occur in trees in the project area. Incorporating the following mitigations will reduce this impact to less than significant.

**BIO-5 Measures:**

a. Conduct a survey for bats and their roosts prior to any construction or large tree removal. In particular, to avoid construction delays, a pre-construction maternity roost survey the summer before construction should be conducted. The survey shall be conducted by a qualified biologist.

b. If a roost is found, especially a maternal roost, the following avoidance measures shall be implemented as necessary and as determined by a qualified biologist (defined as a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle and collect bats):

i. Temporal avoidance. To avoid disturbance to an active maternity colony, construction activities adjacent to the roost tree shall commence after young are volant (flying) (i.e., after July 31) and end before

maternity colonies form (i.e., prior to March 1). CDFG considers the maternity season to occur from March 1 to August 31. Thus the project construction can be scheduled from September 1 through March 1 to avoid potential construction disturbance to the maternity roost.

ii. Construction buffer zones. Depending upon bat species and the expected disturbance to the roost, a qualified biologist shall determine the extent of construction-free zones around the roost. Although impacts to a roost are greater during the maternity season, a buffer zone for the non-breeding season day roost shall also be established. This buffer would be placed to prevent the loss of roots and branches. CDFG will be notified of any active nurseries within the construction zone.

iii. Exclude bats prior to construction disturbance of, or loss of, roosts. If any roosting area with a nursery as determined by the preconstruction survey is planned (and required) to be removed, a qualified biologist shall exclude bats outside of the maternity season (i.e., prior to March 1 or after July 31 when young are volant) with the use of one-way doors. Tree cutting or construction shall then follow no sooner than 3 days after because all bats may not exit each night. If a non-breeding bat hibernaculum is found in a tree that must be removed, the individual bats shall be safely evicted by a qualified biologist, through the use of one-way doors as described above.

Implementation: Qualified biologist

Timing: Prior to and, potentially, during project work

Monitoring: Project manager to schedule construction activities near roost tree outside of maternity season. If not feasible, project manager shall ensure that measures listed above are followed. The qualified biologist completing work would submit a letter to CDFG and project manager of monitoring, protection, and results.

**BIO IMPACT 6.** Woodrat houses have been found in the project area. The San Francisco dusky-footed woodrat is a protected species. These mammals live year round in their houses, which are essential for their survival. Woodrats dwell in moderately-dense to dense riparian habitats, such as those found along Alamitos Creek and Deep Gulch in the project area. Access to and removal of calcines will impact 32,000 SF of riparian habitats. Any woodrats or their houses located in the impacted riparian zone could be harmed or destroyed. Incorporating the following mitigations will reduce this impact to less than significant.

**BIO-6 Measures:**

Conduct a pre-construction survey for San Francisco dusky-footed woodrat houses. If any are detected, the County will complete one of the following avoidance/minimization measures, listed in order of priority and implementation:

- a. The project work will be rerouted to avoid the woodrat house by at least 50 feet.
- b. If the work cannot be rerouted at least 50 feet from the house, it will be rerouted as far away from the nest as possible but not closer than 5 feet from the house. Safety and/or silt fencing (for houses downslope) will be erected around all houses within 25 feet of the construction activity to avoid impacts during construction.
- c. If the project footprint must go directly through or within 5 feet of a house, CDFG should be consulted with one of the two following options:
  - i. If the house appears inactive (e.g. no scat or fresh leaves and twigs), seek approval from CDFG to dismantle the house and replace the lost resource by building an artificial house. One artificial house should be built for every one existing inactive house.
  - ii. If the house appears active, approval will be sought from CDFG to: 1) trap the occupant(s) of the house, 2) dismantle the house, 3) construct a new artificial house with the materials from the dismantled house, and 4) release the occupant into the new artificial house. The new house should be placed no more than 20 feet from its original location and as far from the project footprint as necessary to be protected from construction activities. If the house is to be moved downslope of the project footprint, extra precautions should be taken, such as a plywood barrier, to stop falling/sliding materials from impacting the new house. Houses should only be moved in

the early morning during the non-breeding season (October through February). If trapping has occurred for 3 consecutive nights and no woodrats have been captured, the house should be dismantled and a new house constructed.

Implementation: Qualified biologist

Timing: Before project work begins and, potentially, during project period

Monitoring: If nests are found, the project manager and County Parks Natural Resource Management Program staff or qualified consulting biologist will ensure that all protection measures are implemented. The County Parks Natural Resource Management Program staff or qualified consulting biologist will provide a memo reporting the results of the nest survey and any nest management required.

**BIO IMPACT 7.** *The Loma Prieta hoita*, a special status plant (CNPS List 1B), could occur in the project area. Three patches occupying approximately 50 square feet were found growing on calcine deposits at the Jacques Gulch Restoration Project. If any of these plants are found in the project area, they would need to be removed to excavate the underlying calcine. Incorporating the following mitigations will reduce this impact to less than significant.

**BIO-7 Measures:**

Conduct a pre-construction survey for the plant during a season when plants are most obvious. If any are found, implement the following measures:

a. Develop a plan that includes transplanting techniques, a monitoring program acceptable to CDFG, performance criteria and contingency propagation measures to ensure that the Loma Prieta hoita is restored within the project area. This plan, with mitigation and monitoring measures, will be included in the Riparian Mitigation and Monitoring Plan prepared as part of the Streambed Alteration Agreement application for CDFG.

b. After plants are removed from the site, they will be held in a nursery until the excavation and grading of the project area is complete. After construction, the plants shall be replanted at a site with appropriate habitat conditions. A contingency plan, involving collection ripe seeds from the plants, shall ensure that any mortality of transplanted individuals can be compensated with planting of the collected seeds. In order to ensure viable seed is available for collection, the District shall install exclusionary fencing around the plants during the flowering period to minimize browsing by deer.

Implementation: Qualified biologist

Timing: Before project work begins and after the construction work is completed

Monitoring: Qualified biologist will monitor and maintain the plants for 3 years. The biologist would provide a memo report on the results to project manager.

**BIO IMPACT 8.** *Oaks and large trees* are valuable aesthetic and biological resources found in the project area. Calcine access and removal will result in the loss of, at most, 75 trees with diameters greater than 6 inches in foothill oak and foothill riparian woodlands; 23 are oaks (See Table 5 – Tree Loss by Species) and some are old, very mature trees. Figures 8-11 – Tree Demolition Plans indicate the locations and sizes of trees that will be impacted by the project. It is possible that some trees may not need to be removed based on the extent of the calcine deposits, but this will not be known until conditions are revealed in the field before and during construction. Several trees in the Upper Hacienda and Alamos Creek (AC-2) area will need to be pruned to clear a path for construction equipment, but do not need to be impacted beyond that. A certified arborist must be on-site to determine how to prune trees, determine if trees can be saved, and guide tree removal and protection in the field. The zoning ordinance for the New Almaden Historic Conservation Zoning District, in which the project is located, states that, –Special emphasis shall be given to preservation of mature native trees and shrubs...”

The RP/EA estimated a loss of 20-40 mature trees at Deep Gulch and fewer at Upper and Lower Hacienda. To address habitat impacts, the RP/EA requires “~~a~~ establishment and survival of native species” in impacted areas and requires that the revegetation areas are “~~r~~easonably comparable with surrounding areas”. Public Resources Code 21083.4 requires mitigations if a “~~p~~roject within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment.” Mitigation measures can include planting an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees, as well as other mitigations required by the County. Planting trees “~~s~~hall not fulfill more than one-half of the mitigation requirement for the project”. To complete the oak mitigation requirement, the County can require other mitigations. A reasonable and feasible additional mitigation would be to replant understory and ground cover species native to oak woodlands. This measure will: 1) provide other plant species to ensure a more ecologically functional oak woodland, 2) will reestablish a community “~~r~~easonably comparable with surrounding areas” as required by the RP/EA, and 3) will fulfill mitigation requirements for mitigating losses to oak communities, which is an impact of the project (19,000 SF of oak woodland will be removed by the project) (See Question 2, below). The RP/EA requires maintaining and monitoring trees for 3 years; Public Resources Code 21083.4 states that the requirement to maintain trees ends 7 years after the trees are planted. Incorporating the following mitigations will reduce this impact to less than significant.

**Table 5 - Tree Loss by Species**

<b>Tree Loss by Species</b>					
<b>Species</b>	<b>Deep Gulch 1, 2 and Retort</b>	<b>Upper Hacienda</b>	<b>Lower Hacienda 1</b>	<b>Lower Hacienda 2, Alamitos Creek 2, Alamitos Bridge</b>	<b>TOTAL</b>
<i>Quercus lobata</i> Valley Oak	2	6	0	1	9
<i>Quercus agrifolia</i> Coast Live Oak	0	7	2	5	14
<i>Umbellularia californica</i> California Bay	1	15	4	2	22
<i>Aesculus californica</i> California Buckeye	0	0	1	3	4
<i>Platanus racemosa</i> California Sycamore	0	3	0	0	3
<i>Salix spp.</i> Willow species	0	0	0	9	9
<i>Alnus rhombifolia</i> White Alder	0	4	0	3	7
<i>Acer macrophyllum</i> Big Leaf Maple	0	2	0	0	2
<i>Acer negundo</i> Box Elder	0	0	0	5	5
<b>TOTALS</b>	<b>3</b>	<b>37</b>	<b>7</b>	<b>28</b>	<b>75</b>

**BIO-8 Measures:**

a. A certified arborist will be on-site during all construction phases during which trees are affected. The arborist will make decisions, in consultation with the Project Manager, on tree pruning, removal, and preservation. Whenever possible, mature trees will be preserved while still achieving the calcine removal

goals of the project. Up to 75 trees could be removed, but some may be able to be retained based on construction needs and arborist advice.

b. Develop an oak community revegetation plan with success criteria, monitoring and contingency measures. The plan will require replacing removed trees on a 3:1 basis with trees of the same species grown from seeds or acorns collected in AQS Park or from the watershed. Tree species to be replaced are listed in Table D3. The plan will include requirements to grow, plant and maintain a palette of understory and ground cover species native to oak woodlands, covering an area not less than equal to the size of the area impacted (a total of approximately 19,000 SF of foothill oak woodlands). Some typical understory species are listed in this section, but a more complete list of oak community species as well as information on oak care can be found in Hagen, Coate, and Oldman (2007). The revegetation plan will be developed by a qualified biologist.

c. Monitor and report on vegetation health for 3 years, as per RP/EA reporting requirements.

Implementation: Certified arborist and qualified biologist

Timing: Before project work begins (develop oak community revegetation plan; collect seeds and acorns; revegetation implementation), during project work (monitor tree pruning, removal, preservation), and after the project (maintenance, monitoring, reporting)

Monitoring: Native plant expert or other qualified biologist will monitor tree and vegetation success for 3 years; biologist will recommend changes to improve performance, if needed, and will report the results each year to the Project Manager.

***2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?***

***4. Have a substantial adverse effect on oak woodland habitat as defined by Oak Woodlands Conservation Law (conversion/loss of oak woodlands) – Public Resource Code 21083.4?***

**BIO IMPACT 9. Foothill riparian.** Calcine removal and access to the calcine deposits will result in the loss or degradation of approximately 76,000 SF of habitat; approximately 32,000 SF (~0.74 acres) of this is foothill riparian community. Some trees, including oaks, willows, and sycamores, that dominate the overstory will be removed and 0.74 acres of understory and ground level species, including poison oak, coffeeberry, toyon, non-native blackberry and native and non-native herbaceous species will be damaged or destroyed. This important habitat supports a great diversity of species including bats, migratory and nesting birds, birds of prey, and woodrats. The ecological value of riparian corridors is widely recognized, resulting in many protective codes and ordinances.

Under Fish and Game Code 1602, CDFG requires a Riparian Mitigation and Monitoring Plan to be prepared as part of the Streambed Alteration Agreement application. The Resource Conservation Element of the County of Santa Clara General Plan states —riparian habitats in rural lands must be preserved through protection of native vegetation, development setback, regulation of tree and vegetation removal, and control and design of grading, road construction, and bridges (32). Buffer should be 150' from natural and 100' from modified streams.” This element also states that —Habitat types and biodiversity within County should be maintained and enhanced (19). Development projects in rural areas must be evaluated and conditioned to assure they do not degrade natural resources and that reasonable steps are taken to mitigate potentially adverse impacts (5).” Incorporating the BIO-9 measures will reduce this impact to less than significant.

Foothill oak woodland. The Project will impact approximately 76,000 SF of habitat and 19,000 SF is oak woodland. Twenty-three valley or coast live oaks, all 6 inches in diameter or greater, will be removed (Table D3). Oak woodlands are protected by CDFG Code as special communities that are —either known or believed to be of high priority for inventory in California Natural Diversity Database (CNDDDB)” as administered by the California DFG (CDFG, 2003). Oak trees and woodlands are also protected by Public Resources Code

21083.4. In addition, the RP/EA requires restoration of natural communities in impacted areas to a state that is “reasonably comparable with surrounding areas”. These natural communities have some of the highest species diversity in California. Typical animal species include western rattlesnakes (*Crotalus viridis*), gopher snakes (*Pituophis catenifer*), scrub jays (*Aphelocoma coerulescens*), California quail (*Callipepla californica*), western bluebirds (*Sialia mexicana*), and acorn woodpeckers (*Melanerpes formicivorus*). Mammals, such as black-tailed deer (*Odocoileus hemionus*), coyotes (*Canis latrans*), and raccoons (*Procyon lotor*), are common as are a wide diversity of rodents. The plant species that characterize oak woodlands are well covered in Hagen, Coate, and Oldman (2007). See Question 1H for more discussion of oaks and oak woodlands and **BIO-8** for mitigation measures reducing impacts to this community to less than significant.

Wetlands. Wetlands and streams are sensitive habitats protected by a number of codes and laws. Impacts to these habitats are addressed under Question 3, below, and impacts are mitigated to less than significant with measures given in **BIO-10**.

**BIO-9 Measures:**

a. Protect all riparian vegetation outside the construction area from any direct or indirect impacts of construction. In particular, no vehicles or foot traffic will be allowed outside the construction zone, soil excavated for the project will not be allowed flow or erode into the riparian zones, and no animals will be harassed.

b. Develop a Riparian Mitigation and Monitoring Plan as part of the Streambed Alteration Agreement required by the CDFG and as a component of the CWA Section 401 certification/Waste Discharge Requirements that will be issued for the Project by the RWCQB. The plan will mitigate tree loss on a 3:1 basis and will restore the riparian understory and ground cover on at least a 1:1 area (SF) basis. The plan will be developed by qualified biologist and must be approved by the CDFG appropriate agencies.

c. Maintain and monitor mitigation areas, and report on the success of the Riparian Mitigation and Monitoring Plan as required by CDFG.

Implementation: County staff for BIO-9a and c; Qualified biologist for BIO-9b and c.

Timing: Before project work begins (develop riparian community revegetation plan; collect seeds and acorns), during project work (monitor tree pruning, removal, preservation and revegetation implementation), and after the project (maintenance, monitoring, reporting)

Monitoring: Qualified biologist will monitor vegetation success for 3 years; biologist will recommend changes to improve performance, if needed, and will report the results each year. County staff will conduct any required maintenance or replanting.

**3. 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.) or tributary to an already impaired water body, as defined by section 303(d) of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?**

**BIO IMPACT 10**. Pre-project wetland and stream/aquatic mapping in the project area showed 0.14 acres or approximately 6,100 SF of freshwater wetlands (See Appendix B - Identification of Waters and Wetlands of the United States). Of this area, approximately 900 SF (0.020 acres) of wetlands will be temporarily impacted by the project. Impacted wetlands occur in Deep Gulch (approximately 200 SF), in Alamitos Creek adjacent to Upper Furnace Yard (approximately 600 SF) and adjacent to AC-2 (100 SF). Wetlands will be impacted as a result of providing access to calcine tailings and grading to remove calcines.

