December 9, 2020

Andrew White
Benchmark Resources

Re: Biological Resources Constraints Assessment of Stevens Creek Quarry, Cupertino, California

Dear Mr. White,

This letter report provides the results of the biological resources constraints assessment conducted for Stevens Creek Quarry (Study Area; see Appendix A, Figure 1) in Cupertino, Santa Clara County, California. This report describes the results of the assessment, which evaluated the Study Area for: (1) the potential to support special-status species and (2) the potential presence of other sensitive biological resources, including sensitive and jurisdictional communities that are protected by local, state, and federal laws and regulations.

The Study Area is approximately 252 acres and located near the intersection of Stevens Canyon Rd and Montebello Rd in Cupertino, approximately 3 miles west of State Route 85. The Study Area is bound by Permanente Quarry to the north, Stevens Creek Reservoir and Stevens Creek County Park to the east, Picchetti Ranch Open Space, scattered agricultural, and residential development to the south, and open space to the west. The Study Area is primarily characterized as an active quarry with almost the entire Study Area disturbed by aggregate extraction, processing, and associated facilities and infrastructure.

Based on a review of background literature and databases, the relatively small amount of undisturbed Study Area contains four sensitive biological communities. The Study Area has potential to support eight special-status plant and nine special-status wildlife species. In addition, non-special-status nesting birds may be present in the Study Area during the breeding season (February 1 to August 31).

REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the database reviews and analysis of potential impacts.

Federal and State Regulatory Setting

Vegetation and Aquatic Communities

CEQA provides protections for particular vegetation types defined as sensitive by the California Department of Fish and Game (CDFW), and aquatic communities protected by laws and regulations administered by the U.S Army Corps of Engineers (Corps), State Water Resources Control Board (SWRCB), and Regional Water Quality Control Boards (RWQCB). The laws and regulations that provide protection for these resources are summarized below.

Sensitive Natural Communities: Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFW 2020a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2020). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2020) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G).

Waters of the United States, Including Wetlands: The Corps regulates “Waters of the United States” under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands that are hydrologically connected with these navigable features (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the Corps Wetlands Delineation Manual (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

The Corps also regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403). Section 10 of the RHA requires Corps approval and a permit for excavation or fill, or alteration or modification of the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

Waters of the State, Including Wetlands: The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The SWRCB and nine RWQCBs protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit, but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Sections 1600-1616 of California Fish and Game Code: Streams and lakes, as habitat for fish and wildlife species, are regulated by CDFW under Sections 1600-1616 of California Fish and

Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). The term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). Riparian vegetation has been defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG 1994).

Special-status Species

Endangered and Threatened Plants, Fish, and Wildlife. Specific species of plants, fish, and wildlife species may be designated as threatened or endangered by the federal Endangered Species Act (ESA), or the California Endangered Species Act (CESA). Specific protections and permitting mechanisms for these species differ under each of these acts, and a species’ designation under one law does not automatically provide protection under the other.

The ESA (16 USC 1531 et seq.) is implemented by the USFWS and the National Marine Fisheries Service (NMFS). The USFWS and NMFS maintain lists of "endangered" and "threatened" plant and animal species (referred to as "listed species"). "Proposed" or "candidate" species are those that are being considered for listing, and are not protected until they are formally listed as threatened or endangered. Under the ESA, authorization must be obtained from the USFWS or NMFS prior to take of any listed species. Take under the ESA is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Take under the ESA includes direct injury or mortality to individuals, disruptions in normal behavioral patterns resulting from factors such as noise and visual disturbance, and impacts to habitat for listed species. Actions that may result in “take” of an ESA-listed species may obtain a permit under ESA Section 10, or via the interagency consultation described in ESA Section 7. Federally listed plant species are only protected when take occurs on federal land.

The ESA also provides for designation of critical habitat, which are specific geographic areas containing physical or biological features “essential to the conservation of the species”. Protections afforded to designated critical habitat apply only to actions that are funded, permitted, or carried out by federal agencies. Critical habitat designations do not affect activities by private landowners if there is no other federal agency involvement.

The CESA (California Fish and Game Code 2050 et seq.) prohibits a "take" of any plant and animal species that the California Fish and Game Commission determines to be an endangered or threatened species in California. CESA regulations include take protection for threatened and endangered plants on private lands, as well as extending this protection to “candidate species” which are proposed for listing as threatened or endangered under CESA. The definition of a "take" under CESA ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") only applies to direct impact to individuals, and does not extend to habitat impacts or harassment. CDFW may issue an Incidental Take Permit under CESA to authorize take if it is incidental to otherwise lawful activity and if specific criteria are met. Take of these species is also authorized if the geographic area is covered by a Natural Community Conservation Plan (NCCP), as long as the NCCP covers that activity.

Fully Protected Species and Designated Rare Plant Species. This category includes specific plant and wildlife species that are designated in California Fish and Game Code (CFGC) as protected even if not listed under CESA or the ESA. Fully Protected Species includes specific lists of birds, mammals, reptiles, amphibians, and fish designated in CFGC. Fully protected species may not be taken or possessed at any time. No licenses or permits may be issued for take of fully protected species, except for necessary scientific research and conservation purposes. The definition of "take" is the same under the California Fish and Game Code and the CESA. By law, CDFW may not issue an Incidental Take Permit for Fully Protected Species. Under the California Native Plant Protection Act (NPPA), CDFW has listed 64 “rare” or “endangered” plant species, and prevents “take”, with few exceptions, of these species. CDFW may authorize take of species protected by the NPPA through the Incidental Take Permit process, or under a NCCP.

Special Protections for Nesting Birds and Bats. The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America’s eagle species (bald [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*)] that in some regards are similar to those provided by the ESA. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA.

Essential Fish Habitat. The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) provides for conservation and management of fishery resources in the U.S., administered by NMFS. This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g. eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Species of Special Concern, Movement Corridors, and Other Special Status Species under CEQA. To address additional species protections afforded under CEQA, CDFW has developed a list of special species as “a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status.” This list includes lists developed by other organizations, including for example, the Audubon Watch List Species, the Bureau of Land Management Sensitive Species, and USFWS Birds of Special Concern. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1, 2, and 3 are also considered special-status plant species and must be considered under CEQA. Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. Additionally, any species listed as sensitive within local plans, policies and ordinances are likewise considered sensitive. Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

Local Regulatory Setting

County of Santa Clara Tree Ordinance. The County of Santa Clara Tree Preservation and Removal Ordinance (County Code, §C16.1 to §C16.17) serves to protect all trees having a trunk that measures 37.7 inches or more in circumference (12 inches in diameter) at the height of 4.5 feet above the ground or immediately below the lowest branch, whichever is lower, or in the case of multi trunk trees a trunk size of 75.4 inches in circumference or more (24 inches or more in diameter). In addition, any tree that because of its history, girth, height, species or other unique quality, is considered significant to the community or recommended by the historic commission can be designated as a heritage tree and, therefore, deemed protected and preserved.

Santa Clara County requires that a replanting or revegetation plan be submitted for all trees to be removed (County Code, §C16.7 (e)). If the trees to be removed are native species, then replacement by the same species is requested if feasible. For non-native species, the County Planning Department may determine the species for planting. All replacement tree plantings must use at least five-gallon stock.

METHODS

Available resources and reference materials were reviewed to evaluate potential for special-status species in the Study Area, including available aerial photographs of the sites (Google Earth 2020) and a review of databases and background literature. A site survey was not conducted and the review was restricted to a desktop assessment. These resources included:

- Contemporary aerial photographs (Google Earth 2020)
- California Natural Diversity Database (CNDDB, CDFW 2020)
- California Soil Resources Laboratory (CSRL) online soil viewer (CSRL 2020)
- California Native Plant Society Electronic Inventory (CNPS 2020a)
- Consortium of California Herbaria (CCH 2020)
- National Wetlands Inventory (USFWS 2020a)
- California Aquatic Resources Inventory (SFEI 2020)
- USFWS Information for Planning and Conservation Database (USFWS 2020b)
- eBird Online Database (eBird 2020)
- CDFW Publication, California Bird Species of Special Concern in California (Shuford and Gardali 2008)
- CDFW and University of California Press publication California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- A Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009)
- A Manual of California Vegetation Online (CNPS 2020b)
- Preliminary Descriptions of the Terrestrial Natural Communities (Holland 1986)
- Approved Jurisdictional Delineation, Stevens Creek Quarry (LSA 2017)

Database searches (i.e., CNDDB, CNPS) focused on the Cupertino, Palo Alto, Mountain View, Milpitas, Mindego Hill, San Jose West, Big Basin, Castle Rock Ridge, and Los Gatos 7.5-minute quadrangles (U.S. Geological Survey [USGS] 2018). Figures 3 and 4 in Appendix A contain occurrences of special-status species documented in the CNDDB within a 5-mile radius of the Study Area. This analysis was performed to a level of detail necessary to understand what types of biological constraints may be associated with the Study Area. The conclusions of this report are based on conditions at the time of the analysis and regulatory policies and practices in place

at the time the report was prepared; changes that may occur in the future with regard to conditions, policies, or practices could affect the conclusions presented in this study.

RESULTS

Based on the desktop review, the Study Area contains eight unique biological communities, five of which are considered sensitive by federal, state or local jurisdiction.

The majority of the Study Area consists of non-sensitive biological communities and developed land cover including the activities mining and processing areas, stormwater containment, equipment storage areas, office complex, and roads. Developed areas are often bordered by the next most prevalent non-sensitive biological community, chaparral, which is dominated by species such as California sagebrush (*Artemisia californica*) and coyote brush (*Baccharis pilularis*). Other non-sensitive biological communities within the Study Area include annual grassland.

The five sensitive biological communities present along the edges of the Study Area include California bay forest, oak woodland, cattail marsh, open water (ponds), and drainages.

Sensitive Communities

Sensitive biological communities within the Study Area include oak woodland, California bay forest, cattail marsh, drainages, and open water. Oak woodland is found along portions of the northern boundaries on ridgetops or the upper portions of steep slopes within the Study Area and is co-dominated by coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), and leather oak (*Quercus durata*). Oak woodland is considered a sensitive community by Santa Clara County.

California bay forest is found along the southern boundaries on north and east facing slopes within the Study Area. This biological community was dominated by California bay (*Umbellularia californica*) intermixed with big-leaf maple (*Acer macrophyllum*), coast live oak, and western sycamore (*Platanus racemosa*). California bay forest is considered a sensitive community by CDFW.

Cattail marsh is present along the north and west edge of the westernmost pond in the Study Area. Cattail marsh is dominated by cattail species (*Typha* sp.) with other species such as rabbitfoot grass (*Polypogon monspeliensis*) and narrow leaf willow (*Salix exigua*). In addition to the cattail marsh, other aquatic features; open water ponds and drainages are present. Open water ponds are man-made and utilized as settling ponds for mining operations. These features are typically inundated year-round, and are highly disturbed due to regular dredging activities and surrounding vegetation maintained via herbicide applications. Drainages are also present within the Study Area, some previously manipulated to facilitate mining activities and others unaltered. Drainages both manipulated and un-manipulated are present in the southern portion of the Study Area. While all of the cattail marsh is considered potentially jurisdictional by the Corps, RWQCB, and CDFW, some of the settling ponds and anthropogenically altered drainages are only potentially jurisdictional by the RWQCB and CDFW, and not the Corps (LSA 2017).

Special-status Plant Species

A total of 81 special-status plant species have been documented in the *Cupertino* and eight surrounding USGS 7.5 minute quadrangles. Appendix B describes these species' regulatory

status, habitat requirements, and potential to occur within the Study Area. Of the species documented in the vicinity, 75 are unlikely or have no potential to occur within the Study Area due to one or more of the following reasons:

- Specific edaphic conditions, such as serpentine or volcanic soils, are absent;
- Specific hydrologic conditions, such as riverine or tidal waters, are absent;
- Common associated plant species and vegetation communities are absent;
- The Study Area is above/below the documented elevation range of the species;
- Lack of a viable seed bank due to historic and contemporary soil alterations;
- Non-native species competition; or
- Regular disturbance (e.g., mining operations) of the Study Area

A total of 4 of the 81 special-status plant species have moderate or high potential to occur in the Study Area, a brief description of each species and potential to occur in the Study Area is found below.

Santa Clara red ribbons (*Clarkia concinna* ssp. *automixa*) CRPR 4.3. Moderate Potential. Santa Clara red ribbons is an annual herb in the evening primrose family (Onagraceae) that blooms April through July. It typically occurs on slopes and near intermittent streams in chaparral and cismontane woodland at elevation range 270 to 4,500 feet (CNPS 2020a). Known associated species include coast live oak, slender wild oat (*Avena fatua*), sticky monkey flower (*Mimulus aurantiacus*), poison oak (*Toxicodendron diversilobum*), buckwheat (*Eriogonum nudum*), and woolly sunflower (*Eriophyllum confertiflorum*).

There are multiple CNDDB occurrences west and northwest of the Study Area in similar habitats, therefore Santa Clara red ribbons has moderate potential to occur in the chaparral, forest, and woodland biological communities (CDFW 2020b).

Western leatherwood (*Dirca occidentalis*), CRPR 1B. High Potential. Western leatherwood is a deciduous shrub in the mezereum family (Thymelaeaceae) that blooms from January to April, but is typically identifiable via vegetative structures into late summer and/or early fall. It typically occurs on brushy, mesic slopes in partial shade in broadleaf upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland habitat at elevations range from 165 to 1285 feet (CDFW 2020b, CNPS 2020, Hickman 1993). Observed associated species include coast live oak, California bay, Pacific madrone (*Arbutus menziesii*), poison oak, coyote brush, yerba buena (*Satureja douglasii*), sword fern (*Polystichum munitum*), and Pacific sanicle (*Sanicula crassicaulis*), (CDFW 2020b).

The nearest CNNDB occurrence is just south of the Study Area near the Stevens Creek Reservoir within the Pichetti Ranch Regional Open Space, and was last observed in 2010. Western leatherwood has high potential to occur in the chaparral, California bay forest, and woodland biological communities within the Study Area.

Arcuate bush mallow (*Malacothamnus arcuatus*) 1B.2. Moderate Potential. Arcuate bush mallow is a shrub in the mallow family (Malvaceae) that blooms from April through September. It typically occurs on gravelly alluvium within chaparral, cismontane woodland, valley and foothill grasslands. Observed associated species include California sagebrush (*Artemisia californica*), coyote bush, poison oak (*Toxicodendron diversilobum*), and toyon (*Heteromeles arbutifolia*).

The nearest CNDDB occurrence is roughly 2.3 miles northwest of the Study Area and was last observed in 2018 in the Rancho San Antonio Open Space. Arcuate bush mallow has moderate potential to occur within the chaparral woodlands on the soils derived from alluvium present within the Study Area.

White-flowered rein orchid (*Piperia candida*) CRPR 1B. Moderate Potential. White-flowered rein orchid is a perennial forb in the orchid family (Orchidaceae) that blooms from May to September. It typically occurs on forest duff, mossy banks, rock outcrops, and muskegs in North Coast coniferous forest, lower montane coniferous forest, and broadleaf upland forest habitat at elevations ranging from 95 to 4300 feet (CDFW 2020b, CNPS 2020a). Soil survey data at known locations suggest that this species is typically located on slightly acid (pH 6.5) very gravelly loams derived from sedimentary rock (CDFW 2020b, CSRL 2020). Observed associated species include Douglas fir (*Pseudotsuga menziesii*), tanoak (*Lithocarpus densiflorus*), coyote brush sticky monkey, poison oak, ocean spray (*Holodiscus discolor*), coast wild cucumber (*Marah fabaceus*), Torrey's onion grass (*Melica torreyana*), Italian rye grass, and goldback fern (*Pentagramma triangularis*) (CDFW 2020b).

The nearest CNDDB occurrence is roughly five miles northwest of the Study Area and was last observed in 1992 along Lost Creek Trail in the Los Trancos Open Space Preserve (CDFW 2020b). Other occurrences from 2019 are within similar habitat in the *Big Basin* quad (CNPS 2020a). White-flowered rein orchid has moderate potential to occur along drainages within the understory of forest and woodlands within the Study Area.

Special-status Wildlife Species

A total of 53 special-status wildlife species have been documented in the *Cupertino* and eight surrounding USGS 7.5 minute quadrangles. Appendix B describes these species' regulatory status, habitat requirements, and potential to occur within the Study Area. Of the species documented in the vicinity, 44 are unlikely or have no potential to occur within the Study Area due to one or more of the following reasons:

- Aquatic habitats (e.g., brackish waters or estuaries) necessary to support the special-status wildlife species are not present in the Study Area;
- Vegetation types (e.g., conifer forest, marsh) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present in the Study Area;
- Physical structures and vegetation (e.g., mines, old-growth conifers, cliffs, alkaline flats) necessary to provide nesting, cover, and/or foraging habitat to support the special-status wildlife species are not present in the Study Area;
- The Study Area is outside (e.g., north of, west of) of the special-status wildlife species documented local range (including the nesting/breeding range for birds).

In addition to the aforementioned reasons why species are absent, a documented occurrence of California tiger salamander (*Ambystoma californiense*) on the Permanente Quarry Property approximately 1 mile north of the Study Area has been reviewed and found to have no potential. The validity of this occurrence is questioned (Jennings pers. comm.) due to the age of the reported occurrence (from 1893) and likely misidentification. Therefore, this species was also considered absent.

All special-status wildlife species assessed as having moderate or high potential to occur within the Study Area are discussed below and include: pallid bat (*Antrozous pallidus*), hoary bat (*Lasiurus cinereus*), San Francisco dusky footed woodrat (*Neotoma fuscipes annectens*), yellow warbler (*Setophaga petechia brewsteri*), western pond turtle (*Actinemys marmorata*), Santa Cruz black salamander (*Aneides flavipunctatus niger*), California giant salamander (*Dicamptodon ensatus*), California red-legged frog (CRLF; *Rana draytonii*), and red-bellied newt (*Taricha rivularis)*.

Pallid bat (*Antrozous pallidus*). CDFW Species of Special Concern, WBWG High Priority. Moderate Potential. The pallid bat is broadly distributed throughout much of western North America and typically occurs in association with open, rocky areas. Occupied habitats are highly variable and range from deserts to forests in lowland areas, and include higher-elevation forests. Roosting may occur singly or in groups of up to hundreds of individuals. Roosts must offer protection from high temperatures and are typically in rock crevices, mines, caves, or tree hollows; manmade structures are also used, including buildings (both vacant and occupied) and bridges. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight (WBWG 2020). The Study Area contains trees which may provide suitable roosting habitat by this species.