Activities to access calcines will cause temporary impacts to approximately 400 SF (0.009 acres) of wetlands (See Table 3 – Summary of Construction Effects). These access impacts to wetlands will be caused by the temporary placement of a lining, clean soil and culverts to form bridges for construction equipment to use to

cross the creek. The lining will capture the material placed on it such that all material can be removed after construction. The stream flow will either be completely diverted from the stream or will be channeled into a pipe. All materials--the impermeable mat, pipes and soil--will be completely removed when the project is completed. Wetlands under these materials will be temporarily over covered. Since all material will be removed, these impacts to wetlands are temporary. Once uncovered, these wetlands will be able to resprout and revegetate. Thus, this impact is less than significant.

Temporary grading impacts to approximately 500 SF (0.012 acres) of wetlands will be caused by the removal of wetlands adjacent to calcine deposits in the Deep Gulch area (200 SF), and the removal of calcine deposits plus the installation of an erosion protection/riprap wall at Upper Hacienda (300 SF). The project will compensate for the temporary impact to 500 SF of wetlands by:

1. Removing the *Arundo donax* from the wetlands immediately upstream of Upper Hacienda to restore native freshwater wetland vegetation and prevent the spread of this invasive species to the newly disturbed wetland areas within the project site.
2. If possible, compensating for the estimated 500 SF of temporary wetland impacts resulting from the calcine removal at Upper Hacienda and Deep Gulch by creating wetlands conditions at AC-2, if full calcine removal is achieved. When the vertical bank at AC-2 is laid back for calcine removal, the entire area will be regraded to a minimum of a 2:1 slope. In the process of this resculpting, it may be possible to create a 500 SF area bench to allow wetlands to form next to the stream in an area that had previously been above Ordinary High Water (OHW). However, wetland creation in this area may not be possible if the calcines found in the area are unable to be fully removed and must be capped and secured with an erosion protection/riprap wall. This site is adjacent to a previously remediated upland area and the full extent of the existing capped in place soils is not known. These two treatments are included in the construction documents as "Add Alternatives" for bidding purposes. If wetland conditions can be created, then the recolonization of the site will be monitored for 3 years as part of the other vegetation monitoring required for this project.
3. Ensuring that the cross-sectional area of Alamitos Creek and Deep Gulch are not reduced from pre-project conditions to allow for bar reformation and vegetation recolonization to form wetlands within the channel.

This is a less than significant impact with mitigation incorporated.

The area of stream zone mapped in the project area was an approximately 0.9 acres or 39,200 SF of stream/aquatic habitat (0.07 acres in Deep Gulch and 0.83 acres in Alamitos Creek). Dewatering the stream at Upper Hacienda/Furnace Yard (300 LF) and at AC-2 (300 LF), and routing the stream into a pipe at Deep Gulch (75 LF) and Alamitos Bridge (75 LF) will result in temporary impacts to approximately 750 LF of stream. This is a temporary impact that will not change the aquatic environment because when the project is completed, the stream will be restored to its original course. No impact.

Soil will be placed in the streambed on a lining that will capture all material placed on top of it. Since the stream will be rerouted around these temporary fill areas, this material will not have the potential to enter stream waters. However, calcine and soil stockpiled near Alamitos Creek and grading to remove calcines adjacent to the creek could result in soil and contaminated material entering stream waters, which flow into the Guadalupe River, a 303(d) impaired water body. Sediment eroding from regraded and denuded areas could also result in sediment entering Alamitos Creek. The County will ensure that complete measures to prevent sediment and other materials from entering Alamitos Creek during and after construction are in place as given in **HYD-1** and **HYD-2**. This impact is less than significant with mitigations incorporated.

***5. 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 wildlife nursery sites?***

**BIO IMPACT 11.** By removing trees and riparian habitat, the project will create breaks in the riparian corridor. However, these breaks will not be great enough to impede the movement of species such as birds, turtles, and woodrats that travel the riparian zone, and the breaks will be revegetated after project completion to provide a continuous corridor. Also, steelhead will temporarily be prevented from moving thorough the stream during the dewatering period which will last up to 12 weeks. Impacts to steelhead are reduced to less than significant with **BIO-2** measures.

**6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?**

The project area is within the boundaries of the proposed County of Santa Clara HCP/NCCP planning area. This plan has not yet been completed or adopted, so the project cannot conflict with it. Given that the purpose of this project is to improve habitat quality and to restore natural communities in the project area, the project will protect local species and improve the survival and reproduction of species dependent on Alamitos Creek, Guadalupe River and the South San Francisco Bay. These outcomes are all in keeping with habitat conservation. No impact.

**7. Impact a local natural community, such as a fresh water marsh, oak forest or salt water tide land?**

**8. Impact a watercourse, aquatic, wetland, or riparian area or habitat?**

**BIO IMPACT 12.** Impacts to natural communities on site, including oak woodlands, riparian woodlands, freshwater wetlands, and aquatic habitats are given above in Questions 2, 3 and 4. Incorporating **BIO-8**, **BIO-9**, and **BIO-10** mitigation measures will reduce these impacts to less than significant.

**BIO IMPACT 13.** Santa Clara County has confirmed sites in which oak trees are infested with Sudden Oak Death (SOD), a virulent disease of oaks caused by *Phytophthora ramorum*. This disease has resulted in widespread dieback of several tree species including tan oak, coast live oak and black oak. This pathogen thrives in moist coastal forests. Oaks are prevalent in the project area and, one of the best indicators that SOD may occur is the presence of California bay laurel, which is also found in the project area. While present in Santa Clara County, the disease is not shown as occurring in Almaden Quicksilver Park by Oak Mapper (<http://www.oakmapper.org/>), a SOD mapping tool developed by UC Berkeley, supported by the California Department of Forestry and the Forest Service. As of November 2004, Sanborn and Stevens Creek are the only confirmed SOD infested County Parks. However, the project area is within the area regulated for SOD by the California State Board of Forestry and Fire Protection. For the project, oaks and bay laurels will be removed to access calcines, but all cut trees and tree material will either remain in the park or will be transported directly to the San Francisco Open Cut. Thus, if trees are infected with SOD, they will not be transported off site and will not have the potential to affect other trees.

However, soil from the site may harbor the disease and must not be transported off-site. In addition, and perhaps more likely, trucks and equipment coming to the project site from other sites may potentially carry infected soil. The County of Santa Clara policy on SOD states that staff should make every attempt to limit the spread of SOD within and between Park properties by controlling the movement of soil, SOD host plants and SOD infected plants from infested areas. Mitigation measures to minimize the unintended movement of host material are required. To ensure that the disease is neither imported to nor exported from the site, follow BIO-13 measures. This impact is less than significant with mitigations incorporated.

**BIO-13 Measures:**

To prevent the spread of SOD from soil and attached plant material (adapted from California Oak Mortality Task Force, 2008):

- a. Conduct operations during the dry season to minimize wet soil, mud and plant material adhering to vehicles, equipment, and boots; utilize paved and rock roads and landings to the extent possible.
- b. Inspect material and equipment leaving the site to ensure that no host material is being transported.
- c. Clean mud from shoes, boots, vehicles and heavy equipment, etc. to remove soil and host plant material imbedded in mud, as needed depending on conditions during project work.
- d. Equipment coming from potentially SOD-infested sites must be cleaned of soil and plant material at that site to ensure SOD is not transported to the project site.

Implementation: Contractor and County staff

Timing: During all project work

Monitoring: County staff

**9. Adversely impact unique or heritage trees or a large number of trees over 12" in diameter?**

**BIO IMPACT 14.** Removal of calcine deposits and access routes to the deposits will result in the removal of 75 trees, 47 of which have diameters >12 inches. As described in **BIO-8**, all trees will be replanted on a 3:1 ratio; this impact is less than significant with BIO-8 mitigations incorporated.

**10. Conflict with any local policies or ordinances protecting biological resources:**

- i) Tree Preservation Ordinance?**
- ii) Wetland Habitat?**
- iii) Riparian Habitat?**

**BIO IMPACT 15.** County of Santa Clara has a Tree Preservation Ordinance (C16) which requires mitigation for removing trees  $\geq 12$  inches. In addition, AQS Park is located in the New Almaden Historical Zoning District (See Figure 12 - New Almaden Historical Conservation Zoning District Map). The zoning ordinance for this District states, "Trees and shrubs having a main trunk or stem measuring six (6) inches in diameter or greater (eighteen and eight tenths (18.8) inches in circumference), at a height of four and one-half (4.5) feet above ground, are protected trees, subject to the relevant provisions of the County's "Tree Preservation and Removal Ordinance," Division C16 of the County Ordinance Code." The zoning code also states, "Trees and shrubs selected for new plantings and landscaping treatments should be native species typical of the hills and riparian areas specific to this district." As described in **BIO-8**, all trees with diameters 6 inches or greater will be replanted on a 3:1 ratio with trees of the same species, reducing this impact to less than significant.

**BIO IMPACT 16.** The Resource Conservation Element of the County of Santa Clara General Plan states "riparian habitats in rural lands must be preserved through protection of native vegetation, development setback, regulation of tree and vegetation removal, and control and design of grading, road construction, and bridges (32). Buffer should be 150' from natural and 100' from modified streams." Impacts to riparian habitat from the project will be mitigated as per the measures in **BIO-9**, reducing this impact to less than significant.

The County has no specific policies or ordinances relating to wetland habitat. No impact.

<b>E. CULTURAL/ HISTORICAL/ ARCHAEOLOGICAL RESOURCES</b>						
<b>WOULD THE PROJECT</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines, or the County's Historic Preservation Ordinance (i.e. relocation, alterations or demolition of historic resources)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 16, 19, 40, 41, 49
2. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5 of the CEQA Guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 19, 40, 41,
3. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 40,41
4. Be located in a Historic District (e.g., New Almaden Historic District)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7,10a
5. Disturb a historic resource or cause a physical change which would affect unique ethnic cultural values or restrict existing religious or sacred uses within the potential impact area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,25,42
6. Disturb potential archaeological resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,10d,41, 42
7. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,3,4,40, 41

**DISCUSSION**

A Technical Report for Cultural Resources was prepared by Basin Research Associates for the Hacienda and Deep Gulch Remediation Project sites located within the AQS County Park. This report identifies prehistoric and historic resources in order to meet the legal requirements of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.) 1970, as amended and planning directives of the County of Santa Clara. The intent of this report is to identify cultural resources that are present and are listed, determined or potentially eligible for inclusion on the California Register of Historical Resources (CRHR) that may be impacted by the proposed project (See Appendix C – Cultural Resources Report).

The report included a literature search by the California Historical Resources Information System, Northwest Information Center, Sonoma State University, Rohnert Park and a review of other pertinent materials and archival records on file at other repositories. The investigation included an archaeological field inventory of the calcine deposits sites and nearby areas. The State of California Native American Heritage Commission (NAHC) was contacted for a review of the Sacred Lands Inventory. Letters soliciting additional information were sent to the nine Native Americans individuals/groups listed by the NAHC.

The text contained in the setting and mitigation measures of this section is excerpted from the Cultural Resources Report prepared for this project by Basin Research Associates (2010) (Appendix C).

### **Regulatory Context**

The California Environmental Quality Act (CEQA) requires regulatory compliance in regard to historical resources. Under CEQA, public agencies must consider the effects of their actions on both “historical resources” and “unique archaeological resources” - a . . . project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment” (Public Resources Code, Section 21084.1). The CEQA Guidelines define a significant resource as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (see Public Resources Code, Section 21084.1 and CEQA Guidelines Section 15064.5 (a) and (b)). The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest.

The CRHR was created to identify resources deemed worthy of preservation on a state level and was modeled closely after the NRHP. The criteria are nearly identical to those of the NRHP, which includes resources of local, state, and region or national levels of significance. The CRHR automatically includes properties listed in the National Register, determined eligible for the National Register either by the Keeper of the National Register or through a consensus determination on a project review, or State Historical Landmarks from number 770 onward. In addition, California Points of Interest nominated from January 1998 onward will be jointly listed as Points and in the CRHR. Landmarks prior to 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission. These listings are updated as resources are determined eligible and/or are officially listed. Current listings are maintained by the California Historical Resources Information System, Northwest Information Center, Sonoma State University (CHRIS/NWIC) for Santa Clara County.

### **Historical Resources**

Public Resources Code Section (PRC) 21084.1 stipulates that any resource listed in, or eligible for listing in, the CRHR is presumed to be historically or culturally significant.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks register or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be “historical resources” for the purposes of CEQA unless a preponderance of evidence indicates otherwise (Public Resources Code, Section 5024.1g; California Code of Regulations, Title 14, Section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

In addition to assessing whether historical resources potentially affected by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria prior to making a finding as to a proposed project’s impacts on historical resources (Public Resources Code, Section 21084.1; CEQA Guidelines, Section 15064.5(a)(3)). In general, a historical resource is defined as any object, building, structure, site, area, place, record, or manuscript that:

- a) Is historically or archaeologically significant; or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and
- b) Meets any of the following criteria:
  - (1) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
  - (2) is associated with the lives of persons important in our past;

- (3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (4) has yielded, or may be likely to yield, information important in prehistory or history.

For historic buildings and structures, CEQA Guidelines Section 15064.5(b)(3) indicates that following the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), mitigates impacts to a less than significant level. Potential eligibility also rests upon the integrity of the resource. Integrity is defined as the retention of the resource's physical identity that existed during its period of significance. Integrity is determined through considering the setting, design, workmanship, materials, location, feeling, and association of the resource.

### **Archaeological Resources**

When an archaeological resource is listed in or eligible to be listed in the CRHR, Section 21084.1 requires that any substantial adverse effect to that resource be considered a significant environmental effect. Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of a project's environmental analysis. Either of these benchmarks may indicate that a proposal may have a potential adverse effect on archaeological resources.

CEQA also requires lead agencies to consider whether projects will affect "unique archaeological resources" (Public Resources Code, Section 21083.2(g)) which are defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Treatment options for unique archaeological resources include preservation in place in an undisturbed state; excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a "unique archaeological resource").

### **Native American Burials**

California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (see Section 7050.5(b) of the California Health and Safety Code; Public Resources Code 5097.8; and, CEQA Guidelines section 15064.5(e)).

### **Cultural Resource Findings**

Basin Research Associates cultural resources findings from the literature, archaeological field inventory and outreach to the State of California Native American Heritage Commission (NAHC) and the nine Native Americans individuals/groups listed by the NAHC are summarized below and detailed in Appendix C.

- The project areas are within the Hacienda Area of the AQS County Park in the County of Santa Clara. The Deep Gulch area (2 locations) of the project is located along the Mine Hill Trail. Access to the

Upper Hacienda and Lower Hacienda areas is provided by Alamitos Road, an important transportation vector during the mining era onward. The Alamitos Creek Deposits (3 locations) are present along Alamitos Creek. The Alamitos Creek Bridge Deposits (2 locations) are present under the Alamitos Creek Bridge on Alamitos Road and to the immediate north.

- Six (6) compliance reports on file with the CHRIS/NWIC include the three project areas.
- The general project area is considered an area of archaeological sensitivity in the County of Santa Clara (Garaventa and Guedon 1993; Basin Research Associates 2009).
- No prehistoric and or combined prehistoric/historic era sites have been recorded or reported in or immediately adjacent to the proposed project areas.
- No known ethnographic, traditional or contemporary Native American use areas and/or other features of cultural significance have been identified in or adjacent to the project alignments although the cinnabar ore was considered a valued material by a number of Native American groups.
- No known Hispanic Period expeditions, adobe dwellings, or other structures, features, etc. have been reported in or immediately adjacent to the proposed project areas.
- The project areas are within the boundary defined for CA-SCI-405H (P-43-000411), "New Almaden," which is a National Historic Landmark District (NHL 66000236). The New Almaden Historic District is listed under National Register criterion, "a" and is automatically included on the California Register of Historical Resources (CRHR).
- One recorded American Period resource, Historic Resource #y44, a structure identified as a retort near the Hacienda entrance to the Deep Gulch area, is present within the project area. It has been identified and evaluated as in fair condition, with medium/high integrity, low accessibility, low/medium interpretive value, and as low priority for treatment.