Hoary bat (*Lasiurus cinereus*), WBWG Medium Priority. Moderate Potential. Hoary bats are highly associated with forested habitats in the western United States, particularly in the Pacific Northwest. They are a solitary species and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches, usually at the edge of a clearing. Roosts are typically 10 to 30 feet above the ground. They have also been documented roosting in caves, beneath rock ledges, in woodpecker holes, in grey squirrel nests, under driftwood, and clinging to the side of buildings, though this behavior is not typical. Hoary bats are thought to be highly migratory, however, wintering sites and migratory routes have not been well documented. This species tolerates a wide range of temperatures and has been captured at air temperatures between 0 and 22 degrees Celsius. Hoary bats probably mate in the fall, with delayed implantation leading to birth in May through July. They usually emerge late in the evening to forage, typically from just over one hour after sunset to after midnight. This species reportedly has a strong preference for moths, but is also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps (WBWG 2020). The Study Area contains trees which may provide suitable roosting habitat by this species.

San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), CDFW Species of Special Concern. High Potential. This subspecies of the dusky-footed woodrat occurs in the Coast Ranges between San Francisco Bay and the Salinas River (Matocq 2003). Occupied habitats are variable and include forest, woodland, riparian areas, and chaparral. Woodrats feed on woody plants, but will also consume fungi, grasses, flowers and acorns. Foraging occurs on the ground and in bushes and trees. This species constructs robust stick houses/structures in areas with moderate cover and a well-developed understory containing woody debris. Breeding takes place from December to September. Individuals are active year-round, and generally nocturnal. The Study Area contains suitable woodland habitat and may support this species.

(Brewster's) Yellow warbler (*Setophaga petechia brewsteri*), CDFW Species of Special Concern. Moderate Potential. The yellow warbler is a neotropical migrant bird that is widespread in North America, but has declined throughout much of its California breeding range. The Brewster's (*brewsteri*) subspecies is a summer resident and represents the vast majority of yellow warblers that breed in California. West of the Central Valley, typical yellow warbler breeding habitat consists of dense riparian vegetation along watercourses, including wet meadows, with willow

growth especially being favored (Shuford and Gardali 2008). Insects comprise the majority of the diet. The Study Area contain streams and riparian vegetation that may support this species.

Western pond turtle (*Actinemys marmorata*), CDFW Species of Special Concern. Moderate Potential. The western pond turtle (WPT) is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and Transverse Ranges. WPT inhabits annual and perennial aquatic habitats, such as coastal lagoons, lakes, ponds, marshes, rivers, and streams from sea level to 5,500 feet in elevation. Pond turtles also occupies man-made habitats such as stock ponds, wastewater storage, percolation ponds, canals, and reservoirs. This species requires low-flowing or stagnant freshwater aquatic habitat with suitable basking structures, including rocks, logs, algal mats, mud banks, and sand. Warm, shallow, nutrient-rich waters are ideal as they support prey items, which include aquatic invertebrates and occasionally fish, carrion, and vegetation. Turtles require suitable aquatic habitat for most of the year; however, WPT often occupies creeks, rivers, and coastal lagoons that become seasonally unsuitable. To escape periods of high water flow, high salinity, or prolonged dry conditions, WPT may move upstream and/or take refuge in vegetated, upland habitat for up to four months (Rathbun et al. 2002). Although upland habitat is utilized for refuging and nesting, this species preferentially utilizes aquatic and riparian corridors for movement and dispersal. Detention ponds lacking vegetated banks and emergent vegetation are not suitable for this species. In addition, the Study Area does not provide friable soils for nesting. However, aquatic habitat is present within the Study Area and no significant barriers to dispersal are present. As such, this species may occasionally occur within or disperse through streams or manmade ponds with vegetated banks within the Study Area.

Santa Cruz black salamander (*Aneides flavipunctatus niger*), CDFW Species of Special Concern. Moderate Potential. Climbing salamanders of the genus *Aneides* frequent damp woodlands and are usually found hiding under various debris (i.e. bark, woodrat nests, logs). The Santa Cruz black salamander exists south of the San Francisco Bay and was only recently recognized as a separate and protected species. They are a black salamander, 2-4 inches long from snout to vent, some with pale spots (Stebbins and McGinnis 2012). Santa Cruz black salamander is highly sedentary, preferring to stay hidden under riparian debris. Prey items include millipedes, spiders, and other insects (Stebbins and McGinnis 2012). The creeks and forested habitat along the southern extent of the Study Area may provide suitable habitat for this species. The majority of the Study Area is disturbed and unvegetated and is not suitable for this species.

California giant salamander (*Dicamptodon ensatus*). CDFW Species of Special Concern. High Potential. The California giant salamander is endemic to the north-central California Coast Ranges, and occurs in two discrete areas north and south of San Francisco Bay respectively. This species primarily occupies moist coniferous and mixed forests, but is also found along streams in coastal woodland and chaparral areas. Adults are largely terrestrial and fossorial, but similar to other fossorial amphibians, can be active at or near the surface in wet conditions such as high humidity or rain events (Thomson et al. 2016). Discoveries of this species at burrows are restricted to wet, shaded along streams, stream banks, and moist road cuts, and only above ground during fall and winter rain events (Fellers et al 2010, Thomson et al 2016). Observations of this species underground come from work in streams and individuals were always within refugia in proximity to creek or spring features (Feller et al 2010). Breeding occurs in cold, permanent or semi-permanent streams, often in headwater reaches. Larvae typically remain aquatic for over a year before metamorphosing (Thomson et al. 2016). Some larvae never undergo metamorphosis, and become reproductively mature while remaining aquatic. Prey consists of a variety of invertebrates and small vertebrates. This species has been documented upstream of the Study Area in Montebello Creek, which flows into Swiss Creek. (CDFW 2020). The creeks

and forested habitat along the southern extent of the Study Area may provide suitable habitat for this species.

California red-legged frog (*Rana draytonii*), Federal Threatened Species, CDFW Species of Special Concern. Moderate Potential. The California red-legged frog is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. California red-legged frogs aestivate (period of inactivity) during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds. CRLF have been documented within 0.5 miles of the Study Area as recently as 2017 (CDFW 2020). Ponded areas within the Study Area may provide suitable habitat for the species.

Red-bellied newt (*Taricha rivularis*). CDFW Species of Special Concern. Moderate Potential. The red-bellied newt is endemic to the California Coast Ranges from southern Sonoma County through central Humboldt County. Cool coastal forests (typically coniferous) provide typical habitat, though this species also occupies hardwood forests. Similar to other newts, adults are primarily terrestrial but shift annually between terrestrial and aquatic (breeding) phases. Breeding occurs during the spring in mountain streams, usually with moderate to high flow and rocky substrates; ponds are only rarely used (Thomson et al. 2016). Although this species often shows fidelity to certain stream reaches, adults are capable of moving a mile or more from year to year (Thomson et al. 2016). An isolated population of this species exists in Santa Clara County over 2 miles west of the Study Area. This species has not been documented in Swiss Creek or its tributaries. However, given the proximity to a known population and the presence of stream habitat, this species has moderate potential to occur within the Study Area.

Critical Habitat and Wildlife Corridors

The Study Area does not contain any designated Critical Habitat.

The Study Area is classified as some of the least permeable landscapes (less conducive to wildlife movement) in the Essential Connectivity Areas mapped within the BIOS system (CDFW 2014). The undeveloped portions of the Santa Cruz Mountains lie to the south and west of the Study Area and provide more suitable habitat to facilitate movement of wildlife. Wildlife may occasionally traverse through the Study Area. However, given the disturbed nature of the site and because it does not link areas of core habitat, the Study Area does not serve as a wildlife corridor.

Please do not hesitate to contact our office should you have any questions, comments, or concerns.

Sincerely,

Kari Dupler
Senior Biologist
WRA, Inc.

Appendices:

Appendix A: Figures
Figure 1. Study Area Regional Location Map
Figure 2. Study Area Overview
Figure 3. Special-status Plant Species Documented within 5 miles of the Study Area
Figure 4. Special-status Wildlife Species Documented within 5 miles of the Study Area
Appendix B: Special-status Species Potentials Table

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Appendix A – Figures

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Sources: National Geographic, WRA | Prepared By: JSChuster, 12/8/2020

Figure 1. Study Area Regional Location Map

Stevens Creek Quarry
Biological Constraints
Cupertino, Santa Clara County, California