The retort may have been built in the 1940s or 1950s and was subsequently used by various persons to treat ore. It continued in use up to the point that New Idria Mining and Chemical Company purchased the property. The last operator was John Tobar. The resource does not appear to have been formally recorded and evaluated for the CRHR.

- No evidence of significant prehistoric archaeological resources was observed during the field surveys conducted within the project areas. The surface has been extensively disturbed by historic mining activities primarily the deposition of calcine deposits associated with cinnabar reduction to extract mercury.
- The remains of several features associated with the former Vichy Spring water bottling complex operating from 1867 to 1880/1882 were noted during the field inventory of the Alamitos Creek Bridge Deposit (ACB-1) under Bridge No. 37C0160 on Almaden Road [Fig. 3]. The features include a stone wall, the remains of a wood wall in the creek bank, and the exposed top of what local tradition believes to be the remains of the former Vichy Spring water well - a carbonated water source.
- No other evidence of historically significant archaeological resources was observed during the field surveys conducted within the project areas. The surface has been extensively disturbed by historic mining activities.
- No standing buildings or architectural features other than the retort identified as Historic Resource #y44 and the former location of the Vichy Spring water bottling complex are located in or immediately adjacent to the project areas.
- No local, state or federal historically or architecturally significant structures, landmarks, or points of interest have been identified within or adjacent to the project areas except for their location within a

listed National Historic Landmark District.

## IMPACTS AND MITIGATION

The thresholds of significance for cultural resource impacts for the project are defined as situations where construction could:

Result in damage to, the disruption of, or adversely affect a property that is listed in the California Register of Historical Resources (CRHR) or a local register of historic resources per Section 5020.1 of the Public Resources Code;

Cause damage to, disrupt, or adversely affect an important prehistoric or historic archaeological resource such that its integrity could be compromised or eligibility for future listing on the CRHR diminished; or,

Cause damage to or diminish the significance of an important historic resource such that its integrity could be compromised or eligibility for future listing on the CRHR diminished.

A significant impact would occur if the project would directly or indirectly disturb any human remains, including those interred outside of formal cemeteries.

Any damage to a cultural resource determined to be ~~important~~ based on the criteria outlined above would be considered a significant impact.

- 1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5 of the CEQA Guidelines, or the County's Historic Preservation Ordinance (i.e. relocation, alterations or demolition of historic resources)?*
- 2. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5 of the CEQA Guidelines?*
- 6. Disturb potential archaeological resources?*

Removal of the calcine deposits in the project will include both deposit and sediment removal around two historic architectural and archaeological features that could affect the cultural materials:

***Deep Gulch Deposit #2*** - Historic Resource #y44 Retort. The estimated three foot thick soil deposit around the retort has been identified as a potential source of mercury. Ground-disturbing removal activities have the highest potential to directly impact this cultural resource by disturbing both surface and subsurface soils.

***Alamitos Creek Bridge Deposit*** - remains of several features associated with the former Vichy Spring water bottling complex operating from 1867 to 1880/1882 were noted during the field inventory of the Alamitos Creek Bridge Deposit (ACB-1) under Bridge No. 37C0160 on Almaden Road. The estimated three foot thick soil deposit has been identified as a potential source of mercury. Ground-disturbing removal activities have the highest potential to directly impact this cultural resource by disturbing both surface and subsurface soils.

Surface and subsurface disturbances or calcines removal activities may result in the loss of integrity of cultural deposits, loss of information, and the alteration of a site setting. Potential indirect impacts, primarily vandalism, could result from increased access to and use of the general area during both construction and operation. There is also the potential for inadvertent discoveries of buried archaeological materials during construction. This impact is less than significant with the incorporation of the following mitigations.

**CUL-1 Measures:**

Prior to the initiation of construction or ground disturbing activities, the County Parks staff or designee shall conduct a tailgate meeting to inform all construction personnel of the potential for exposing subsurface cultural resources and to recognize possible buried cultural resources. Personnel shall be informed of the procedures that will be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains and their treatment.

Implementation: County of Santa Clara

Timing: During a pre-construction field meeting with contractors and subcontractors

Monitoring: County staff will require contractor and subcontractors to have each employee attend training session and sign training materials indicating attendance at education program.

**CUL-2 Measures:**

Two potentially significant archaeological and/or architectural resources have been identified in the project as a result of research and/or survey conducted for the proposed project. Further investigation and evaluation of the identified resources prior to project construction and during project construction is recommended to determine their potential for inclusion on the California Register of Historical Resources. No other potentially significant archaeological or architectural sites or features have been identified in the project as a result of research and/or survey conducted for the proposed project.

A. Historic Resource #y44 - Retort

One American Period structure, Historic Resource #y44, identified as a historic retort is present in the Deep Gulch Deposit #2. It has been previously identified and evaluated as in fair condition, with medium/high integrity, low accessibility, low/medium interpretive value, and as low priority for treatment (see Allen and Crosby 2002). However, the resource appears not to have been formally recorded and evaluated for the CRHR. Possible mercury contamination of adjacent soil and the retort structure strongly indicate that removal may be the only viable option to the County. Mitigation actions shall include:

- Development of an appropriate historic context of the resource; record the resource on appropriate DPR 523 forms; and, formally evaluate the resource for the CRHR.
- Pre-construction treatment measures prior to resource removal shall include HABS/HAER large format (4x5) black & white photography; mapping; and compilation of appropriate measured drawings/plans. In addition, archaeological and architectural monitoring including additional HABS/HAER large format photography of its demolition shall be undertaken due to the potential to expose associated subsurface archaeological deposits and/or buried architectural construction features not visible during pre-construction studies.

B. Vichy Spring Water – Former Bottling Complex

One American Period archaeological resource, cultural materials associated with the former bottling house complex at Vichy Spring now present under the Alamos Creek Bridge on Almaden Road, was noted during the field inventory. The materials include a stone wall, the remains of a wood wall in the creek bank, and the exposed top of what local tradition believes to be the remains of the former Vichy Spring water well - a carbonated water source bottled from 1867 to 1880/1882. The former Vichy Water bottling complex was demolished in 1939 and the remainder of the resource was supposedly destroyed during the construction of the Alamos Creek Bridge in 1966. The stone wall is outside the work area and will not be disturbed, while the remains of a wooden wall and possibly the water well are in an area where calcines must be removed and a riprap slope protection constructed to protect the bridge footings. Possible actions include:

- Development of an appropriate historic context of the resource; record the resource on appropriate DPR 523 forms; and, a professional archaeologist and architectural historian shall formally evaluate the resource for the CRHR.
- Archaeological recordation shall be undertaken of any significant subsurface features exposed during calcine removal. The water well will be preserved in place and will not be affected by the proposed project except for the removal of calcines around the well. There are no plans to remove the existing plug/cap. The presence of the calcines shall be reviewed to determine the safe extent of any archaeological recordation program.
- Pre-construction treatment measures prior to resource removal of resources associated with the former Vichy Spring within the project area shall include HABS/HAER large format (4x5) black & white photography; mapping; and compilation of appropriate measured drawings/plans. In addition, archaeological
- and architectural monitoring including additional HABS/HAER large format photography shall be undertaken of any significant associated subsurface archaeological deposits and/or buried architectural construction features not visible during pre-construction..
- Resource protection measures shall include installation of barrier fencing or other appropriate measures to protect the stone wall shall be included in the project construction contract documents.

Implementation: Qualified archaeologist and architectural historian

Timing: Pre-construction and construction evaluation and documentation

Monitoring: County of Santa Clara

### ***3. Disturb any human remains, including those interred outside of formal cemeteries?***

The project areas located within AQS County Park have been subject to extensive mining operations. The potential to encounter human remains in these calcine piles is considered low. However, the following mitigation measure is included to address any unanticipated discoveries of human remains.

#### **CUL-3 Measures:**

Upon discovery of possible buried human remains including potential Native American skeletal remains, work within 100-feet of the find shall be halted and the Santa Clara County's Project Manager shall be notified. The Project Manager shall retain a qualified archaeologist to review and evaluate the find. Construction work shall not begin again until the archaeological or cultural resources consultant has been allowed to examine the remains, assess their significance, and offer proposals for any additional exploratory measures deemed necessary for the further evaluation of, and/or mitigation of adverse impacts. Human remains shall be handled in accordance with State law including immediate notification of the County Medical Examiner/Coroner. This potential impact is less than significant with mitigation incorporated.

Implementation: County of Santa Clara

Timing: During construction

Monitoring: County of Santa Clara

### ***4. Be located in a Historic District (e.g., New Almaden Historic District)?***

The project site is located within the New Almaden Historic District. The project requires removal and/or stabilization of visible mercury containing calcine deposits within specified areas ~~is required under the Superfund Law to remove and/or stabilize the mercury containing calcine deposits that remain from mining activities and~~ the project will restore the natural contours of the landscape and native foothill riparian and oak woodland vegetation. Mitigation measures CUL-1 through CUL-3 would guide construction activities and specifies actions to protect in place and/or and to fully evaluate and document the remains of the Vichy Spring Water

Complex and Historic Resource #y44 - Retort and any other potentially significant unknown cultural resources discovered during construction. Mitigation measures BIO-8 and BIO-9 would restore the native foothill riparian and oak woodland forest landscapes that the 'H1' Historic Preservation Zoning District is designed to preserve. This zoning district —.si intended to provide for the preservation of historic sites, historic structures, buildings of architectural significance, and other natural and man-made heritage resources which are included in the National Register of Historic Places, or which are otherwise designated as a registered cultural heritage resource.” (County of Santa Clara, 2009. Zoning Ordinance, Article 3.50). The impact of construction on the New Almaden Historic District will be less than significant with mitigation incorporated.

**5. Disturb a historic resource or cause a physical change which would affect unique ethnic cultural values or restrict existing religious or sacred uses within the potential impact area?**

The project would restore the topography and habitat to approximate the landscape conditions prior to mining activities. This work would not impact or restrict unique ethnic cultural values, existing religious or sacred uses of the land. No impact.

**7. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

There are no known unique paleontological resources or sites or unique geologic features in the project area. No impact.

F. ENERGY						
WOULD THE PROJECT	IMPACT					SOURCE
	NO	YES				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. Use non-renewable resources in large quantities or in a wasteful manner?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
2. Involve the removal of vegetation capable of providing summer shade to a building or significantly affect solar access to adjacent property?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 3

**IMPACTS AND MITIGATION**

**1) Use non-renewable resources in large quantities or in a wasteful manner?**

Non-renewable fossil fuel resources will be used to power construction equipment for this project. Fuel use will be as efficiently as possible for this equipment. Measures to ensure efficiency are specified in the Greenhouse Gases section. No impact.

**2) Involve the removal of vegetation capable of providing summer shade to a building or significantly affect solar access to adjacent property?**

While trees will be removed for this project, none shade buildings or affect solar access to adjacent properties. No impact.

<b>G. GEOLOGY AND SOILS</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6, 17, 43
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6, 17,18b
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6, 17, 18b
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6, 17, 118b
2. Result in substantial soil erosion or siltation or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6, 2, 3
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, collapse, shrink/ swell potential, soil creep or serve erosion?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 3, 17, 23, 24, 42
4. Be located on expansive soil, as defined in the report, <i>Soils of Santa Clara County</i> or California Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14, 20, 21, 23, 24, 48
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,6, 23,24,
6. Cause substantial compaction or over-covering of soil either on-site or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 6
7. Cause substantial change in topography or unstable soil conditions from excavation, grading, or fill?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 3, 6, 42
8. Be located in an area designated as having a potential for major geological hazard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9b,10c,11a 12a,17,18
9. Be located on, or adjacent to a known earthquake fault?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9c,10c,11a
10. Be located in a Geologic Study Zone?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9c,11a
11. Involve construction of a building, road or septic system on a slope of:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9b,10c,11a 12a,17,18
a. 30% or greater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,10j,11c
b. 20% to 30%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,10j,11c
c. 10% to 20%?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,10j,11c

**DISCUSSION**

The text contained in the setting and mitigation measures of this section is excerpted from the Geology and Soils Report prepared for this project by Cotton, Shires and Associates (2010) (See Appendix D).

### **Geology**

The geologic units mapped in the area of the proposed project include *mélange*, chert, and basaltic volcanic rocks of the Franciscan Complex (R.J. McLaughlin, et al., 2001). In addition, a mapped Quaternary Landslide (Qls) of approximately 2,300 feet in length and 1,000 feet in width is located on the southeastern bank of Alamitos Creek and upslope areas of Upper Hacienda Calcine deposits. The size and geomorphology of this landslide suggests a depth of landsliding exceeding 60 feet.

### **Seismicity**

Active faults have not been mapped across the project area and the site is not located within the State's Special Fault Study Zone. Consequently, the risk of primary fault rupture through the project area is low. State designated active Type A and B faults mapped near the project include the Monta Vista-Shannon fault (1.4 miles northwest), Sargent fault (4.2 miles southwest) and San Andreas fault (5.9 miles southwest). Very strong seismic ground shaking should be anticipated at the project site in response to a major local earthquake.

Seismic ground shaking could trigger potential liquefaction within young alluvial deposits located adjacent to Alamitos Creek. Liquefaction could result in sand boils, lateral spreading, and settlement. Impacts associated with possible liquefaction should not impact the intent of the project (removal of exposed calcine material).

### **Soils**

Soils in the project vicinity generally consist of gravelly- to sandy silt largely representing colluvial and alluvial deposits. Site soils have a moderate to high potential for erosion when unvegetated. Calcine materials are typically associated with artificial fill (mining spoil deposits). In addition, calcine materials have been mixed with local soils by water transport and by gravity mixing on slopes with colluvial soil deposits. Calcine deposits identified for removal are typically located near active drainage channels or on steep embankments near drainage channels. Calcine removal in some areas will result in exposure of underlying steep natural slopes with the potential for erosion.

## **IMPACTS AND MITIGATIONS**

- 1) 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 special studies Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?***

No active faults are known to pass through the project area, and the proposed project is not located within a State of California designated Fault Special Study Zone. Consequently, fault rupture through the project area is not likely to occur. Implementation of the proposed project would not result in the construction of any structures for human habitation, nor would it significantly increase long-term human use of the project area. Consequently, there is no anticipated impact on humans or structures from fault rupture.

- ii) Strong seismic ground shaking?***

Although no known active faults have been identified within the project area, very strong ground shaking can be expected to occur at the project area during major earthquakes in the region. Impacts to the project resulting from anticipated seismic ground shaking would be less than significant.

- iii) Seismic-related ground failure, including liquefaction?***

The Upper and Lower Hacienda project areas and planned calcine removals beneath Alamitos Creek Bridge are located within a zone of potential liquefaction as delineated on the Santa Teresa Hills Quadrangle Hazard Zone Map prepared by the California Geologic Survey (CGS, 2003). The affects of potential liquefaction at or in the immediate vicinity of the project site could include sand boils, lateral spreading, and settlement. The proposed project should not increase potential hazards from liquefaction and planned calcine removal is unlikely to be impacted by potential liquefaction. Implementation of the proposed project would not result in the construction of any structures for human habitation, nor would it significantly increase long-term human use of the project area. Therefore, the potential impacts on humans from liquefaction (as a result of the project) are less than significant.

***iv) Landslides?***

An existing mapped Quaternary Landslide (Qls) underlies the Upper Hacienda calcine removal area (R. F. McLaughlin, et. al., 2001). This landslide is over 2,000 feet in length and project calcine removal in the Upper Hacienda area is not of sufficient volume to result in potential reactivation of the massive Qls deposit. Calcine removal in this vicinity is also located near the base of a steep slope. Pacific Geotechnical Engineering (Geotechnical Investigation of January 14, 2010) has concluded that native earth materials are present beneath the calcine deposits planned for removal, and that the project is not anticipated to have a significant impact on the stability of native slopes. Pacific Geotechnical Engineering has recommended that final slopes be established in accordance with the recommendations of their report, and that they provide geotechnical construction inspection services to verify anticipated earth materials, and to confirm the adequacy of presented recommendations.

Project calcine removal in areas of steep slopes has the potential to result in adverse slope stability impacts. Current project design recommendations prepared by Pacific Geotechnical Engineering are sufficient to address potential slope instability impacts. In addition, the project will require an erosion protection/riprap wall at the edge of Alamitos Creek at the base of the Upper Hacienda calcine removal area. There is a slight chance that excavation for this structure could result in material sliding down the slope. Appropriate geotechnical inspection and preparation of supplemental design recommendations (if needed) during project grading would reduce the impact to less than significant. The following geotechnical construction inspection services are an essential part of the project.

**GEO-1 Measures:**

- a. Conduct geotechnical inspection of all final slopes of 2:1 (horizontal:vertical) or steeper in areas of calcine removal. Exposed slopes should be inspected by the Geotechnical Consultant prior to application of erosion control measures.
- b. Conduct full time geotechnical inspection during calcine removal in the Upper Hacienda area (this removal site is anticipated to be underlain by Qls materials).
- c. Excavation of first segment of rock slope foundation at Upper Hacienda to be observed by a County staff.

Implementation: Geotechnical consultant for GEO-1a and b; County staff for GEO-1c

Timing: Upon completion of grading for all calcines sites except Upper Hacienda (UH-1 and UH-2) which would require full time inspection during calcine excavation

Monitoring: County of Santa Clara

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

Construction would involve temporary ground disturbing activities, including excavation and removal of calcine deposits, establishment of temporary channel crossings along Alamitos Creek, and other temporary

access routes for equipment. These impacts will be reduced to less than significance with Stormwater Pollution Prevention Plan implementation (See **HYD-1**). Vegetation removal and regrading will result in areas that could erode after construction. These activities will expose unvegetated soils, which would accelerate erosion and sedimentation and could expose native slopes to scour during high flow or flood events. Areas disturbed during the construction phase would be addressed by revegetation with trees and native understory and ground cover vegetation (See **BIO-8** and **BIO-9**) as well as measures given in the *Guidelines and Standards for Land Use Near Streams* (SCVWRPC, 2006), such as natural fiber netting/erosion control blanket installation on steeper slopes (See **HYD-2**). Disturbed slope areas within the limits of seasonal flooding would be addressed by placement bioengineering structures (SCVWRPC, 2006) and more traditional engineering methods such as riprap, when required. The existing drainage pipe discharging above the Upper Hacienda area is to be extended or the flow path below the pipe outlet is to be armored to prevent erosion of steep slopes in this vicinity. All erosion protection mitigation measures are to be completed prior to initiation of seasonal rainfall (October 15).

Construction of the proposed project could accelerate erosion, and would be potentially significant. However, this impact is less than significant with incorporation of the following mitigations.

**GEO-2 Measures:**

- a. Stormwater Pollution Prevention Plan
- b. Surface Erosion Control Treatments (Hydroseeding and/or Fiber Netting)
- c. Replacement Planting
- d. Placement of rip-rap (rock slope protection) over calcine removal areas beneath Alamitos bridge
- e. Placement of rip-rap at the toe of slopes within the Upper Hacienda and Alamitos Creek removal areas to protect from scour under high flow conditions
- f. Drainage control improvements to mitigate the potential for erosion resulting from culvert discharge above the Upper Hacienda area

Implementation: County of Santa Clara

Timing: Integrate measures into construction documents and implement during construction

Monitoring: County of Santa Clara

**3) *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, collapse, shrink/swell potential, soil creep, or severe erosion?***

As indicated above, the project calcine removal includes areas that have the potential for liquefaction, lateral spreading, erosion, and slope instability. The project is not anticipated to result in the aggravation of these existing conditions. Any potential impacts will be reduced to less than significant with incorporation of GEO-1 and GEO-2 mitigations.

**4) *Would the project be located on expansive soil, as defined in the report *Soils of Santa Clara County or California Building Code*, creating substantial risks to life or property?***

The project area may include expansive soils. However, no significant new structures are proposed for construction that could be damaged. The project would not create substantial risks related to expansive soils. The project would have a less than significant impact.

**5) *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?***

The proposed project would not involve the construction or operation of septic tanks or other waste disposal systems. Therefore, the proposed project would have no impacts related to wastewater disposal.

**6) *Would the project cause substantial compaction of over-covering of soil either on-site or off-site?***

The proposed project includes removal of calcine and placement of this material in the designated "San Francisco Open Cut" area that was previously utilized for the Jacques Gulch Restoration Project. The project would not result in substantial compaction or over-covering of on-site soil. Less than significant impact.

**7) *Would the project cause substantial change in topography or unstable soil conditions from excavation, grading, or fill?***

The project includes isolated areas of change in topography. These changes result from removal of artificial fill material and restoration of grades that match with adjoining native slopes. Substantial grading (beyond calcine removal) is not part of the project and negative impacts to native slopes are not anticipated. Less than significant with mitigations incorporated (GEO-1 and GEO-2).

**8) *Would the project be located in an area designated as having a potential for major geologic hazard?***

The channel of Alamos Creek and immediately adjoining flood plains are located within State mapped liquefaction hazard zones. Moderate to steep slopes located on both sides of the creek corridor are uniformly located within State mapped earthquake-induced landslide hazard zones (Santa Teresa Hills Quadrangle Hazard Zone Map, CGS 2003). The proposed project with currently defined mitigation measures would not result in aggravation of these existing conditions, or increased exposure of structures or the public to these potential hazards. Less than significant impact.

**9) *Would the project be located on or adjacent to a known earthquake fault?***

The closest active Type A or B faults are located approximately 1.4 to 5.9 miles from the site. Consequently, the potential for fault rupture across the project site is low. No impact.

**10) *Would the project be located in a Geologic Study Zone?***

The site is not located within the State's Special Fault Study Zone. Comments about the local mapped liquefaction and earthquake-induced landslide hazard zones are addressed in Item 8 above. Less than significant with mitigations incorporated (GEO-1 and GEO-2).

**11) *Would the project involve construction of building, road or septic system on a slope?***

The project does not include construction of a building, road, or septic system. No impact.

H. GREENHOUSE GAS EMISSIONS						
WOULD THE PROJECT	IMPACT					SOURCE
	NO	YES				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 3
3. Would the project increase greenhouse gas emissions that hinder or delay the State's ability to meet the reduction target (25% reduction by 2020) contained in CA Global Warming Solutions Act of 2006 (AB 32)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**IMPACTS AND MITIGATIONS**

- 1) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.*
- 2) *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*
- 3) *Would the project increase greenhouse gas emissions that hinder or delay the State's ability to meet the reduction target (25% reduction by 2020) contained in Global Warming Solutions Act of 2006 (AB 32)?*

Through the adoption of AB 32 (California Global Warming Solutions Act of 2006), the State of California has set the goal of reducing greenhouse gas (GHG) production by 25% from 2000 levels by 2020. Currently, neither the Office of Planning and Research (OPR) nor the Bay Area Air Quality Management District (BAAQMD) have developed thresholds for significant impacts from GHGs resulting from construction impacts. CAPCOA (2008) notes that, “CEQA law does not require a lead agency to establish significance thresholds for GHG. CEQA guidelines encourage the development of thresholds, but the absence of an adopted threshold does not relieve the agency from the obligation to determine significance.” In its proposed changes to CEQA, OPR states that lead agencies can rely on a qualitative analysis or performance based standards to estimate GHG emissions.

The Bay Area Air Quality Management District (BAAQMD) recently adopted CEQA Air Quality Guidelines (June 2010). While these guidelines do not set thresholds for construction-related GHGs, they state that “the Lead Agency should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The Lead Agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable” (BAAQMD, 2010). A relevant standard for judging for GHG emissions is the BAAQMD threshold for “operational-related” GHG emissions of 1,100 MT (Metric Tons) of carbon dioxide (CO<sub>2</sub>) per year.

Greenhouse gas emissions generated the Hacienda and Deep Gulch Remediation Project will result from two activities. First, trees and vegetation will be removed, which removes carbon sinks. However, trees will be replaced on a 3:1 basis and an estimated 51,000 SF will be revegetated with oak woodland and riparian species (**BIO-8** and **BIO-9**). The plants will be monitored and maintained by the County of Santa Clara to ensure they establish. These measures will, over time, compensate for the CO<sub>2</sub> sequestration levels of the original vegetation. To the extent that more trees survive, sequestration may be increased. Second, during construction, the consumption of fuel by vehicles and equipment related to construction activity would generate GHG emissions. This project has no long-term operational GHG impacts since, once the remediation is complete, the site will return to parkland with natural habitats.

A qualitative estimate of the GHG emissions from this project can be developed based on a similar County Parks project, the Madrone Landfill Closure Project. The emissions for the Madrone project were quantified using Urbemis 2007 model for all of the construction activity and phases involving grading for covering and capping a landfill area as well as demolition of existing trail segment and grading/reconstructing a of the trail. Equipment for the Madrone project was similar to that which will be used for the Hacienda and Deep Gulch Remediation Project, including personal light trucks, graders, compactors, loaders, water trucks, scrapers, dozers and 10-wheeler dirt haulers. However, the Madrone project was estimated to take 40 days, while Hacienda and Deep Gulch Remediation is expected to take approximately 100 days. In addition, 10-wheelers were estimated to make 280 trips for Madrone, while approximately 900 trips will be required this project. In essence, the construction work for this project is approximately 3 times the size of Madrone. The GHG quantification for the Madrone project yielded 20,122.85 pound/day, or approximately 9 MT/day, of carbon dioxide emissions as a result of the grading and construction activities for 37 days, or a total of 333 MT. Estimating the Hacienda and Deep Gulch Remediation as 3 times the size of the GHG output of the Madrone project, would mean an output of approximately 1,000 MT total. Upon completion of the remediation project the construction related GHG emissions will cease.

As recommended by the BAAQMD, the County will implement these BMPs, to the extent feasible, to reduce construction –related GHG output:

- a. All construction vehicles, equipment and delivery trucks shall have a maximum idling time of 5 minutes (5 minute limit require by Title 13, Section 2485, California Code of Regulations). Engines shall be shut off if construction requires longer idling time unless necessary for proper operation of the vehicle.
- b. Provide signage at the entrances to the site that clearly state this requirement.
- c. Maintain all construction equipment in proper working condition. Equipment must be maintained by a certified mechanic and documented to be in proper condition before operated on the site.
- d. Use equipment properly-sized for the job.
- e. If feasible, use an CARB-approved low carbon fuel for construction equipment (SMAQMD, 2009).

The impacts of this project are less than significant.

<b>I. HAZARDS AND HAZARDOUS MATERIALS</b>						
<b>WOULD THE PROJECT</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<i>No Impact</i>	<i>Less Than Significant Impact</i>	<i>Less Than Significant With Mitigation Incorporated</i>	<i>Potentially Significant Impact</i>	<i>Cumulative</i>	
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 4, 5
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Involve risk of explosion or release of hazardous substances (including pesticides, herbicides, toxic substances, oil, chemicals or radioactive materials)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 4, 5
8. Provide breeding grounds for vectors?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
9. Proposed site plan result in a safety hazard (i.e., parking layout, access, closed community, etc.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3
10. Involve construction of a building, road or septic system on a slope of 30% or greater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 17n
11. Involve construction of a roadway greater than 20% slope for a distance of 300' or more?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 17n
12. Be located within 200' of a 230KV or above electrical transmission line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,4
13. Create any health hazard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,4,5

14. Expose people to existing sources of potential health hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,3,4
15. Be located in an Airport Land Use Commission Safety Zone?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31
16. Increase fire hazard in an area already involving extreme fire hazard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10g
17. Be located on a cul-de-sacs over 800 ft. in length and require secondary access which will be difficult to obtain?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,4,32,33
18. Employ technology which could adversely affect safety in case of a breakdown?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,5

## DISCUSSION

Mercury from calcine deposits is the primary hazard on this project site. Although a naturally-occurring element, mercury in the environment is a concern for both people and wildlife because exposure can result in many lethal and sublethal effects. Human activities such as mining, have added mercury to the atmosphere at levels that are now three to six times higher than those estimated before the industrial age, but still these levels are “very, very low and do not pose a health risk” (ATSDR, 1999).

Mercuric sulfide (cinnabar ore) is one common form of mercury and the form found at the Hacienda Furnace Yard. Cinnabar ore, cooked at 1,000 degrees F, releases elemental mercury that can be used for human purposes. The remaining ore, called calcines, have varying levels of residual mercury. So much methylmercury has been released by the Hacienda calcine deposits that the site is listed as a state hazardous site and has been the focus of remediation efforts for two decades. High mercury levels can harm the human nervous system, including brain damage and tremors. Depending on its state, mercury can harm lungs, kidneys, mouth/throat/nasal tissues, can cause vomiting, rashes, and can cause birth defects. Children are especially susceptible to the harmful effects of mercury. People can be exposed to metallic mercury vapors from breathing contaminated air around hazardous sites although most outdoor air is not likely to contain levels that would be harmful. Exposure to mercury compounds at hazardous waste sites is much more likely to occur from handling or ingesting contaminated soil or drinking contaminated well-water waters near those sites.

Due to high levels of mercury escaping into soils and waters from calcines, Almaden Quicksilver County Park is included on the list of hazardous waste sites (“Cortese” List) compiled by the Department of Toxic Substances Control pursuant to Government Code Section 65962.5 (Cal EPA, 2006 <http://www.calepa.ca.gov/sitecleanup/cortese/SectionA.htm> ). This project will remove visible calcine deposits, which is expected to reduce levels of mercury in soils, water, and sediment below current levels, decreasing mercury risks to wildlife and people from methylmercury. However, during the project, calcine deposits will be dug up and moved to Mine Hill. Both these activities could add mercury-contaminated dust to the air. This project will remove approximately 9,000 CY of calcines and contaminated material in an area approximately 24,000 SF (approximately 0.55 acres). This estimate does not include the area required for equipment access and other construction related activities. The calcine removal actions are expected to last from April 15 to October 15. Material will be trucked to “San Francisco Open Cut” at Mine Hill, which does not require trucks to go through the Town of New Almaden.

The Engineer’s Report for Hacienda Furnace Yard (CH2M Hill, 2009) gives the results for 110 soil analyses taken at 55 sites. The report states, “Average mercury concentrations were highest for the Deep Gulch calcine deposit (269 mg/kg) and the Lower Hacienda calcine deposits (169 and 241 mg/kg for Deposits 1 and 2). The average mercury concentration for the Upper Hacienda Calcine Deposit 1 was 55 mg/kg. The lowest average

mercury concentrations were associated with the Upper Hacienda Calcine Deposit 2 (17 mg/kg), the Upper Furnace Yard Calcine Deposit (23 mg/kg), and the Alamitos Creek Calcine Deposit (24 mg/kg). The results are consistent with sampling results for calcines summarized on Map of Area CP-1, Hacienda Furnace Area (CDM, 1994), which indicated that average mercury concentrations for calcines were 200 mg/kg, and for samples other than calcines were 270 mg/kg.” All levels are below the 400 mg/kg remediation level set in the Remedial Action Plan (RAP) for the Hacienda Furnace Yard Site calcine sites (CDM, 1994).

## IMPACTS AND MITIGATIONS

*1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

*13) Create any health hazard?*

*14) Expose people to existing sources of potential health hazards?*

These three categories focus on the exposure of people to hazards either existing or created by the project. Excavation of calcine and trucking to —San Francisco Open Cut” for the project has the potential to increase the amount of mercury-contaminated dust in the vicinity for the short-term. Dust from the excavation work could increase the opportunity for inhalation, potentially creating a health risk. This dust could expose construction workers, park visitors, and local residents to increased amounts of mercury, as compared to current conditions. To prevent fugitive dust from creating a health risk, implement mitigations **HAZ-1** and **HAZ-2**, below. Incorporating these mitigations will reduce this potential impact to less than significant.