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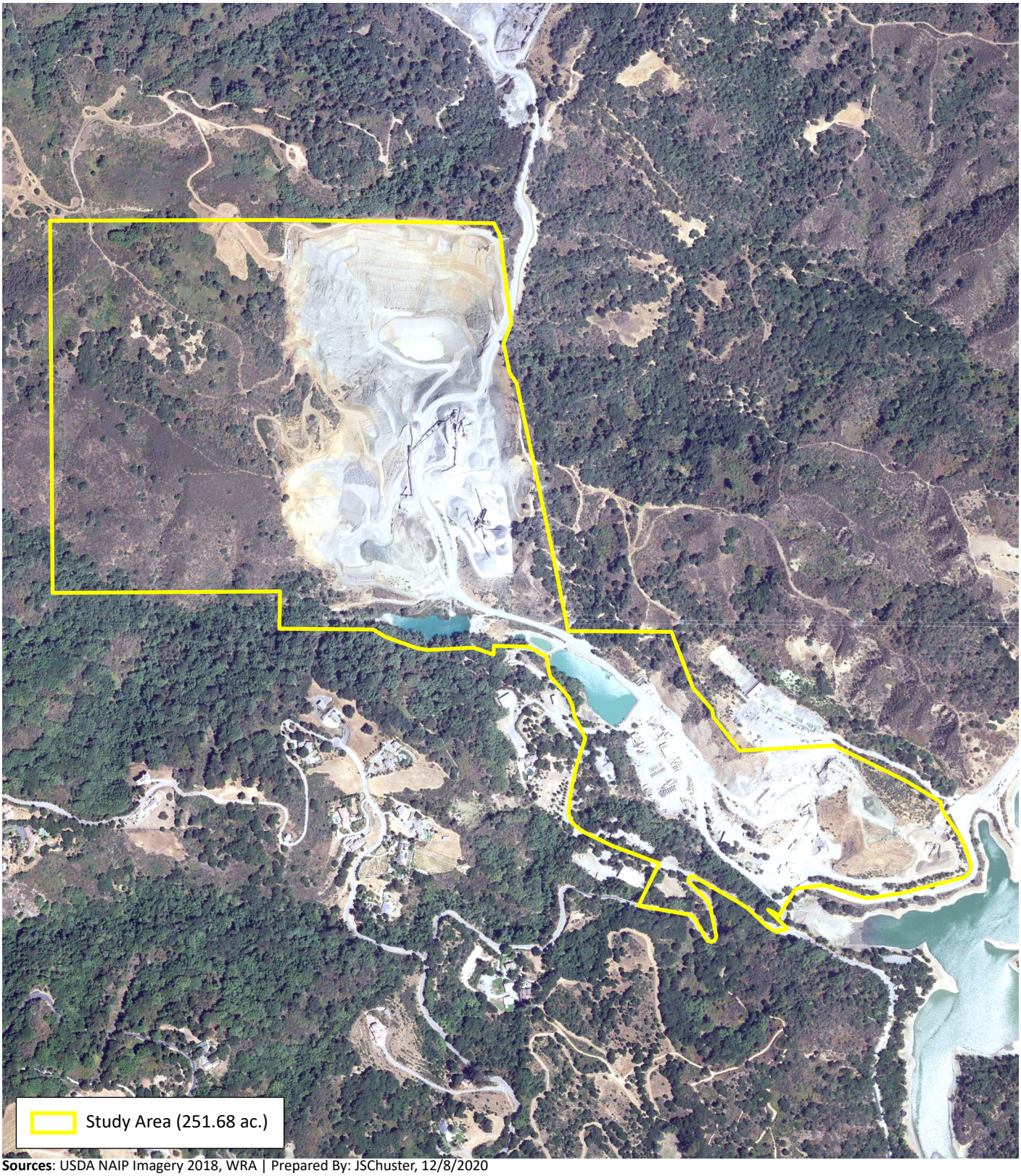

Sources: USDA NAIP Imagery 2018, WRA | Prepared By: JSChuster, 12/8/2020

Figure 2. Study Area Overview

Stevens Creek Quarry
Biological Constraints
Cupertino, Santa Clara County, California

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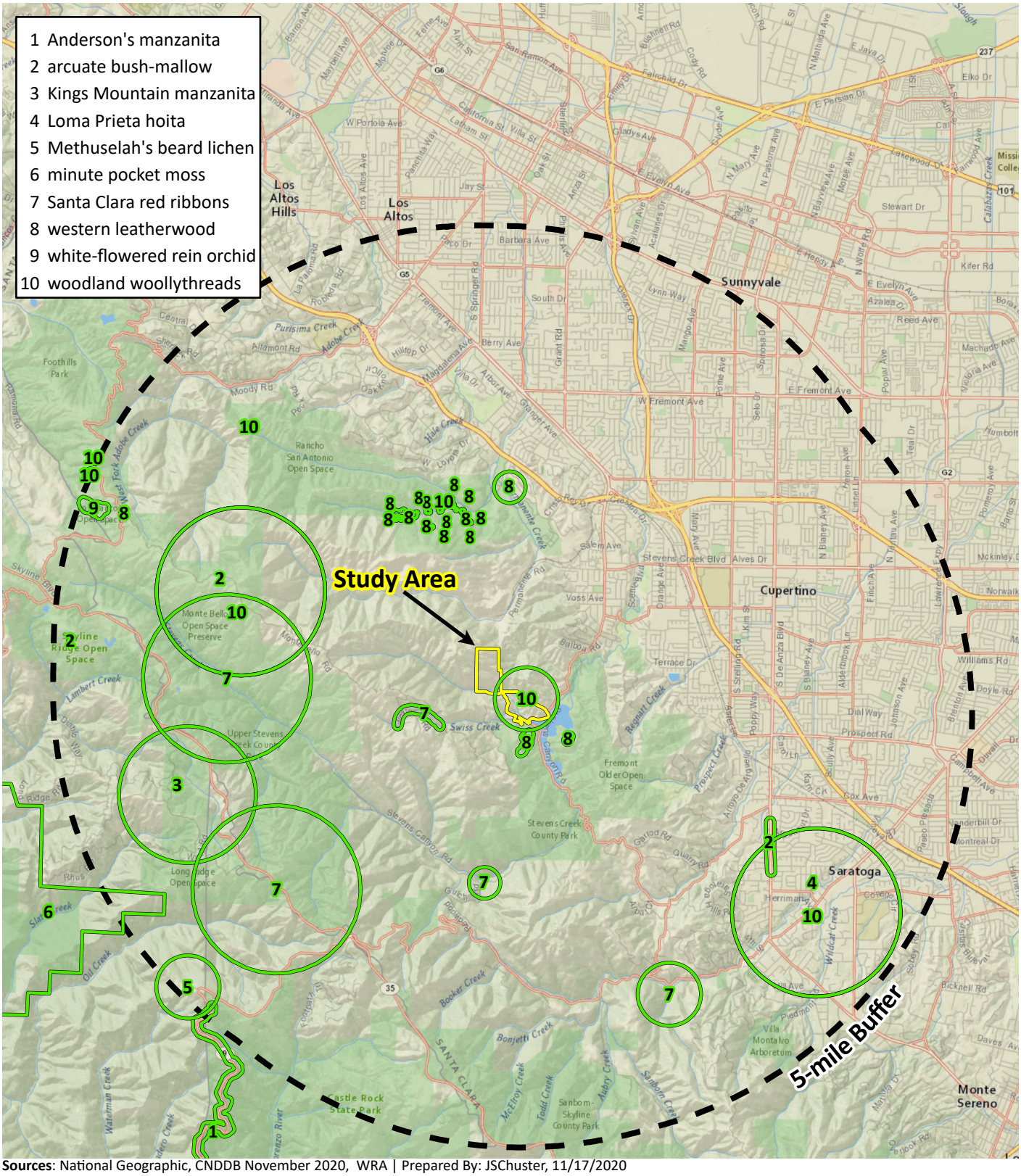
ENVIRONMENTAL CONSULTANTS



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Sources: National Geographic, CNDDB November 2020, WRA | Prepared By: JSChuster, 11/17/2020

Figure 3. Special-Status Plant Species Documented within 5-miles of the Study Area

Stevens Creek Quarry
Biological Constraints
Cupertino, Santa Clara County, California

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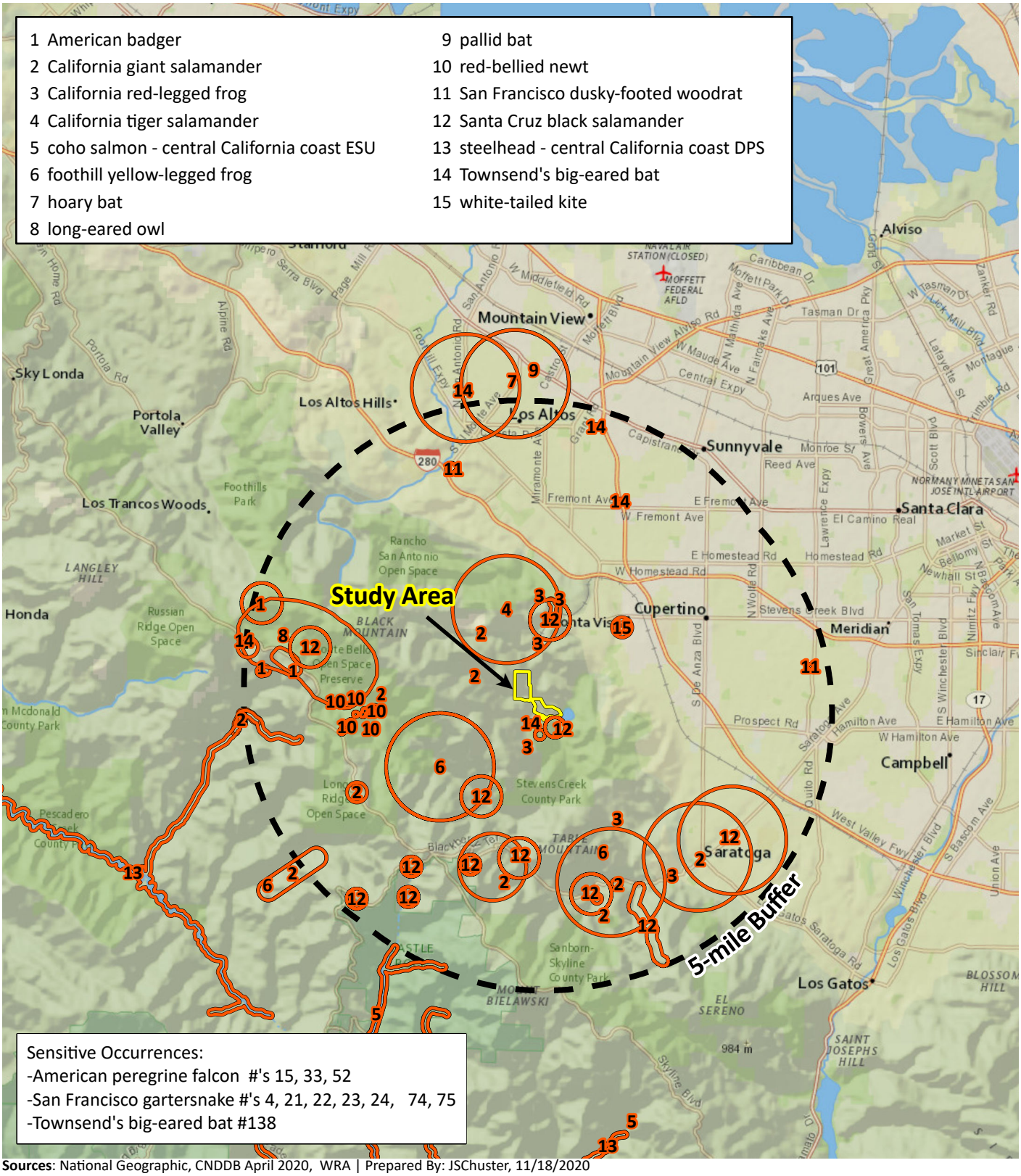