Sediment could enter Alamitos Creek as a result of calcine removal, stockpiling and transport activities as well as from erosion of denuded areas after construction. This sediment could pose a hazard to the environment. These hazards will be prevented by implementing measures in **HAZ-3** below, which include a Stormwater Pollution Prevention Plan (See **HYD-1**) and following the measures given in the *Guidelines and Standards for Land Use Near Streams* (See **HYD-2**). Incorporating these mitigations will reduce this impact to less than significant.

### **HAZ-1 Measures:**

A worker safety and health program, as required by CalOSHA will be implemented during calcine and soil removal, transport, and consolidation. It is anticipated, based on the Jacques Gulch project and the Camp Dresser McKee Final Remedial Action Plan (1994), that Level D Personal Protective Equipment would be worn by all workers involved in or near to soils disturbance and movement. However, the necessary level of protection will be determined based on field conditions at the time of project execution. The worker safety and health program will:

- a. Minimize human contact with contaminated soils, inhalation of dust, and contact with ground or surface water.
- b. Inform workers and Park visitors of the relevant aspects of the safety and health program.
- c. Require the responsible contractor shall monitor and enforce compliance.
- d. Require visitors and other non-essential personnel to stay a distance adequate to ensure their safety. Visitors to the site shall be provided appropriate Personal Protective Equipment.

The site will be open only to workers and individuals required to undertake or inspect work. Active removal areas will be fenced with temporary construction-type chain link fences adequate to prevent unauthorized entry. The fence will be maintained for the duration of soil disturbance activities.

Implementation: County staff or qualified expert

Timing: During project work monitor for compliance with worker safety program

Monitoring: County of Santa Clara will report compliance with **HAZ-1** measures to lead agency and other relevant agencies.

**HAZ-2 Measures:**

To ensure workers and visitors are not exposed to hazardous calcine and soil dust, a fugitive dust control program shall be developed and implemented by the contractor, as approved by the County. This program shall include an onsite Air Quality Monitor (AQM), a Dust Control Plan (DCP), monitoring of the project sites and the transport route for visible dust plumes. The AQM will require more frequent and more extensive dust control methods, should standard methods not be adequate to control airborne dust. Dust control measures, as described in the Jacques Gulch Mitigated Negative Declaration are cited here as they are relevant and adequate for the Hacienda and Deep Gulch Remediation Project.

–a. The project shall designate and retain onsite an Air Quality Monitor (AQM) who shall be responsible for directing and documenting compliance with dust control measures for the entire project site and transportation route to the consolidation area. The AQM shall have full access to all areas of excavation and loading on the site, and shall have the authority to stop any or modify all activities as warranted in order to ensure that these dust control measures remain adequate to control dust generation.

b. A Dust Control Plan (DCP) shall be developed and implemented to prevent the generation of dust during soils movement. The plan shall include measures to ensure the following:

- All unpaved roads and disturbed areas in the project site shall be watered as frequently as necessary to comply with the dust mitigation objectives. The frequency of watering can be reduced or eliminated during periods of precipitation.
- No vehicle shall exceed 15 miles per hour within the site or on any unpaved road along the transport route to the soils repository.
- All site entrances shall be posted with visible speed limit signs.
- All vehicles leaving the site that have ridden on contaminated soil shall have their tires inspected and dirt removed and/or washed as necessary to be cleaned free of dirt prior to leaving the site and/or entering paved roadways. This is done with metal pikes, large wire brushes, and water. The volume of water is to be kept at a minimum and kept contained. Decontamination of vehicle tires shall be conducted. This can be done on top of 50-mil Visqueen plastic sheets with small berms on the perimeter to keep the water/soil from flowing off except into collection areas, or, if Visqueen plastic is not used, gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.
- Soil removal areas adjacent to any paved roadway shall be provided with sandbags or other measures as required to prevent runoff to roadways.
- All soil storage piles and disturbed areas that remain inactive for longer than 2 days, or if high wind conditions exist, shall be covered or shall be treated with appropriate dust suppressant compounds.
- All vehicles that are used to transport excavated material to the consolidation area and that have potential to cause visible dust emissions shall be provided with a cover or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard.
- Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all areas of soil that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.
- The AQM shall monitor all soil removal activities on the site and the transport route for visible dust plumes. Observations of visible dust plumes that have the potential to be transported: (1) off the project site; (2) 100 feet beyond the centerline of the transport route; (3) within 25 feet downwind of any soil removal/excavation activity; (4) within the presence of onsite workers such that they will become exposed to an inhalation hazard shall be an indication that existing dust suppression/control measures are not resulting in effective mitigation. The AQM shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed:

- Step 1: The AQM shall direct more intensive application of the existing mitigation methods within 15 minutes of making such a determination.
- Step 2: The AQM shall direct implementation of additional methods of dust suppression if Step 1 specified above fails to result in adequate mitigation within 30 minutes of the original determination.
- Step 3: The AQM shall direct a temporary shutdown of the activity causing the emissions if Step 2 specified above fails to result in effective mitigation within one hour of the original determination. The activity shall not restart until the AQM is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes will not result upon restarting the shutdown source.”  
(Jacques Gulch Mitigated Negative Declaration, 2008).

Implementation: County staff or qualified expert

Timing: During project work monitor for compliance with fugitive dust control program

Monitoring: County of Santa Clara Inspector will report compliance with HAZ-2 measures to lead agency and other relevant agencies.

### **HAZ-3 Measures:**

To prevent stockpiled sediments from entering Alamitos Creek, sediments will be stored and transported in a manner that minimizes water quality impacts as follows:

- a. Wet sediments will be stockpiled in a manner that prevents any material or water from draining into Alamitos Creek.
- b. Water will not drain directly into public streets without providing water quality control measures.
- c. Streets will be cleared of mud and/or dirt by street sweeping (with a vacuum-powered street sweeper), as necessary, and not by hosing down the street.
- d. Follow measures in **HYD-1** and **HYD-2** for construction and post-construction control of sediments and prevention of soil erosion.

Implementation: County staff or qualified expert

Timing: During project work monitor for compliance with measures to prevent sediment from moving into Alamitos Creek.

Monitoring: County of Santa Clara Inspector will report compliance with HAZ-3 measures to lead agency and other relevant agencies.

## ***2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

While no foreseeable upset could release hazardous materials that would endanger the public, there are three potential routes by which hazardous materials could accidentally be released into the environment:

1. Equipment on site could leak diesel, gasoline, oil, and other lubricants onto soils or into Alamitos Creek and Deep Gulch. These materials would be onsite only in quantities sufficient to operate the equipment. The contractor will implement standard BMPs for ensuring these materials do not leak into waters on site, which will reduce this impact to less than significant.

2. Materials stockpiled on site could be washed into Alamitos Creek. Measures to reduce this impact to less than significant are given in **HAZ-3** measures.

3. Calcines and materials from steep hillside excavations at Upper Hacienda and Alamitos Creek (AC-2) could fall into Alamitos Creek and those from Deep Gulch could fall into these intermittent drainage. However, construction methods will reduce this impact to less than significant. At Upper Hacienda and Alamitos Creek (AC-2), the creek will be dewatered and diverted in a pipe around the site. Any material that falls in the creek bed will not contaminate stream water and will be removed before the creek is returned to its

original course. All other areas where materials could potentially reach the stream or the drainage will be protected with SWPP Plan and erosion prevention measures (**HYD-1**). Less than significant with mitigations incorporated.

**HAZ-4 Measures:**

Standard County of Santa Clara BMPs for controlling oil, grease and fuel from construction vehicles.

Implementation: County staff or qualified expert

Timing: During project work, monitor for compliance with BMPs for controlling oil, grease and fuel runoff from

Monitoring: County of Santa Clara Inspector will report compliance with HAZ-4 measures to lead agency and other relevant agencies.

**3) *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 does not entail the management of acutely hazardous materials, substances, or waste, nor are there existing schools located within 1/4 mile of the project. No impact.

**4) *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?***

Almaden Quicksilver County Park is included on the list of hazardous waste sites (“Crises” List) compiled by the Department of Toxic Substances Control (DTSC) pursuant to Government Code Section 65962.5. The Park is listed because of the high levels of mercury escaping into the environment from the calcines. This project is intended to reduce these mercury impacts to less than significance. Four areas in the Hacienda Furnace Yard area were remediated previously and some calcines were capped on site. These capped areas are inspected each year to ensure they are intact and calcines are not exposed. The current project will disturb one of these previous remediation areas that is located between Alamitos Road and Alamitos Creek (AC-2). Additional material from this former remediation site will be excavated and consolidate at the “San Francisco Open Cut” at Mine Hill. This material will be removed to provide access and create stable slopes to the AC-2 deposit. The exposed portion of this remediation area will be recapped with no less than two feet of clean fill or other measures as specified by DTSC.

As part of this project, calcines will be transported to an existing consolidation site at the “San Francisco Open Cut”. This site is where calcine materials have been previously consolidated and capped during remedial actions implemented elsewhere in the County Park and at Jacques Gulch, under the oversight of the California DTSC. Therefore, hazardous waste from this project would be added directly to an existing hazardous waste depository. No disturbance of the existing waste would occur. Therefore, this project would have no impact on the existing hazardous waste site.

**5) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

Construction activities adjacent to Alamitos Road and increased truck and vehicle traffic along haul routes could temporarily increase response times for emergency response providers along affected roadways. This impact could occur on the public roads, but only very briefly during the movement of construction equipment. This impact is addressed in the Transportation section and this impact is reduced to less than significant with incorporation of mitigation measure TRA-2.

**6) 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?**

**16) Increase fire hazard in an area already involving extreme fire hazard?**

The project area is in a “High” Fire Severity Zone (Cal FIRE, 2007). The project would be conducted during the summer and fall when fire danger non-native grasses and weeds dry out and fire danger increases. Downed wood, leaves and other dry plant material cover much of the site and could serve as fuel. Hot construction equipment on site could increase risks of fire. This risk is minor, but incorporating HAZ-5 measures will ensure this impact is less than significant.

**HAZ-5 Measures:**

- a. A water truck will remain on site equipped with a hose that can be used to spray water on fires.
- b. Each construction vehicle will be equipped with a fire extinguisher.
- c. Workers will be instructed in the need to stay alert to the start of fires and will be given instruction in using fire extinguishers; the construction manager will be informed immediately if a fire starts.
- d. SWPPP measures will ensure that water and chemicals required to stop fires will not enter Alamos Creek.

Implementation: County staff or qualified expert

Timing: During project work, monitor for compliance with wildfire control measures

Monitoring: County of Santa Clara Inspector will report compliance with HAZ-5 measures to lead agency and other relevant agencies.

**7) Involve risk of explosion or release of hazardous substances (including pesticides, herbicides, toxic substances, oil, chemicals or radioactive materials)?**

The project does not require explosives so there is no risk of explosion or release of hazardous substances including pesticides, herbicides, toxic substances, oil, chemicals or radioactive materials. No impact.

**8) Provide breeding grounds for vectors?**

The project would not increase standing water on site and so would not provide breeding grounds for vectors. No impact.

**9) Proposed site plan result in a safety hazard (i.e., parking layout, access, closed community, etc.)?**

The project does not include a site plan and therefore cannot result in a safety hazard from the plan (i.e., parking layout, access, closed community, etc.). No impact.

**10) Involve construction of a building, road or septic system on a slope of 30% or greater?**

This project does not include construction of a building, road or septic system. No impact.

**11) Involve construction of a roadway greater than 20% slope for a distance of 300' or more?**

No roadway construction of any type is part of this project. No impact.

**12. Be located within 200' of a 230KV or above electrical transmission line?**

The project is not located within 200' of a 230KV or above electrical transmission line. No impact.

**15. Be located in an Airport Land Use Commission Safety Zone?**

No airports lie within two miles of any part of the proposed project; therefore, there is no impact to public safety associated with aircraft operations or an aircraft safety hazard for workers or nearby residents. No impact.

**17. Be located on a cul-de-sac over 800 ft. in length and require secondary access which will be difficult to obtain?**

The project is not located on a cul-de-sac. No impact.

**18. Employ technology which could adversely affect safety in case of a breakdown?**

This project does not employ technology which could adversely affect safety in case of a breakdown. Construction equipment is the only technology associated with the project. No impact.

<b>J. HYDROLOGY AND WATER QUALITY</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	34, 36
2. 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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 4
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3
5. Create or contribute increased impervious surfaces and associated runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5, 36, 21a
6. Degrade surface or ground water quality or public water supply? (Including marine, fresh and wetland waters.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,11b,21,46
7. Place a structure within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 18b, 18d

	Flood Insurance Rate Map or other flood hazard delineation map?						
8.	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	■	□	□	□	□	3, 18b, 18d
9.	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?	■	□	□	□	□	2, 3, 4
10.	Result in an increase in pollutant discharges to receiving waters?	□	□	■	□	□	
11.	Be located in an area of special water quality concern (e.g., Los Gatos or Guadalupe Watershed)?	□	□	■	□	□	4, 6a,
12.	Result in use of well water previously contaminated by nitrates, mercury, asbestos, etc. existing in the groundwater supply?	■	□	□	□	□	10e,23
13.	Result in a septic field being constructed on soil with severe septic drain field limitations or where a high water table extends close to the natural land surface?	■	□	□	□	□	10e,11b,1 2d, 20,21,22,2 4
14.	Result in a septic field being located within 50 feet of a drainage swale; 100 feet of any well, water course or water body or 200 feet of a reservoir at capacity?	■	□	□	□	□	1,2,3,4
15.	Conflict with Water Resources Protection Collaborative Guidelines and Standards for Land Uses near Streams?	□	■	□	□	□	22, 51
16.	Result in extensions of a sewer trunk line with capacity to serve new development?	■	□	□	□	□	3
17.	Require a NPDES permit for construction [Does it disturb one (1) acre or more]?	■	□	□	□	□	3, 46
18.	Result in significant changes to receiving waters quality during or following construction?	□	□	■	□	□	46,47
19.	Is the project a tributary to an already impaired water body? If so will the project result in an increase in any existing pollutants?	□	□	■	□	□	46,47
20.	Substantially change the direction, rate of flow, or quantity, or quality of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	■	□	□	□	□	1,3,46
21.	Interfere substantially with ground water recharge or reduce the amount of groundwater otherwise available for public water supplies?	■	□	□	□	□	3,10e,11b
22.	Involve a surface water body, natural drainage channel, streambed or water course such as to alter the amount, location, course, or flow of its waters?	□	□	■	□	□	1,3,11c,28 ,45

**DISCUSSION**

**Surface Water**

Alamitos Creek flows through the Project area, eventually flowing into the Guadalupe River, which empties into southern San Francisco Bay. The Almaden Reservoir is upstream a few miles from the Hacienda Furnace Yard on Alamitos Creek. —Alamitos Creek is a perennial stream with summertime flows maintained by releases from the Almaden Reservoir (SCVWD, 2003). In the Hacienda Furnace Yard Area, the Alamitos Creek stream gradient is relatively steep characterized by pool-riffle morphology. The Deep Gulch drainage

is tributary to Alamitos Creek and in the project area is dry or nearly so during the summer months. This drainage is characterized by step-pool stream morphology” (CH2M Hill, 2009). These are the primary surface waters in the project area.

The project is in a Mediterranean climate zone and rainfall occurs predominantly from October through March. However, rain can occur into June and thunderstorms can cause summer and fall precipitation. At the nearby Jacques Gulch watershed, an average of 34 inches of rain falls per year. Much of the project is in the Alamitos Creek floodplain. During rainfall events, water can cause erosion of slopes and substantial sediment and other material can be transported downstream. There are no structures in or near the floodplain that would be at risk. However, revegetation and post-construction erosion control measures will need to factor in the power of floodwaters in Alamitos Creek in the rainy season.

### **Regulations and Agencies**

The Clean Water Act (CWA), administered by the U.S. Environmental Protection Agency (EPA), is the overarching law protecting surface water quality. Under CWA Section 303(d), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards are required to list bodies of water as impaired when the traditional permitting processes for waste discharges have failed to maintain designated water quality objectives and standards. CWA Section 303(d) also requires preparation of a Total Maximum Daily Load (TMDL) program for waters identified by the state as impaired. Guadalupe River is listed as a 303(d) impaired water body.

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. In California, the SWRCB is authorized by the EPA to oversee the NPDES program through the Regional Water Quality Control Boards (RWQCB). The RWQCB has the primary responsibility for protecting surface- and groundwater resources from degradation and administers the NPDES permitting and Section 401 water quality certification processes.

Under CWA Section 404, the U.S. Army Corps of Engineers (USACE) and the EPA regulate the discharge of dredged and fill materials into waters of the United States. Under CWA Section 230.10(a), Section 404 and other permits may be issued only for the “least environmentally damaging” alternative. For regulatory purposes, the project area falls within the jurisdiction of the USACE, San Francisco District.

Streambed Alteration Agreements, as defined in Section 1602 of the California Fish and Game Code, protect the natural flow, bed, channel, and bank of any river, stream, or lake designated by the California Department of Fish and Game (CDFG) in which there is, at any time, an existing fish or wildlife resource, or benefit for the resource. Section 1602 requires an agreement between the CDFG and a public agency proposing a project that would:

- Divert, obstruct, or change a streambed
- Use material from the streambed
- Result in the disposal, or deposition of debris, waste, or other material containing crumbed, flaked, or ground pavement where it can flow into a stream.

### **IMPACTS AND MITIGATION**

- 1. Violate any water quality standards or waste discharge requirements?*
- 3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on or off site?*
- 6. Degrade surface or ground water quality or public water supply?*
- 10. Result in an increase in pollutant discharges to receiving waters?*

- 11. Be located in an area of special water quality concern (e.g., Los Gatos or Guadalupe Watershed)?**  
**18. Result in significant changes to receiving waters quality during or following construction?**  
**19. Is the project a tributary to an already impaired water body? If so will the project result in an increase in any existing pollutants?**

Each of these seven questions focuses on the potential for pollutants or discharges to enter Alamitos Creek at any level or at a level that violates water quality standards and/or which could have a negative effect on water quality in the Guadalupe River. This project has the potential to introduce sediments and calcines into Alamitos Creek as a result of the calcine removal process, as a result of stockpiling excavated materials, and as a result of temporary fill to create creek crossings during construction. The introduction of calcines and sediment could increase sediment and mercury levels in Alamitos Creek and the Guadalupe River, a 303(d) impaired water body. Sediments and calcines will be prevented from entering Alamitos Creek waters with a variety of project design features and mitigation measures. The project design includes dewatering Alamitos Creek where calcines and sediment must be removed directly adjacent to or in the creek. Any material falling into the creek channel will be removed while the creek is dry and will be removed before waters are restored to their course. All materials required for temporary construction crossings will be placed in the creek bed while it is dewatered and will be removed before the stream is returned to its course. Thus, these materials will not be able to enter stream waters. A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented that ensures material that is removed as a result of this project is not transported by water into Alamitos Creek. Incorporating the HYD-1 measure will reduce this impact to less than significant.

Calcine removal and grading, especially in areas there is substantial tree and vegetation removal, could result in soil erosion into Alamitos Creek after the project is completed. Most of the project area, approximately 51,000 SF (~1.2 acres), will lose much of its vegetation and will be subject to erosion. To reduce this impact to less than significant, the County of Santa Clara will implement tree planting and revegetation measures that will provide significant soil stabilization (See **BIO-8** and **BIO-9**). In addition, the County of Santa Clara will implement other slope and soil stabilization methods as recommended in the Santa Clara Valley Water Resources Protection Collaborative (SCVWRPC, 2006) *Guidelines and Standards for Land Use Near Streams*. For example, biodegradable erosion control blankets will be used where bare soil is exposed and plants are not yet established enough to anchor soil. Incorporating the HYD-2 measure will reduce this impact to less than significant.

**HYD-1 Measures:**

Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that ensures material that is removed as a result of this project is not transported by water into Alamitos Creek. In particular, silt fencing and fiber rolls as appropriate will be placed to ensure that no material enters Alamitos Creek directly or indirectly through drains. Any SWPPP material that will not be completely removed must be composed of all natural and biodegradable material.

The SWPPP will be prepared and submitted in compliance with the requirements of the State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Discharges of Stormwater Associated with Construction Activity. Suitable stormwater BMPs will be implemented consistent with California Stormwater Quality Association — Stormwater Best Management Practices Handbook,” Construction 2003, which is available at <http://www.cabmphandbooks.com>.

Implementation: County staff or qualified expert

Timing: During project work monitor for compliance with SWPPP

Monitoring: County of Santa Clara Inspector will report compliance with HYD-1 measures to lead agency and other relevant agencies.

**HYD-2 Measures:**

Implement measures and techniques for preventing soil erosion as given in the *Guidelines and Standards for Land Use Near Streams*. In particular Chapter 4, pages 4.81-4.84 and 4.92-4.106 provides a range of recommended soil and slope stabilization methods (See Table 6 – Preferred Erosion Repair Methods from Chapter 4). Methods not recommended are given on pages 4.107-4.109 and include concrete crib walls, gabions, concrete block, sacked concrete, and gunite slope protection.

Implementation: County staff or qualified expert

Timing: During project and after calcine removal monitor for compliance with *Guidelines and Standards for Land Use Near Streams*

Monitoring: County of Santa Clara Inspector will report compliance with HYD-2 measures to lead agency and other relevant agencies.

**Table 6. Preferred Erosion Repair Methods (from SCVWRPC, 2006)**

<b>Preferred Erosion Repair Methods</b>				
<b>Repair Method</b>	<b>Appropriate Slope</b>	<b>Appropriate Water Velocity</b>	<b>Environmental Value</b>	<b>Cost</b>
1. Modified Floodplain	Varies	Varies	Positive	Low
2. Slope Grading with Vegetation	2:1 or flatter for vegetation; 1.5:1 or flatter for boulder section	Low – typically up to 6ft/sec	Positive	Low
3. Erosion Mats	2:1 or flatter for erosion mat section; 1.5:1 or flatter if boulders used	Generally, 1-7ft/sec, but can go up to 12ft/sec if vegetated	Positive, if planted	Low
4. Contour Wattling		Low	Positive	Low
5. Brush Mattresses	2:1 or flatter for erosion mat section; 1.5:1 or flatter if boulders used	Low	Positive	Low
6. Brush Layering	2:1	Medium	Positive	Low
7. Vegetated Geogrids or Soil Lifts	Up to 1:1	Medium	Positive	Low
8. Root Wads & Boulders		Medium (≤10ft/sec)	Positive, if planted	High
9. Boulders/rock Revetment	Up to 1:1; preferably 2:1	High: up to 15ft/sec; less where voids in boulders are planted	Negative; Negative to neutral, if planted	Medium
10. Cellular Confinement System	Up to 0.5:1	Medium to High: 5-21ft/sec depending on vegetation	Neutral	Medium
11. Live Log Crib Walls	Up to 0.25:1	Medium: up to 12ft/sec or less	Neutral to high, if planted	High

**2. 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)?**

**20. Substantially change the direction, rate of flow, or quantity, or quality of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?**

**21. Interfere substantially with ground water recharge or reduce the amount of groundwater otherwise available for public water supplies?**

This project primarily occurs at ground level and above OHW. No calcine removal or soil regrading will intercept groundwater. The project includes no groundwater extraction, no activities that interfere with groundwater recharge, excavation that would intersect groundwaters or aquifers, or reduce groundwater available for public use. No impact.

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

**5. Create or contribute increased impervious surfaces and associated runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

**7. Place a structure 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?**

**8. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

**9. 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?**

This project will not change the pattern amount of watershed drainage to an extent that could result in flooding on- or off-site. While approximately 1.2 acres of vegetated habitat will be denuded, increasing runoff, a number measures will be implemented, especially revegetation (**BIO-8** and **BIO-9**) and erosion control measures (**HYD-1**) which will prevent significant increases in run-off. No impervious surfaces will be added to the watershed. No structures will be built as part of this project, apart from two erosion protection/riprap walls, one along approximately 250 feet of the stream at Upper Hacienda and one along 140 feet at AC-2. No structures will impede or redirect flood flows. No activities of this project could put people or structures at risk due to a levee or dam failure. No impact.

**12. Result in use of well water previously contaminated by nitrates, mercury, asbestos, etc. existing in the groundwater supply?**

No well water, beyond that which is part of the County water supply, will be used in this project. The only use of water on-site will be for airborne dust abatement, revegetation watering and, if needed, fire suppression. No impact.

**13. Result in a septic field being constructed on soil with severe septic drain field limitations or where a high water table extends close to the natural land surface?**

**14. Result in a septic field being located within 50 feet of a drainage swale; 100 feet of any well, water course or water body or 200 feet of a reservoir at capacity?**

**16. Result in extensions of a sewer trunk line with capacity to serve new development?**

This project creates no septic fields or sewer line extensions. No impact.

**15. Conflict with Water Resources Protection Collaborative Guidelines and Standards for Land Uses near Streams?**

As described in **HYD-2**, the project will incorporate methods and techniques given in the *Guidelines and Standards for Land Uses near Streams* (SCVWRPC, 2006) to control erosion, stabilize slopes, and whenever feasible. This impact is reduced to less than significant with incorporated mitigation.

**17. Require a NPDES permit for construction [Does it disturb one (1) acre or more]?**

The entire project area is approximately 1.75 acres (76,000 SF). The area to be disturbed, not including the staging and stockpile area (~25,000), is approximately 1.2 acres (51,000 SF). The County has an NPDES permit with the San Francisco Bay Regional Water Quality Control Board (NPDES Permit No. CAS612008, Order No. R2-2009-0074). The County of Santa Clara shall review the erosion control plans for consistency with local requirements, appropriateness and adequacy of proposed BMPs for each site before commencing with project. County of Santa Clara shall file a Notice of Intent for coverage under the Construction General Permit. No impact.

**22. Involve a surface water body, natural drainage channel, streambed or water course such as to alter the amount, location, course, or flow of its waters?**

The project will temporarily divert stream water into pipes along approximately 600 ft of Alamos Creek. These diversions will be temporary, occurring from approximately April 15 to October 15. The County will obtain a CDFG Stream Bed Alteration Agreement, and permits from the RWQCB, related to Clean Water Act Section 402 which regulates construction related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. The design and operation of the diversion structure will be subject to RWQCB jurisdiction under a Clean Water Act Section 401 certification. Less than significant with mitigations incorporated (BIO-9).

<b>K. LAND USE AND PLANNING</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. Physically divide an established community?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 4
2. 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?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,5
3. Conflict with general plan designation or zoning?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>	<input type="checkbox"/>	5,7,9a,10a, 46
4. Conflict with special policies?						
a. San Martin and/or South County	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6,10a,44,45
b. Los Gatos Specific Plan or Lexington Watershed	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6,10a,13,14
c. East Foothills Policy Area	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6,10a
d. New Almaden Historic Area/Guadalupe Watershed	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6,7,10a

e. Stanford	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6,15,16
f. San Jose	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8,10a
5. Be incompatible with existing land use in the vicinity?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3, 2b

**DISCUSSION**

The project site is within the New Almaden National Historic Landmark District, one of 120 such places in California and only one of five in Santa Clara County recognized as being of such national historical significance. The County of Santa Clara General Plan identifies the project site as having a Regional Park land use designation with special land use policies applying to the New Almaden Historical Area (County of Santa Clara, May 2008). The adjacent community of New Almaden is designated a Rural Residential Area with the New Almaden Historical Area. County of Santa Clara has established a historic preservation zoning district for New Almaden. The boundaries of the zoning district coincide with the boundaries of the National Historic Landmark District described by the National Register listing (See Figure 12 – New Almaden Historical Zoning District Map). The majority of the land area within the National Historic Landmark District is contained within the AQS County Park (Santa Clara County, May 2009). The project site is accessed from Alamitos Road, a County designated scenic road (Santa Clara County, June 2008).

The project site is part of the Final Almaden Quicksilver Restoration Plan and Environmental Assessment (RP/EA) prepared under the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as the Superfund Law, which requires remediation and restoration of the former mining lands (USFWS & CDFG, 2008). The goal of the RP/EA is to make the environment and the public whole for injuries to natural resources that resulted from releases of mercury within the Guadalupe River Watershed from sources of mercury, including from the New Almaden Mining District. The specific objectives of the RP/EA are to directly restore stream/aquatic sediments and riparian habitat at two discreet sites of significant releases including Jacques Gulch and Hacienda Furnace Yard.

The project site is within the boundaries of the proposed County of Santa Clara Habitat Conservation Plan/ Natural Community Conservation Plan. This plan has not yet been completed or adopted (See Biological Resources Section).

**IMPACTS AND MITIGATION**

**1) Physically divide an established community?**

The project sites, calcine deposits and the consolidation area, are located within AQS County Park, therefore no impacts would occur.

**2) 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?**

The project implements the Final Almaden Quicksilver Restoration Plan and Environmental Assessment (RP/EA) prepared under the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as the Superfund Law, which requires remediation and restoration of the former mining lands (USFWS & CDFG, 2008). This is a beneficial outcome of the project.

**3) Conflict with general plan designation or zoning?**

The project would be in compliance with the County General Plan designation and Special Land Use Area overlay. The project would be in conflict with the County of Santa Clara Historic Preservation Zoning Ordinance § 3.50.080 K. Tree, Shrub and Landscaping Conservation. This ordinance encourages the protection of all trees 6” in diameter within the New Almaden Historical Area (Santa Clara County, May 2009). Trees must be removed to access and excavate the calcine deposits. County parks will secure a tree removal permit from the Santa Clara County Planning Department. Native plant species will be replanted to mitigation this impact (See Mitigation Measure **BIO-8**). The selected trees and shrubs species conform to the ordinance that indicates “new plantings and landscaping treatments should be native species typical of the hills and riparian areas specific to this district.” This impact is considered less than significant with mitigation incorporated.

**4) Conflict with special policies?**

- a) San Martin and/or South County
- b) Los Gatos Specific Plan or Lexington Watershed
- c) East foothills Policy Area
- e) Stanford
- f) San Jose

The project site is not located within any of these special policy areas. No impact.

**d) New Almaden Historic Area/Guadalupe Watershed**

The project would be in compliance with the special land use policies associated with the New Almaden Historic Area. No impact.

**5) Be incompatible with existing land use in the vicinity?**

The project does not require any changes to the existing land use. The project site will remain a regional park. No impact.

<b>L. MINERAL RESOURCES</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACTS</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the state?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,3,19
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 2, 3, 6,8
3. Result in substantial depletion of any non-renewable natural resource?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 3

**DISCUSSION**

The project area has not been classified as a Mineral Resource Zone (MRZ) because it is located outside the urbanization lines set by the California Office of Planning and Research. The closest classified mineral

resource zones are located approximately two miles north of the proposed project. Operations related to the mining and processing of the mercury-bearing ore cinnabar (mercury sulfide) were conducted throughout the Mine Hill Area from approximately 1840 to 1970 (USFWS & CDFG, 2008). No impacts.

**IMPACTS AND MITIGATION**

**1) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the state?**

The project area does not contain any known or locally important mineral resources defined by the County of Santa Clara General Plan (1994). No impact.

**2) 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 area is not located within any of eight operational mineral resources recovery operations in County of Santa Clara (1994). No impact.

**3) Result in substantial depletion of any non-renewable natural resource?**

The will use non-renewable fuel resources in the amounts typically associated with earth moving construction activities. The project would not utilize a substantial amount any non-renewable natural resource. No impact.

<b>M. NOISE</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACTS</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,5,6
2. Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,2,4,3,5,31
4. Result in a substantial temporary increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Increase substantially the ambient noise levels for adjoining areas during and/or after construction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**DISCUSSION**

Noise impacts can be significant based on their levels and proximity to sensitive receptors, including schools, hospitals, religious facilities, and parks. AQS County Park is an undeveloped open space with low levels of

ambient noise. The project site is directly adjacent to the Town of New Almaden. Specifically, the north-east end of the project site, which is under the bridge where Alamitos Road crosses Alamitos Creek, is at the edge of town. There are no schools or hospitals in New Almaden. The closest schools (Williams Elementary and Challenger-Almaden) are approximately 3 miles from the end of the project site closest to town and the nearest hospital, Kaiser Permanente, is approximately 5 miles from the project site. Nearest residences and commercial establishments are within 200 feet of the north-east end of the project site, which is located under Alamitos Road.