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Sources: National Geographic, CNDDB April 2020, WRA | Prepared By: JSChuster, 11/18/2020

Figure 4. Special-Status Wildlife Species Documented within 5-miles of the Study Area

Stevens Creek Quarry
Biological Constraints
Cupertino, Santa Clara County, California

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Appendix B – Special-status Species Potentials Table

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Appendix B. Potential for special-status plant and wildlife species to occur in the Study Area. List compiled from the California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CDFW 2020B), U.S. Fish and Wildlife Service (USFWS) Species Lists (USFWS 2020), and California Native Plant Society (CNPS) Electronic Inventory (CNPS 2020b) searches of the Cupertino and surrounding eight USGS 7.5' quadrangles.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
PLANTS				
San Mateo thorn-mint *Acanthomintha duttonii*	FE, SE, Rank 1B.1	Chaparral, valley and foothill grassland. Elevation ranges from 160 to 985 feet (50 to 300 meters). Blooms Apr-Jun.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While chaparral is present, this species is seriously threatened by development, non-native plants and vehicles. Due to the proximity of chaparral habitat to the mining activities, this species is unlikely to be present. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Franciscan onion *Allium peninsulare* var. *franciscanum*	Rank 1B.2	Cismontane woodland, valley and foothill grassland. Elevation ranges from 170 to 1000 feet (52 to 305 meters). Blooms (Apr)May-Jun.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While cismontane woodland is present, this species is threatened by development, non-native plants and vehicles. Due to the proximity of cismontane woodland habitat to the mining activities, this species is unlikely to be present. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
bent-flowered fiddleneck *Amsinckia lunaris*	Rank 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation ranges from 5 to 1640 feet (3 to 500 meters). Blooms Mar-Jun.	**Unlikely.** The Study Area does not contain any coastal bluff scrub, valley or foothill grasslands. While cismontane woodland is present, this species is threatened by development and mining. Due to the proximity of cismontane woodland habitat to the mining activities, this species is unlikely to be present. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
California androsace *Androsace elongata* ssp. *acuta*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland. Elevation ranges from 490 to 4280 feet (150 to 1305 meters). Blooms Mar-Jun.	**Unlikely.** The Study Area does not contain any coastal scrub, meadows, seeps, pinyon or juniper woodland, valley or foothill grasslands. While chaparral is present, this species is threatened by non-native plants. Due to the proximity of chaparral habitat to the mining activities, this species is unlikely to be present. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
slender silver moss *Anomobryum julaceum*	Rank 4.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 325 to 3280 feet (100 to 1000 meters).	**Unlikely.** The Study Area does not contain any acidic substrates with a broadleafed upland forest, lower montane coniferous forest, or north coast coniferous forest overstory. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
coast rockcress *Arabis blepharophylla*	Rank 4.3	Broadleafed upland forest, coastal bluff scrub, coastal prairie, coastal scrub. Elevation ranges from 5 to 3610 feet (3 to 1100 meters). Blooms Feb-May.	**No Potential.** The Study Area does not contain any coastal bluff scrub, coastal prairie, or coastal scrub. While broadleafed upland forest is present, this species is threatened by competition, and due to the proximity to the mining operations, broadleafed upland forest within the Study Area contain an abundance of non-native species in the understory. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Anderson's manzanita *Arctostaphylos andersonii*	Rank 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Elevation ranges from 195 to 2495 feet (60 to 760 meters). Blooms Nov-May.	**Unlikely.** While the Study Area does not contain any north coast coniferous forest, both broadleafed upland forest and chaparral are present. However this species is mostly associated with open sites with redwoods, which the Study Area lacks. There is a CNDDB occurrence from 2013 approximately 5 miles southwest of the Study Area (CDFW 2020b).	No further recommendations for this species.
Schreiber's manzanita *Arctostaphylos glutinosa*	Rank 1B.2	Closed-cone coniferous forest, chaparral. Elevation ranges from 555 to 2245 feet (170 to 685 meters). Blooms (Nov)Mar-Apr.	**Unlikely.** The Study Area does not contain closed-cone coniferous forest. While chaparral is present, this species is threatened by road development. Due to the proximity of chaparral habitat to the mining activities, this species is unlikely to be present. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Ohlone manzanita *Arctostaphylos ohloneana*	Rank 1B.1	Closed-cone coniferous forest, coastal scrub. Elevation ranges from 1475 to 1740 feet (450 to 530 meters). Blooms Feb-Mar.	**Unlikely.** The Study Area does not contain any closed cone coniferous forest or coastal scrub. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Kings Mountain manzanita *Arctostaphylos regismontana*	Rank 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Elevation ranges from 1000 to 2395 feet (305 to 730 meters). Blooms Dec-Apr.	**Unlikely.** The Study Area does not contain any coastal bluff scrub, coastal prairie, or coastal scrub. While broadleafed upland forest is present, this species is threatened by competition, and due to the proximity to the mining operations, broadleafed upland forest within the Study Area contain an abundance of non-native species in the understory. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Bonny Doon manzanita *Arctostaphylos silvicola*	Rank 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest. Elevation ranges from 390 to 1970 feet (120 to 600 meters). Blooms Jan-Mar.	**Unlikely.** The Study Area does not contain any closed-cone coniferous forest or lower montane coniferous forest. While chaparral is present, this species is threatened by mining and urbanization. Due to the proximity of chaparral habitat to the mining activities, this species is unlikely to be present. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
alkali milk-vetch *Astragalus tener* var. *tener*	Rank 1B.2	Playas, valley and foothill grassland (adobe clay), vernal pools. Elevation ranges from 0 to 195 feet (1 to 60 meters). Blooms Mar-Jun.	**No Potential.** The Study Area does not contain playas, valley or foothill grasslands on adobe clay, or vernal pools. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
brittlescale *Atriplex depressa*	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1050 feet (1 to 320 meters). Blooms Apr-Oct.	**Unlikely.** The Study Area does not contain any chenopod scrub, meadows, seeps, plays, valley or foothill grasslands, or vernal pools. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
lesser saltscale *Atriplex minuscula*	Rank 1B.1	Chenopod scrub, playas, valley and foothill grassland. Elevation ranges from 45 to 655 feet (15 to 200 meters). Blooms May-Oct.	**Unlikely.** The Study Area does not contain any chenopod scrub, playas, valley or foothill grasslands. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Brewer's calandrinia *Calandrinia breweri*	Rank 4.2	Chaparral, coastal scrub. Elevation ranges from 30 to 4005 feet (10 to 1220 meters). Blooms (Jan)Mar-Jun.	**Unlikely.** The Study Area does not contain any coastal scrub. While chaparral is present this species is threatened by urbanization. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Santa Cruz Mountains pussypaws *Calyptridium parryi* var. *hesseae*	Rank 1B.1	Chaparral, cismontane woodland. Elevation ranges from 1000 to 5020 feet (305 to 1530 meters). Blooms May-Aug.	**No Potential.** While chaparral and cismontane woodland is present this species is threatened by development, non-native plants, and mining. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	Rank 1B.1	Valley and foothill grassland (alkaline). Elevation ranges from 0 to 755 feet (0 to 230 meters). Blooms May-Oct(Nov).	**Low Potential.** Although Congdon's tarplant has been observed in disturbed habitats, the Study Area does not contain any alkaline valley or foothill grasslands. There are no nearby CNDDB occurrences for this species (CDFW 2020).	No further recommendations for this species.
Point Reyes bird's-beak *Chloropyron maritimum* ssp. *palustre*	Rank 1B.2	Marshes and swamps (coastal salt). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Jun-Oct.	**Unlikely.** The Study Area does not contain any marshes. There are no nearby CNDDB occurrences for this species (CDFW 2020).	No further recommendations for this species.
Ben Lomond spineflower *Chorizanthe pungens* var. *hartwegiana*	FE, Rank 1B.1	Lower montane coniferous forest (maritime ponderosa pine sandhills). Elevation ranges from 295 to 2000 feet (90 to 610 meters). Blooms Apr-Jul.	**Unlikely.** The Study Area does contain any lower montane coniferous forest specifically maritime ponderosa pine sandhills. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
robust spineflower *Chorizanthe robusta* var. *robusta*	FE, Rank 1B.1	Chaparral (maritime), cismontane woodland (openings), coastal dunes, coastal scrub. Elevation ranges from 5 to 985 feet (3 to 300 meters). Blooms Apr-Sep.	**Unlikely.** The Study Area does contain any maritime chaparral, coastal dunes, or coastal scrubs. While cismontane woodland is present this species is threated by development, mining and non-native plants. Due to the cismontane woodland proximity to mining operations this species is unlikely to be present. There are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Mt. Hamilton fountain thistle *Cirsium fontinale* var. *campylon*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 325 to 2920 feet (100 to 890 meters). Blooms (Feb)Apr-Oct.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While chaparral and cismontane woodland is present this species is threated by foot by urbanization, trampling, and non-native plants. . Due to the suitable habitat proximity to mining operations this species is unlikely to be present. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Crystal Springs fountain thistle *Cirsium fontinale* var. *fontinale*	FE, SE, Rank 1B.1	Chaparral (openings), cismontane woodland, meadows and seeps, valley and foothill grassland. Elevation ranges from 145 to 575 feet (45 to 175 meters). Blooms (Apr)May-Oct.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands, or meadows or seeps. While chaparral and cismontane woodland is present this species is seriously threated by foot traffic, road maintenance, and non-native plants. Due to the suitable habitat proximity to mining operations this species is unlikely to be present.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