**Ordinances and Regulations**

The County of Santa Clara General Plan Noise discussion states that all citizens deserve “a peaceful and quiet environment, free from unnecessary and annoying levels of noise” and an environment “free from noise that jeopardizes public health and well-being” (SCC, 1994). The General Plan states that noise levels for residential, commercial uses such as hotels, and parks should not exceed 55 dBA and that noise impacts from projects should be mitigated or eliminated.

The County of Santa Clara Code on Noise and Vibration (sections B11-150 to B11-158) is designed to control unnecessary, excessive and annoying noise and vibration and to prohibit the noise and vibration generated from or by all sources as specified in this chapter. It is also the intent of the County to maintain quiet in those areas that exhibit low noise levels and to implement programs aimed at reducing noise in those areas where noise levels are above acceptable values ([http://www.sccgov.org/scc\\_ordinance/31108000.HTM](http://www.sccgov.org/scc_ordinance/31108000.HTM)). Section B11-154(b)(6) lists the following restrictions for construction/demolition:

- a. No operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekdays and Saturday hours of 7:00 p.m. and 7:00 a.m., nor at any time on Sundays or holidays, such that the sound creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance.
- b. Where technically and economically feasible, construction activities will be conducted in a manner that the maximum noise levels at affected properties will not exceed those listed in Table 8.

**Table 8. Maximum Allowable Noise Levels for Different Types of Equipment**

A. Mobile equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than ten days) of mobile equipment:

<b>Mobile Equipment Maximum Noise Levels</b>			
	<b>Single- and Two-Family Dwelling Residential Area</b>	<b>Multifamily Dwelling Residential Area</b>	<b>Commercial Area</b>
Daily, except Sundays and legal holidays 7:00 a.m.--7:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

B. Stationary equipment. Maximum noise levels for repetitively scheduled and relatively long-term operation (periods of ten days or more) of stationary equipment are as follows:

<b>Stationary Equipment Maximum Noise Levels</b>			
	<b>Single- and Two-Family Dwelling Residential Area</b>	<b>Multifamily Dwelling Residential Area</b>	<b>Commercial Area</b>
Daily, except Sundays and legal holidays 7:00 a.m.--7:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

**IMPACTS AND MITIGATIONS**

- 1. 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?*
- 2. Result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?*
- 4. Result in a substantial temporary increase in ambient noise levels in the project vicinity above levels existing without the project?*
- 5. Increase substantially the ambient noise levels for adjoining areas during and/or after construction?*

Project activities will require the short-term use (six months) of trucks, excavators, bulldozers, graders, compactors, chainsaws and other equipment for tree cutting, calcine excavation, trucking to the consolidation area, land grading and contouring, restoring slopes, and repairing stream banks and culverts. The project activities would create temporary intermittent and continuous noises. Intermittent noise would result from periodic, short-term equipment operation, and more continuous noise would result from equipment running over longer periods, such as generators. The maximum intermittent equipment noise levels would range from 85 to 92 dBA at 50 feet for pieces of equipment operating simultaneously. Trucks and equipment will come through New Almaden along Almaden Road when they are first brought to the site. Trucks hauling material from the site will not go through town, but will go up Mine Hill Road, which goes north from the southwest end of town. Noise would occur off site from commuting workers and from trucks needed to bring equipment and materials to the project site. The peak noise levels associated with passing trucks and commuting worker vehicles would be approximately 70 to 75 dBA at 50 feet.

Noise would be generated for up to six months (April 15 to October 15) by equipment on-site, by traffic accessing the project site, and by trucking material to the Mine Hill consolidation area. Noise would also be generated for approximately two weeks between November 1 and January 31 for tree removal. Noise levels for typical pieces of equipment (at 50 feet) that would be used for the project are listed in Table 9. The closest work will be approximately 200 feet from the nearest residences and park visitors could be within 200 feet of the construction. Noise attenuation will result in noise levels declining by approximately 10 dBA at 200 feet, 20 dBA at 500 feet, and 26 dBA at 1000 feet from construction equipment.

**Table 9. Typical Noise Levels for Construction Equipment**

<b>Typical Noise Levels for Construction Equipment</b>			
<b>Equipment Type</b>	<b>Typical Noise Levels (dBA, at 50 feet)</b>	<b>Equipment Type</b>	<b>Typical Noise Levels (dBA, at 50 feet)</b>
Front loaders	85	Chainsaws	85-90
Backhoes, excavators	80-85	Pumps	76
Tractors, dozers	83-89	Generators	81
Graders, scrapers	85-89	Compressors	83
Trucks	88	Concrete pumps, mixers	82-85

Sources: Adapted from U.S. EPA, 1972 / U.S. DOT, 1995.

The noise from construction equipment (80-90 dBA) exceeds levels for residential and park uses (55-75 dBA) within 50 feet of the equipment. Park users and nearby residents within 500-1000 feet of the construction zone could be exposed to ground-borne noise levels in excess of applicable standards. These noise levels will be temporary and occur during construction. Less than significant with mitigations incorporated.

**NOISE-1 Measures:**

The County will implement these practices to minimize disturbances to residential neighborhoods surrounding work sites:

- a. No construction on Sundays and legal holidays, or between the hours of 7:00 p.m. and 7:00 a.m. If nighttime construction is required, construction activities should be grouped together so as to avoid continuing periods of high disturbance.
- b. If specific noise complaints are received during construction, one or more of the following noise mitigation measures can be implemented in a more rigorous fashion:
  - i. Use hydraulically or electrically powered impact tools (e.g., jack hammers) when possible. If the use of pneumatically powered tools is unavoidable, use an exhaust muffler on the compressed air exhaust.
  - ii. Install manufacturer’s standard noise control devices, such as mufflers, on engine-powered equipment.
  - iii. Locate stationary construction equipment as far from noise-sensitive properties as possible.
  - iv. Notify nearby property users whenever extremely noisy work will occur.
  - v. Utilize stock piles as effective noise barriers when feasible.
- c. Work under the Alamos Bridge will be conducted as quickly and as quietly as possible.
- d. Internal combustion engines will be equipped with adequate mufflers.
- e. Vehicles will not idle longer than 5 minutes.
- f. All construction equipment will be equipped with manufacturer’s standard noise control devices.
- g. The arrival and departure of trucks hauling material will be limited to the hours of construction.
- h. The County shall place a sign at the entrance of the site informing surrounding neighbors to call the County of Santa Clara, Department of Parks and Recreation regarding noise complaints.

Implementation: Contractors

Timing: During all phases of project work

Monitoring: County of Santa Clara staff

**3. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

This project will not result in a permanent increase in ambient noise levels. After the project is completed, the site will return to its park and recreation land use. No impact.

N. POPULATION AND HOUSING						
WOULD THE PROJECT:	IMPACT					SOURCE
	NO	YES				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2, 3, 4
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**IMPACTS AND MITIGATION**

- 1) *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)?*
- 2) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*
- 3) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

The remediation and restoration work for this project will not result in any type of population growth. No new homes, businesses or road will be built for this project. There is no housing in the project area. Neither housing nor people will be displaced by this project. No impact.

N. PUBLIC SERVICES						
WOULD THE PROJECT:	IMPACT					SOURCE
	NO	YES				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government 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:						

i) Fire Protection?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
ii) Police Protection?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
iii) School facilities?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
iv) Parks?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
v) Other public facilities?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
2. Induce substantial growth or concentration of population? (Growth inducing?)	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
3. Employ equipment which could interfere with existing communications or broadcast systems?	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
4. Increase the need for new systems or supplies, or cause substantial alterations to the following utilities:						
a. Electricity or Natural gas	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
b. Local or regional water treatment or distribution facilities	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
c. Local or regional water supplies	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
d. Sewage disposal	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
e. Storm water drainage	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
f. Solid waste or litter	■	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5

## DISCUSSION

The County Parks Rangers and Maintenance staff service AQS County Park. County of Santa Clara Fire Department provides fire protection and is supported by the California Department of Forestry and Fire Protection. Police services are provided by the County of Santa Clara Sheriff's Department.

## IMPACTS AND MITIGATION

**1) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government 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:***

- a) *Fire Protection?***
- b) *Police Protection?***
- c) *School facilities?***
- d) *Parks?***
- e) *Other public facilities?***

The project is an earth moving and mercury remediation undertaking that would not impact public services. The project would not create a need for new or physically altered governmental or public facilities. No impact.

**2) *Induce substantial growth or concentration of population? (Growth inducing?)***

The project is a mercury remediation undertaking within AQS County Park. This project is intended to improve the health of the environment for humans and wildlife, but will not create infrastructure to support growth or the movement of the human population to a new areas. No impact.

**3) *Employ equipment which could interfere with existing communications or broadcast systems?***

There are no broadcast systems in the project area. No impact.

- 4) **Increase the need for new systems or supplies, or cause substantial alterations to the following utilities:**
- a) **Electricity or Natural gas**
  - b) **Local or regional water treatment or distribution facilities**
  - c) **Local or regional water supplies**
  - d) **Sewage disposal**
  - e) **Storm water drainage**
  - f) **Solid waste or litter**

The project will not change the use of AQS County Park. Thus, there will be no new demand for natural resources or the treatment of these resources. No impact.

<b>P. RECREATION</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 2, 3, 4, 5, 50
2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 2, 3, 4, 5, 50
3. Be on, within or near a public or private park, wildlife reserve, or trail (includes those proposed for the future) or affect existing or future recreational opportunities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2,4,9d,10h, 50
4. Result in loss of open space rated as high priority for acquisition in the "Preservation 20/20" report?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	38

**DISCUSSION**

The project will use the Mine Hill Trail at the Hacienda entrance to AQS County Park as a haul route to the calcine consolidation area at Mine Hill (See Figure 7 – Construction Haul Routes and Figure 13 – Almaden Quicksilver County Park Trail Map). The use of the trail will require temporary closures (See Transportation/Traffic Section). The Hacienda entrance to the park is busiest on weekends. On a weekend in April 2010, 44 cars and 5 horse trailers were observed at this parking area nearly filling the site to capacity. During weekdays it is unusual to observe more than 10 cars at the parking area during what would be typical construction hours.

**IMPACTS AND MITIGATION**

- 1) **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**
- 3) **Be on, within or near a public or private park, wildlife reserve, or trail (includes those proposed for the future) or affect existing or future recreational opportunities?**

The temporary closures of the Mine Hill Trail and the construction noise, dust and traffic may encourage park users to access alternate park entrances and/or alternate trails during the construction. Construction is planned to occur on the weekdays when park use is at its lowest. Parking at the Hacienda entrance may be restricted to a smaller portion of the parking lot to facilitate the movement of trucks in and out of parking area that provides access to the Mine Hill Trail. During the temporary Mine Hill Trail closures, equestrians and hikers will be directed to use the Deep Gulch Trail as an alternative recreation route. Mountain bicyclists will be directed to other park entrances. Appropriate signs will be placed at trailheads and trail junctions warning the public of construction vehicles and providing information on the project status. Displaced park users who elect to use alternate park entrances would not unduly burden other areas of the park during this temporary construction. This is a less than significant impact.

Hauling of the calcine to the consolidation site may also restrict traffic on Wood Road, Hicks Road and Alamos Road if the optional loop route for hauling is used by the County and its contractor. Traffic volume on these park access roads is low and any traffic delay would be temporary and short in duration at the time of the delay. The project will not substantially impact the recreational opportunities at AQS County Park. This is a less than significant impact.

**2) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**4) Result in loss of open space rated as high priority for acquisition in the "Preservation 20/20" report?**

The project remediates mercury contamination within an existing regional park. No impact.

Q. TRANSPORTATION / TRAFFIC						
WOULD THE PROJECT:	IMPACT					SOURCE
	NO	YES				
	No Impact	Less Than Significant Impact	Less Than Significant With Mitigation Incorporated	Potentially Significant Impact	Cumulative	
1. 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 freeway, pedestrian and bicycle paths and mass transit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4, 6a, 26, 27, 28, 29, 43
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6, 49, 50, 53
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5, 6, 7, 53
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3, 5, 6, 7, 53

5.	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5, 48, 53
6.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8a, 21a
7.	Not provide safe access, obstruct access to nearby uses or fail to provide for future street right of way?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,30
8.	Increase traffic hazards to pedestrians, bicyclists and vehicles?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3,4
9.	Cause increases in demand for existing on or off-street parking because of inadequate project parking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1,3,30

**DISCUSSION**

The project would involve work in unincorporated Santa Clara County within the AQS County Park. Construction would involve the excavation and removal of approximately 9,000 CY of calcine deposits and associated soils. The project also calls for the placement of approximately 250 CY of riprap to create erosion protection riprap walls extending along the toe of Upper Hacienda and Alamos Creek (AC-2). Areas where calcines are removed would be graded to match existing slopes and to create stable slopes along Alamos Creek and Deep Gulch. Clean fill may be needed in some locations for revegetation and for capping the 1998-2000 remediation site that will be breached during this remediation. All of these activities would require hauling materials through AQS County Park. In addition, equipment, haul trucks and personnel vehicles will be driven to the project site.

Construction staging including equipment and materials storage, temporary calcine stockpiling and personnel parking would be accommodated within two designated areas within AQS County Park (See Figure 6 – Site Access and Temporary Culvert Placements). No parking will occur outside the boundaries of the construction site. No lane or road closures would occur on any roadways as a result of implementation of the proposed project.

**Local Roads**

The calcine deposits proposed for removal are located along Alamos Road and Mine Hill Trail within the park. The —San Francisco Open Cut” consolidation site is located at Mine Hill in AQS County Park and would be accessed via the Mine Hill Trail and Alamos Road. Hicks Road and Wood Road may be used as a return route from the Mine Hill consolidation area to avoid the need for two-way traffic control on the Mine Hill Trail. Trucks will either make a) round-trips traveling on Alamos Road and the Mine Hill Trail to reach the consolidation area or b) loop trips carrying full loads along Alamos Road and the Mine Hill Trail and returning to the project site with empty trucks via Wood Road, Hicks Road and Alamos Road (See Figure 7 – Construction Haul Routes). These two haul routes have been used in the previous remediation efforts in the area including the 1998-2000 Hacienda Furnace Yard Remediation and the 2009 Jacques Gulch Remediation.

Beyond the project site, Alamos Road and Hicks Road are rural, paved two-lane roads that provide access to remote properties and Almaden Reservoir. Traffic volumes on these roads are low. Wood Road is an unpaved single-lane road within the park designated for multiple use. Mine Hill Trail is an unpaved single-lane road designated for pedestrian, equestrian, horse-cart and bicycle use. Portions of the Mine Trail and Wood Road serve as the Juan Bautista de Anza National Historic Trail and Bay Area Ridge Trail (Santa Clara County, 1995).

### **Regional Access**

Regional access to the project site is provided by U.S. Highway 101, State Route 85 (SR 85) and State Route 17 (SR 17). These routes are within approximately five to eight miles of the project site. Alamos Road may be reached from Highway 101 or SR 85 by traveling along streets in the southern portion of the City of San Jose to Almaden Road and through the community of New Almaden. The primary access is via either SR 85 and Almaden Expressway or McKean Road, which connects to Highway 101 east of the project site. Alternate access can also be provided by SR 17 through Los Gatos. Urban streets in the jurisdiction of the Town of Los Gatos lead from SR 17 to Shannon Road, which can be used to access the rural Hicks Road, or Camden Avenue in the City of San Jose may also be used to access Hicks Road from SR 85.