			Additionally, there are no nearby CNDDB occurrences for this species (CDFW 2020b).	
lost thistle *Cirsium praeteriens*	Rank 1A	!unkno. Elevation ranges from 0 to 330 feet (0 to 100 meters). Blooms Jun-Jul.	**No Potential.** There are no recent documentations of this species since 1901 (CDFW 2020b).	No further recommendations for this species.
Brewer's clarkia *Clarkia breweri*	Rank 4.2	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 705 to 3660 feet (215 to 1115 meters). Blooms Apr-Jun.	**Unlikely.** The Study Area does not contain any coastal scrub. While chaparral and cismontane woodland are present this species is often found on serpentine which is not present as well as being threatened by construction. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally, there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Santa Clara red ribbons *Clarkia concinna* spp. *automixa*	Rank 4.3	Chaparral, cismontane woodland. Elevation ranges from 295 to 4920 feet (90 to 1500 meters). Blooms (Apr)May-Jun(Jul).	**Moderate Potential.** The Study Area contains chaparral and cismontane woodland. This species is also found on slopes near drainages, which are both present within Study Area. Additionally, there are multiple CNDDB occurrences within 5 miles of the Study Area (CDFW 2020b).	Protocol level surveys during this species blooming period are recommended.
Lewis' clarkia *Clarkia lewisii*	Rank 4.3	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub. Elevation ranges from 95 to 3920 feet (30 to 1195 meters). Blooms May-Jul.	**Unlikely.** The Study Area does not contain any closed-cone coniferous forest or coastal scrub. While broadleafed upland forest, cismontane woodland, and chaparral are present this species is threatened by non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally, there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
round-headed Chinese-houses *Collinsia corymbosa*	Rank 1B.2	Coastal dunes. Elevation ranges from 0 to 65 feet (0 to 20 meters). Blooms Apr-Jun.	**No Potential.** The Study Area does not contain any coastal dunes.	No further recommendations for this species.
San Francisco collinsia *Collinsia multicolor* *Collinsia multicolor*	Rank 1B.2	Closed-cone coniferous forest, coastal scrub. Elevation ranges from 95 to 820 feet (30 to 250 meters). Blooms (Feb)Mar-May.	**No Potential.** The Study Area does not contain any closed-coniferous forest or coastal scrub. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
clustered lady's-slipper *Cypripedium fasciculatum*	Rank 4.2	Lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 325 to 7990 feet (100 to 2435 meters). Blooms Mar-Aug.	**No Potential.** The Study Area does not contain any coniferous forest. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020).	No further recommendations for this species.
western leatherwood *Dirca occidentalis*	Rank 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. Elevation ranges from 80 to 1395 feet (25 to 425 meters). Blooms Jan-Mar(Apr).	**High Potential.** The Study Area does not contain any coniferous forest, riparian forest or woodlands. However broadleafed upland forest, cismontane woodland and chaparral is present. Additionally there are multiple CNDDB occurrences within 5 miles of the Study Area (CDFW 2020b).	Protocol level surveys during this species blooming period are recommended.
Santa Clara Valley dudleya *Dudleya abramsii* ssp. *setchellii*	FE, Rank 1B.1	Cismontane woodland, valley and foothill grassland. Elevation ranges from 195 to 1495 feet (60 to 455 meters). Blooms Apr-Oct.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While cismontane woodland is present this species is threatened by urbanization, development, vehicles, and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Ben Lomond buckwheat *Eriogonum nudum* var. *decurrens*	Rank 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest (maritime ponderosa pine sandhills). Elevation ranges from 160 to 2625 feet (50 to 800 meters). Blooms Jun-Oct.	**Unlikely.** This species is known from ponderosa pine sandhills in Santa Cruz County which the Study Area does not contain. While chaparral and cismontane woodland is present this species is threatened by development. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
San Mateo woolly sunflower *Eriophyllum latilobum*	FE, SE, Rank 1B.1	Cismontane woodland (often serpentine, on roadcuts), coastal scrub, lower montane coniferous forest. Elevation ranges from 145 to 1085 feet (45 to 330 meters). Blooms May-Jun.	**Unlikely.** The Study Area does not contain any lower montane coniferous forest or coastal scrub. While cismontane woodland is present this species is threated by development, erosion, and road maintenance. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	Rank 1B.1	Vernal pools. Elevation ranges from 5 to 150 feet (3 to 45 meters). Blooms (Jun)Jul(Aug).	**No Potential.** The Study Area does not contain any vernal pools.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Jepson's coyote thistle *Eryngium jepsonii*	Rank 1B.2	Valley and foothill grassland, vernal pools. Elevation ranges from 5 to 985 feet (3 to 300 meters). Blooms Apr-Aug.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands, or vernal pools. Additionally this species is threatened by development and therefore due to the proximity to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
San Joaquin spearscale *Extriplex joaquinana*	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Elevation ranges from 0 to 2740 feet (1 to 835 meters). Blooms Apr-Oct.	**No Potential.** This species is known to be present in alkaline conditions in chenopod scrub, meadows and seeps, playas, valley and foothill grassland which the Study Area does not contain. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
minute pocket moss *Fissidens pauperculus*	Rank 1B.2	North coast coniferous forest (damp coastal soil). Elevation ranges from 30 to 3360 feet (10 to 1024 meters).	**Unlikely.** The Study Area does not contain north coast coniferous forest on damp coastal soils. While there are multiple CNDDB occurrences within 5 miles of the Study Area, these occurrences are present with coastal conditions which as described above the Study Area does not contain (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
fragrant fritillary *Fritillaria liliacea*	Rank 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 5 to 1345 feet (3 to 410 meters). Blooms Feb-Apr.	**Unlikely.** The Study Area does not contain any coastal prairie, coastal scrub, and valley or foothill grasslands. While cismontane woodland is present this species is threated by urbanization, non-native plants, and foot traffic. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
phlox-leaf serpentine bedstraw *Galium andrewsii* ssp. *gatense*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 490 to 4755 feet (150 to 1450 meters). Blooms Apr-Jul.	**Unlikely.** The Study Area does not contain any lower montane coniferous forest. While chaparral and cismontane woodland is present this species is found on serpentine soils which the Study Area does not contain. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Toren's Grimmia *Grimmia torenii*	Rank 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 1065 to 3805 feet (325 to 1160 meters).	**Unlikely.** The Study Area does not contain any lower montane coniferous forest. While chaparral and cismontane woodland is present, due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
vaginulate grimmia *Grimmia vaginulata*	Rank 1B.1	Chaparral (openings). Elevation ranges from 2245 to 2245 feet (685 to 685 meters).	**No Potential.** While chaparral is present, due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
short-leaved evax *Hesperevax sparsiflora* var. *brevifolia*	Rank 1B.2	Coastal bluff scrub (sandy), coastal dunes, coastal prairie. Elevation ranges from 0 to 705 feet (0 to 215 meters). Blooms Mar-Jun.	**No Potential.** The Study Area does not contain any sandy coastal bluff scrubs, coastal dunes, or coastal prairie.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Santa Cruz cypress *Hesperocyparis abramsiana* var. *abramsiana*	FT, SE, Rank 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest. Elevation ranges from 915 to 2625 feet (280 to 800 meters).	**Unlikely.** The Study Area does not contain any closed-cone coniferous forest or lower montane coniferous forest. While chaparral is present this species is threatened by development. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Butano Ridge cypress *Hesperocyparis abramsiana* var. *butanoensis*	FT, SE, Rank 1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest. Elevation ranges from 1310 to 1610 feet (400 to 490 meters). Blooms Oct.	**Unlikely.** The Study Area does not contain any closed-cone coniferous forest or lower montane coniferous forest. While chaparral is present this species is threatened by alteration of fire regimes and usually found on sandstone. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Marin western flax *Hesperolinon congestum*	FT, ST, Rank 1B.1	Chaparral, valley and foothill grassland. Elevation ranges from 15 to 1215 feet (5 to 370 meters). Blooms Apr-Jul.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While chaparral is present this species is threatened by development, non-native plants, and foot traffic. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Loma Prieta hoita *Hoita strobilina*	Rank 1B.1	Chaparral, cismontane woodland, riparian woodland. Elevation ranges from 95 to 2820 feet (30 to 860 meters). Blooms May-Jul(Aug-Oct).	**Unlikely.** The Study Area does not contain any riparian woodland. While cismontane woodland and chaparral are present this species is threatened by foot traffic and urbanization. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. While there is a CNDDB occurrence within 5 miles of the Study Area this occurrence is from 1913 and on serpentine soil, which the Study Area does not contain (CDFW 2020b).	No further recommendations for this species.