### **Transit and Rail Service**

The Santa Clara Valley Transportation Authority (VTA) operates bus and light rail transit routes throughout the county. Bus lines occur along Camden Avenue between the intersection of Hicks Road and SR 85, along the Almaden Expressway, and in the Los Gatos town center. The nearest rail facility is the VTA light rail Almaden Station about four miles north of the project site. The VTA does not provide direct transit service to any location within the AQS County Park.

### **Pedestrian, Bicycle and Equestrian Facilities**

AQS County Park offers a variety of trails and roads that provide open space access to pedestrian, equestrian, horse-cart and bicycle users. Many of these trails intersect the Mine Hill Trail and Wood Road.

### **Regulations, Plans, and Standards**

County of Santa Clara Roads and Airports Department. Operation and maintenance of local roads in the project area is the responsibility of the County of Santa Clara Roads and Airports Department. County of Santa Clara transportation policies and standards for roadways are discussed in the General Plan. The proposed project would involve work along and beneath Alamos Road and possibly hauling along Hicks Road, two County road facilities. The construction contractor would be required to obtain encroachment permits from the County of Santa Clara Roads and Airports Department.

## **IMPACTS AND MITIGATION**

*1) 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 freeway, pedestrian and bicycle paths and mass transit.*

Project activities may increase traffic on Hicks Road, Alamos Road, and the unpaved single lane Wood Road within the park. Traffic would arrive on Alamos Roads after traveling through the Town of New Almaden and along the more urban city streets and highways that provide regional access. Delivery of heavy equipment and construction employee traffic would occur on these roads and potentially increase traffic congestion for up to eight months of construction activities. Trucks for hauling water for dust control and construction materials would also access the site daily.

Construction is anticipated to occur in two phases. Tree and vegetation removal is proposed to occur between November 1 and January 31, prior to calcine removal. Dewatering, calcine excavation, grading and off hauling is proposed to occur between April 15 and October 15. Revegetation work would follow the grading and continue through the following January, as required by rainfall. Tree removal is anticipated to take no more than 2 weeks. The calcine removal and regrading is anticipated to take no more than 20 weeks. Revegetation is likely to take no more than 4 weeks. Construction work hours are planned for 7 AM through 5 PM. It is estimated that during peak work operations up to 15 construction workers may be on-site each day.

The number of personnel will vary between 2 and 15 during the construction. Assuming single-occupancy per vehicle the project would generate a maximum 30 personnel trips per day to the site (15 trips to the job site, 15 trips leaving the job site).

The project would also generate local hauling trips to the consolidation site that would either be confined within AQS Park or may use Alamos Road, Hicks Road and Wood Road. It is estimated that approximately 9,000 CY of calcine and associated soils will be brought to the consolidation site. It is anticipated that off haul will be carried by dump trucks with a 10-CY capacity resulting in 900 round trips or 1,800 one-way to the consolidation site over the total work period. The majority of the off hauling is estimated to occur over three months or a 60-work day period. Using these assumptions, the peak work operations of the project may generate up to 60 truck trips per day (30 trips in, 30 trips out) for a maximum of 10 trips per hour. The total project construction traffic may reach 90 trips per day (30 personnel trips and 60 truck trips) during peak work operations.

Local roadways in the project area have relatively low traffic volumes. Project related traffic would not increase traffic on the local roads to a level that is substantial in relation to the existing traffic load and capacity of the street system. Therefore, congestion caused by construction vehicles accessing the work areas from local roads would be minimal and limited to the short-term duration of the project. This impact is less than significant with the implementation of County Roads and Airports BMPs.

**TRA-1 Measures:**

Implement County Roads and Airports BMPs requiring the installation of fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction, to give adequate warning to the public of the construction and of any dangerous condition to be encountered as a result thereof.

Implementation: Contractor and County of Santa Clara

Timing: During construction

Monitoring: County of Santa Clara

***2) 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?***

The traffic levels for local roadways in the project area have low traffic volumes and operate at acceptable levels of service. Therefore, impacts would be less than significant.

***3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?***

No operating airports or heliports are located within two miles of the proposed project. Helicopters would not be used during project construction. The proposed project would not include any features that would disrupt or affect air traffic. No impact.

***4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

The project does not include any roadway design features. Truck hauling to the consolidation site at Mine Hill has been successfully undertaken in previous remediation projects. Although this is not a typical use of the

Mine Hill Trail and Wood Road both one lane access routes can accommodate ranger vehicles and dump trucks. Trails will be temporarily closed during hauling and traffic control measures including signing, flagmen with radios and a possible loop haul route would be implemented to reduce the potential for travel conflict. This is a less than significant impact with the construction methods specified in the construction documents.

**5) Result in inadequate emergency access?**

Construction activities adjacent to Alamos Road and increased truck and vehicle traffic along haul routes could temporarily increase response times for emergency response providers along affected roadways. This impact could occur on the public roads, but only very briefly during the movement of construction equipment. Truck traffic would fully occupy this single lane of Wood Road and the Mine Hill Trail during trips to the consolidation site. To the extent these routes are used for emergency services, the presence of haul trucks on these facilities could temporarily disrupt response to wildfires or other emergencies within the park. This impact is less than significant with mitigation incorporated.

**TRA-2 Measures:**

Prior to the start of the project, County of Santa Clara will develop and communicate to the contractor an emergency response procedure for emergency access to Wood Road and the Mine Hill Trail

Implementation: County of Santa Clara

Timing: Prior to construction

Monitoring: County of Santa Clara

**6) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.**

**7) Not provide safe access, obstruct access to nearby uses or fail to provide for future street right of way?**

**8) Increase traffic hazards to pedestrians, bicyclists and vehicles?**

The use of the Mine Hill Trail and Wood Road as haul routes to the consolidation area will reduce the recreation use of these trails during construction. The Mine Hill Trail is the primary access into the park from the Hacienda park entrance and is a popular hiking, biking and equestrian route. The adjacent Deep Gulch Trail serves only hikers and equestrians. The curves in these routes would result in safety hazards for trail uses if trucks were also operating on the facilities. As a consequence, Mine Hill Trail and Wood Road would be closed to users during hauling. Hauling would be limited to weekdays when park use is the lower compared to weekends. Hikers and equestrians will be directed to the nearby Deep Gulch Trail. Bicyclists and horsecart users will be directed to the Mockingbird Hill park entrance and trails during these periods. This is a less than significant impact with the construction methods specified in the construction documents.

**9) Cause increases in demand for existing on or off-street parking because of inadequate project parking?**

Transport of calcine to the Mine Hill consolidation site would involve short-term, heavy use of the Hacienda and Hicks/Wood Road park entrances. The parking area there would be affected by turning movements, idling and temporary parking of construction trucks or equipment at these entrances. The proposed project would largely involve weekday activity when the park entry would be lightly used. Construction activities would not normally occur on weekends when parking is at capacity on fair weather days. This would be a less than significant impact confined to the limited duration of construction.

<b>R. UTILITIES AND SERVICE SYSTEMS</b>						
<b>WOULD THE PROJECT:</b>	<b>IMPACT</b>					<b>SOURCE</b>
	<b>NO</b>	<b>YES</b>				
	<u>No Impact</u>	<u>Less Than Significant Impact</u>	<u>Less Than Significant With Mitigation Incorporated</u>	<u>Potentially Significant Impact</u>	<u>Cumulative</u>	
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5,
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5, 21, 38
3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5, 21,
5. 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
6. Not be able to be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1, 3, 5
7. Comply with federal, state, and local statutes and regulations related to solid waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5, 6

**IMPACTS AND MITIGATION**

- 1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**
- 2) 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?**
- 5) 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?**

The project would not discharge wastewater. Thus, the project will not create a demand for new or expanded wastewater treatment facilities. No impact.

The project will use on-site potable water for dust control and short-term establishment irrigation of the native revegetation plantings. These are modest water uses that would not result in the need for new water treatment facilities. No impact.

- 3) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

The project will repair an existing storm water culvert that drains hillside and roadway runoff from Alamitos Road into Alamitos Creek. The existing culvert has created erosion of the slope below Alamitos Road. This erosion area will be graded and riprap placed on the soil to act as an energy dissipater. No new storm water drainage facilities are planned. No impact.

***4) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

The project will use on-site potable water for dust control and short-term establishment irrigation of the native revegetation plantings. Over the long term the project would rely on naturally occurring sources of water including precipitation, groundwater flowing toward Alamos Creek and local flooding events to support the native riparian and oak woodland revegetation plantings. The project would not result in impacts to water supplies. No impact.

***6) Not be able to be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

***7) Comply with federal, state, and local statutes and regulations related to solid waste?***

The excavated calcine will be consolidated and capped within AQS County Park. Therefore, the project would not contribute material to area landfills. The project would not require use of landfill for solid waste needs and complies with regulations related to solid waste. No impact.

DOES THE PROJECT:	NO	YES
<b>S. MANDATORY FINDINGS OF SIGNIFICANCE</b>		
<p>a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</p> <p>This project is designed to benefit the environment by removing calcines remaining from former mercury mining operations, and thereby, reduce mercury loads to Alamos Creek, Guadalupe River and the San Francisco Bay. A number of biological resources, such as oak and riparian woodlands, steelhead and red-legged frogs, will or could potentially be impacted by the work. The Initial Study/Environmental Checklist includes mitigations to prevent take of and impacts to species, to limit impacts to natural communities, and to restore natural communities that will be temporarily impacted by the remediation project. All potentially significant impacts are reduced to less than significant.</p>	X	
<p>b. Have the potential to achieve short-term environmental goals, to the disadvantage of long-term environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.)</p> <p>This project is designed provide long-term benefits to the environment, especially water quality and stream and riparian species along Alamos Creek, Guadalupe River and the San Francisco Bay.</p>	X	
<p>c. Have environmental impacts which are individually limited, but cumulatively considerable? (–Cumulatively considerable” means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.)</p> <p>There are no cumulative negative impacts of the project.</p>	X	
<p>d. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p> <p>Humans will benefit from the removal of calcines and reduction of mercury in the San Francisco Bay. Short-term potential impacts to workers, park visitors and residents that could arise from mercury on air-borne dust particles are reduced to less than significant with mitigations provided in the Initial Study/Environmental Checklist.</p>	X	
<p style="text-align: center;"><b>DISCUSSION OF ENVIRONMENTAL EVALUATION</b></p> <p>Discuss on attached sheet(s) all “yes” answers and any “no” answers that are potentially controversial or require clarification. (Must be TYPED). Describe any potential impacts and discuss possible mitigations. For source, refer to attached “Initial Study Source List”. When a source is used that is not listed on the form or an individual is contacted, that source and/or individual should be cited in the discussion.</p>		

<b>DETERMINATION</b>	On the basis of this initial evaluation:	
I find that the proposed project <b>COULD NOT</b> have a significant effect on the environment, and a <b>NEGATIVE DECLARATION</b> will be prepared.		<input type="checkbox"/>
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on the attached are included as part of the proposed project. A <b>MITIGATED NEGATIVE DECLARATION</b> will be prepared.		<input checked="" type="checkbox"/>
I find the proposed project <b>MAY</b> have a significant effect on the environment and an <b>ENVIRONMENTAL IMPACT REPORT</b> is required.		<input type="checkbox"/>
I find that the proposed project <b>MAY</b> 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 <b>ENVIRONMENTAL IMPACT REPORT</b> is required, but it must analyze only the effects that remain to be addressed.		<input type="checkbox"/>
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or <b>NEGATIVE DECLARATION</b> pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or <b>NEGATIVE DECLARATION</b> , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.		<input type="checkbox"/>

Signature: <u></u>	date <u>7/13/10</u>
Print name & title: <u>Mohamed Assaf, Sr. Facilities Engineer</u>	

## INITIAL STUDY SOURCE LIST

1. Field Inspection
2. Project Plans
3. Planner's Knowledge of Area
4. Experience With Other Project of This Size and Nature
5. County General Plan
6. The South County Joint Area Plan
7. County Zoning Regulations (Ordinance)
8. Second Amendment to Agreement [with San Jose] for Allocation of Tax Increment Funds
9. MAPS (various scales)
  - a. County Zoning (500' or 1,000')
  - b. ABAG "On Shaky Ground"-Santa Clara County Map Set (2 miles)
  - c. Barclay's Santa Clara County Local Street Atlas (2631')
  - d. County Regional Parks, Trails and Scenic Highways Map (10,000')
10. 5000' or one mile Scale MAPS
  - a. County General Plan Land Use
  - b. Natural Habitat Areas
  - c. Relative Seismic Stability
  - d. Archaeological Resources
  - e. Water Resources & Water Problems
  - f. Viewshed and Scenic Road
  - g. Fire Hazard
  - h. Parks and Public Open Space
  - i. Heritage Resources
  - j. Slope Constraint
  - k. Serpentine soils
11. 2000' Scale MAPS
  - a. State of California, Special Studies Zones [Revised Official Map]
  - b. Water Problem/Resource
  - c. USGS Topo Quad (7-1/2 minutes)
  - d. Dept. of Fish & Game, Natural Diversity Data Base Map Overlays & Textual Reports
  - e. Natural Resources [Key to map found in: Natural Resource Sensitivity Areas-Locality Data, Harvey & Stanley Associates-Contact County staff]
12. 1000' Scale MAPS/Air Photos
  - a. Geologic Hazards
  - b. Color Air Photos (MPSI)
  - c. Santa Clara valley Water District-Maps of Flood Control Facilities & Limits of 1% Flooding
  - d. Soils Overlay Air Photos
  - e. "Future Width Line" map set
13. County Lexington Basin Ordinance Relating to Sewage Disposal
14. Los Gatos Hillside Specific Area Plan
15. Stanford University General Use Permit and Environmental Impact Report [EIR]
16. Stanford Protocol and Land Use Policy Agreement
17. County Geologist
18. Site Specific Geologic Report
19. State Department of Mines and Geology, Special Report #146
20. USDA, SCS, "Soils of Santa Clara County"
21. USDA, SCS, "Soil Survey of Eastern Santa Clara County"
22. County Environmental Health/Septic Tank Sewage Disposal System - Bulletin "A"
23. San Martin Water Quality Study
24. County Environmental Health Department Tests and Reports
25. Santa Clara County Heritage Resource (including Trees) Inventory [computer database]
26. Official County Road Book
27. County Transportation Agency
28. County Standards and Policies Manual (Vol. I - Land Development)
29. Public Works Departments of Individual Cities
30. County Off-street Parking Standards
31. ALUC Land Use Plan for Areas Surrounding Airports [1992 version]
32. County Fire Marshal
33. California Department of Forestry
34. BAAQMD Annual Summary of Contaminant Excesses & BAAQMD, "Air Quality & Urban Development-Guidelines for Assessing Impacts of Projects & Plans"
35. Architectural and Site Approval Committee Secretary
36. County Guidelines for Architecture and Site Approval
37. County Development Guidelines for Design Review
38. Open Space Preservation, Report of the Preservation 2020 Task Force, April 1987 (Chapter IV)
39. Riparian Inventory of Santa Clara County, Greenbelt Coalition, November 1988.
40. Section 21151.4 of California Public Resources Code.
41. Site Specific Archaeological Reconnaissance Report
42. State Archaeological Clearinghouse, Sonoma State University
43. Transportation Research Board, "Highway Capacity Manual", Special Report 209, 1985
44. Design Guidelines for Non-residential Development in San Martin.
45. Southwest San Martin Area Interim Development Guidelines
46. 2009 NPDES Storm Water Discharge Permit
47. 2002 Clean Water Act Section 303(d)
48. California Building Code (2007)
49. County of Santa Clara Ordinance Code
50. Santa Clara Countywide Trails Master Plan Update, November 1995
51. Santa Clara Valley Water District Water Resources Protection Collaborative Guidelines and Standards for Land Use Near Streams

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## **Section 5: Report Preparation**

This section lists those individuals who contributed to the preparation of the Initial Study.

### **5.1 Consultants**

#### **Sokale Environmental Planning**

Jana Sokale, Principal Planner

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### **5.2 County Parks Staff**

Mohamed Assaf, Senior Facilities Engineer  
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Mark Frederick, Construction Services Manager  
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