coast iris *Iris longipetala*	Rank 4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps. Elevation ranges from 0 to 1970 feet (0 to 600 meters). Blooms Mar-May.	**Unlikely.** The Study Area does not contain coastal prairie, lower montane coniferous forest, meadows or seeps. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species
Contra Costa goldfields *Lasthenia conugens*	FE, Rank 1B.1	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun.	**No Potential.** The Study Area does not contain any playas, valley or foothill grasslands, or vernal pools. While cismontane woodland is present this species is threated by development, habitat alteration, hydrological alterations, and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
			nearby CNDDB occurrences for this species (CDFW 2020b).	
legenere *Legenere limosa*	Rank 1B.1	Vernal pools. Elevation ranges from 0 to 2885 feet (1 to 880 meters). Blooms Apr-Jun.	**No Potential.** The Study Area does not contain any vernal pools.	No further recommendations for this species.
serpentine leptosiphon *Leptosiphon ambiguus*	Rank 4.2	Cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 390 to 3705 feet (120 to 1130 meters). Blooms Mar-Jun.	**Unlikely.** The Study Area does not contain any coastal scrub, valley or foothill grasslands. While cismontane woodland is present this species is threatened by non-native plants and habitat alteration. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
woolly-headed Lessingia *Lessingia hololeuca*	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 45 to 1000 feet (15 to 305 meters). Blooms Jun-Oct.	**No Potential.** The Study Area does not contain any coastal scrub, lower montane coniferous forest, and valley or foothill grasslands. While broadleafed upland forest is present this species is threatened by non-native plants. Due to the proximity	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
			of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	
smooth Lessingia *Lessingia micradenia* var. *glabrata*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 390 to 1380 feet (120 to 420 meters). Blooms (Apr-Jun)Jul-Nov.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While chaparral and cismontane woodland is present this species is known for serpentine conditions in addition to being threatened by development and vehicles. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
arcuate bush-mallow *Malacothamnus arcuatus*	Rank 1B.2	Chaparral, cismontane woodland. Elevation ranges from 45 to 1165 feet (15 to 355 meters). Blooms Apr-Sep.	**Moderate Potential.** The Study Area contains chaparral and cismontane woodland as well gravelly alluvium soils. Additionally there is a nearby CNDDB occurrence within 5 miles of the Study Area.	Protocol level surveys during this species blooming period are recommended.
Davidson's bush-mallow *Malacothamnus davidsonii*	Rank 1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland. Elevation ranges from 605 to 3740 feet (185 to 1140 meters). Blooms Jun-Jan.	**Unlikely.** The Study Area does not contain any coastal scrub or riparian woodland. While chaparral or cismontane woodland is present this species is known for sandy washes as well as being threatened by development and erosion. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
			nearby CNDDB occurrences for this species (CDFW 2020b).	
Hall's bush-mallow *Malacothamnus hallii*	Rank 1B.2	Chaparral, coastal scrub. Elevation ranges from 30 to 2495 feet (10 to 760 meters). Blooms (Apr)May-Sep(Oct).	**Unlikely.** The Study Area does not contain any coastal scrub. While chaparral is present this species is threatened by development and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Mt. Diablo cottonweed *Micropus amphibolus*	Rank 3.2	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 2705 feet (45 to 825 meters). Blooms Mar-May.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While broadleafed upland forest, chaparral, and cismontane woodland is present, due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
woodland woollythreads *Monolopia gracilens*	Rank 1B.2	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), valley and foothill grassland. Elevation ranges from 325 to 3935 feet (100 to 1200 meters). Blooms (Feb)Mar-Jul.	**Unlikely.** The Study Area does not contain any north coast coniferous forest, valley or foothill grasslands. Previous sightings of this species are from 1956. It is assumed extirpated from this area.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
prostrate vernal pool navarretia *Navarretia prostrata*	Rank 1B.1	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools. Elevation ranges from 5 to 3970 feet (3 to 1210 meters). Blooms Apr-Jul.	**Unlikely.** The Study Area does not contain any coastal scrub, meadows, seeps, valley or foothill grasslands on alkaline soils, or vernal pools. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species
Dudley's lousewort *Pedicularis dudleyi*	SR, Rank 1B.2	Chaparral (maritime), cismontane woodland, north coast coniferous forest, valley and foothill grassland. Elevation ranges from 195 to 2955 feet (60 to 900 meters). Blooms Apr-Jun.	**Unlikely.** The Study Area does not contain any maritime chaparral, north coast coniferous forest, and valley or foothill grasslands. While cismontane woodland is present this species is threatened by foot traffic and erosion. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Santa Cruz Mountains beardtongue *Penstemon rattanii* var. *kleei*	Rank 1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 1310 to 3610 feet (400 to 1100 meters). Blooms May-Jun.	**Unlikely.** The Study Area does not contain any lower montane coniferous forest and north coast coniferous forest. While chaparral is present due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
white-rayed pentachaeta *Pentachaeta bellidiflora*	FE, SE, Rank 1B.1	Cismontane woodland, valley and foothill grassland (often serpentine). Elevation ranges from 110 to 2035 feet (35 to 620 meters). Blooms Mar-May.	**Unlikely.** The Study Area does not contain valley or foothill grasslands. While cismontane woodland is present this species is threatened by development. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
white-flowered rein orchid *Piperia candida*	Rank 1B.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 95 to 4300 feet (30 to 1310 meters). Blooms (Mar)May-Sep.	**Moderate Potential.** The Study Area does not contain any lower montane coniferous forest or north coast coniferous forest. However broadleafed upland forest is present in addition to there being a CNDDB occurrence species last observed in 1992 approximately 5 miles northwest of the Study Area. While this species is threatened by development, it has potential to occur within the natural drainages within forests and woodlands within the Study Area (CDFW 2020b).	Protocol level surveys during this species blooming period are recommended.
Choris' popcornflower *Plagiobothrys chorisianus* var. *chorisianus*	Rank 1B.2	Chaparral, coastal prairie, coastal scrub. Elevation ranges from 5 to 525 feet (3 to 160 meters). Blooms Mar-Jun.	**Unlikely.** The Study Area does not contain any coastal prairie or coastal scrub. While chaparral is present this species is threatened development, foot traffic, and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Hickman's popcornflower *Plagiobothrys chorisianus* var. *hickmanii*	Rank 4.2	Closed-cone coniferous forest, chaparral, coastal scrub, marshes and swamps, vernal pools. Elevation ranges from 45 to 605 feet (15 to 185 meters). Blooms Apr-Jun.	**Unlikely.** The Study Area does not contain any closed-cone coniferous forest, coastal scrub, marshes, or vernal pools. While chaparral is present this species is threatened development, foot traffic, and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
hairless popcornflower *Plagiobothrys glaber*	Rank 1A	Meadows and seeps (alkaline), marshes and swamps (coastal salt). Elevation ranges from 45 to 590 feet (15 to 180 meters). Blooms Mar-May.	**No Potential.** The Study Area does not contain any alkaline meadows or seeps, or coastal salt marshes. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
California alkali grass *Puccinellia simplex*	Rank 1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 3050 feet (2 to 930 meters). Blooms Mar-May.	**No Potential.** The Study Area does not contain any chenopod scrub, meadows, seeps, valley or foothill grasslands, or vernal pools. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Lobb's aquatic buttercup *Ranunculus lobbii*	Rank 4.2	Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 45 to 1540 feet (15 to 470 meters). Blooms Feb-May.	**Unlikely.** The Study Area does not contain any north coast coniferous forest, valley or foothill grasslands, or vernal pools. While cismontane woodland is present this species is threatened by habitat alteration and development. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
			occurrences for this species (CDFW 2020b).	
rock sanicle *Sanicula saxatilis*	SR, Rank 1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland. Elevation ranges from 2030 to 3855 feet (620 to 1175 meters). Blooms Apr-May.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While broadleafed upland forest or chaparral this species is threatened by development and possibly foot traffic. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
chaparral ragwort *Senecio aphanactis*	Rank 2B.2	Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 45 to 2625 feet (15 to 800 meters). Blooms Jan-Apr(May).	**Unlikely.** The Study Area does not contain any coastal scrub. While chaparral and cismontane woodland is present this species is found on alkaline flats not present. Additionally this species is threatened by development therefore due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
San Francisco campion *Silene verecunda* ssp. *verecunda*	Rank 1B.2	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 95 to 2115 feet (30 to 645 meters). Blooms (Feb)Mar-Jun(Aug).	**Unlikely.** The Study Area does not contain any coastal bluff scrub, coastal prairie, and valley or foothill grasslands. While chaparral is present this species is threatened by development and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Santa Cruz microseris *Stebbinsoseris decipiens*	Rank 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 30 to 1640 feet (10 to 500 meters). Blooms Apr-May.	**Unlikely.** The Study Area does not contain any closed-cone coniferous forest, coastal prairie, coastal scrub, and valley or foothill grasslands. While chaparral and broadleafed upland forest is present due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
Metcalf Canyon jewelflower *Streptanthus albidus* ssp. *albidus*	FE, Rank 1B.1	Valley and foothill grassland (serpentine). Elevation ranges from 145 to 2625 feet (45 to 800 meters). Blooms Apr-Jul.	**No Potential.** The Study Area does not contain any valley or foothill grasslands on serpentine.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
most beautiful jewelflower *Streptanthus albidus* ssp. *peramoenus*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 310 to 3280 feet (95 to 1000 meters). Blooms (Mar)Apr-Sep(Oct).	**Unlikely.** The Study Area does not contain any valley or foothill grasslands. While chaparral and cismontane woodland is present this species is threatened by development and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
slender-leaved pondweed *Stuckenia filiformis* ssp. *alpina*	Rank 2B.2	Marshes and swamps (assorted shallow freshwater). Elevation ranges from 980 to 7055 feet (300 to 2150 meters). Blooms May-Jul.	**Unlikely.** While freshwater habitat is present within the Study Area, it has been heavily impacted by mining activities and therefore is not suitable habitat for this species.	No further recommendations for this species.
California seablite *Suaeda californica*	FE, Rank 1B.1	Marshes and swamps (coastal salt). Elevation ranges from 0 to 50 feet (0 to 15 meters). Blooms Jul-Oct.	**No Potential.** The Study Area does not contain any marshes.	No further recommendations for this species.
two-fork clover *Trifolium amoenum*	FE, Rank 1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentine). Elevation ranges from 15 to 1360 feet (5 to 415 meters). Blooms Apr-Jun.	**Unlikely.** The Study Area does not contain any coastal bluff scrub or valley or foothill grasslands.	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Santa Cruz clover *Trifolium buckwestiorum*	Rank 1B.1	Broadleafed upland forest, cismontane woodland, coastal prairie. Elevation ranges from 340 to 2000 feet (105 to 610 meters). Blooms Apr-Oct.	**Unlikely.** The Study Area does not contain any coastal prairie. While cismontane woodland and broadleafed upland forest is present this species is threatened by land clearing and non-native plants. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
saline clover *Trifolium hydrophilum*	Rank 1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Elevation ranges from 0 to 985 feet (0 to 300 meters). Blooms Apr-Jun.	**Unlikely.** The Study Area does not contain any mesic alkaline valley or foothill grasslands, or vernal pools. Aquatic habitat within the Study Area has been heavily impacted by mining activities and therefore is not suitable habitat for this species.	No further recommendations for this species.
Pacific Grove clover *Trifolium polyodon*	SR, Rank 1B.1	Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland. Elevation ranges from 15 to 1395 feet (5 to 425 meters). Blooms Apr-Jun(Jul).	**Unlikely.** The Study Area does not contain any closed-cone coniferous forest, coastal prairie, meadows, seeps, and valley or foothill grasslands. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.
caper-fruited tropidocarpum *Tropidocarpum capparideum*	Rank 1B.1	Valley and foothill grassland (alkaline hills). Elevation ranges from 0 to 1495 feet (1 to 455 meters). Blooms Mar-Apr.	**Unlikely.** The Study Area does not contain any valley or foothill grasslands on alkaline hills. Additionally there are no nearby CNDDB occurrences for this species (CDFW 2020b).	No further recommendations for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Methuselah's beard lichen *Usnea longissima*	Rank 4.2	Broadleafed upland forest, north coast coniferous forest. Elevation ranges from 160 to 4790 feet (50 to 1460 meters).	**Unlikely.** The Study Area does not contain any north coast coniferous forest. While broadleafed upland forest is present this species is threatened by development. Due to the proximity of suitable habitat to mining operations this species is unlikely to occur. While there is a CNDDB occurrences for this species nearby the Study Area from 1995, it's considered extirpated (CDFW 2020b).	No further recommendations for this species.
WILDLIFE				
Mammals				
pallid bat *Antrozous pallidus*	SSC, WBWG High	Occupies a variety of habitats at low elevation including grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	**Moderate Potential.** The Study Area contains large trees which may provide suitable roosting habitat by this species.	Pre-construction surveys for bat roosts should be conducted prior to work or vegetation removal within 100 feet of any large trees (>16 inches DBH). See summary and recommendations section for further details.
Townsend's big-eared bat *Corynorhinus townsendii*	SSC, WBWG High	Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts highly associated with caves and mines. Building roost sites must be cave like. Very sensitive to human disturbance.	**Unlikely.** The Study Area is composed of primarily an active quarry site with regular disturbance and a dynamic landscape. Due to the requirements of this species for large caves, or mine shafts for roosting the species is unlikely to be found within the quarry. However, the species may occur in more natural settings surrounding the Study Area where caves or large crevices in rocky outcrops exist.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
hoary bat *Lasiurus cinereus*	WBWG Medium	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths.	**Moderate Potential.** The Study Area contains trees which may provide suitable roosting habitat by this species.	Pre-construction surveys for bat roosts should be conducted prior to work or vegetation removal within 100 feet of any large trees (>16 inches DBH). See summary and recommendations section for further details.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	SSC	Typically occurs in forest habitats of moderate canopy and moderate to dense understory, especially redwood. Also found in chaparral habitats.	**High Potential.** The species is known to occur in woodlands in the vicinity of the Study Area. The Study Area contains woodland and chapparal and is likely to support this species.	Within 30 days prior to initial ground disturbance in woodland or scrub/chaparral communities, a pre-construction survey for active woodrat stick nests should be conducted. See summary and recommendations section for further details.
salt marsh harvest mouse *Reithrodontomys raviventris*	FE, SE, CFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for flood escape.	**No Potential.** No suitable tidal marsh habitat is present within or adjacent to the Study Area.	No further actions are recommended for this species.
salt-marsh wandering shrew *Sorex vagrans halicoetes*	SSC	Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6 to 8 feet above sea level where abundant driftwood is scattered among *Salicornia*.	**No Potential.** No suitable tidal marsh habitat is present within or adjacent to the Study Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
American badger *Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable, uncultivated soils. Prey on burrowing rodents.	**No Potential.** The Study Area is geomorphically composed of a limestone ridge which does not provide friable soils suitable for badger denning.	No further actions are recommended for this species.
Birds				
tricolored blackbird *Agelaius tricolor*	SSC, ST	Usually nests over or near freshwater in dense cattails, tules, or thickets of willow, blackberry, wild rose or other tall herbs. Nesting area must be large enough to support about 50 pairs.	**Unlikely.** Suitable freshwater marsh vegetation is not present in ponds or along the creek to support a colony of this species.	No further actions are recommended for this species.
golden eagle *Aquila chrysaetos*	CFP, BGEPA	Year-round resident in rolling foothills with open grasslands, scattered trees, and cliff-walled canyons.	**Unlikely.** There are no unvegetated cliffs or tall trees in otherwise open areas that are suitable to support nesting golden eagles within the Study Area. Additionally, foraging opportunities are scarce as the majority of the Study Area is either active quarry, development, or forest.	No further actions are recommended for this species.
grasshopper sparrow *Ammodramus savannarum*	SSC	Summer resident. Breeds in open grasslands in lowlands and foothills, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.	**No Potential.** The Study Area does not contain any expanses of grassland to support nesting or foraging by this species.	No further discussion of this species is required.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
short-eared owl *Asio flammeus*	SSC	Occurs year-round, but primarily as a winter visitor; breeding very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	**No Potential**. The Study Area does not contain open grassland or marsh to support this species. The Study Area is outside of this species typical breeding range.	No further actions are recommended for this species.
long-eared owl *Asio otus*	SSC	Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.	**Unlikely.** The Study Area contains forested habitat. However, the majority of the Study Area is active quarry and does not provide open foraging habitat for this species.	No further actions are recommended for this species.
burrowing owl *Athene cunicularia*	SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**No potential.** The Study Area is geomorphically composed of a limestone ridge which does not provide friable soils suitable for burrowing mammals. Areas that are not currently under quarry operation are forest and scrub habitat that are not suitable for this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
marbled murrelet *Brachyramphus marmoratus*	FT, SE	Predominantly coastal marine. Nests in old-growth coniferous forests up to 30 miles inland along the Pacific coast, from Eureka to Oregon border, and in Santa Cruz/San Mateo Counties. Nests are highly cryptic, and typically located on platform-like branches of mature redwoods and Douglas firs. Forages on marine invertebrates and small fishes.	**No Potential.** There is no coastal old-growth redwood or fir forest habitat within the Study Area to support nesting by the species.	No further actions are recommended for this species.
Swainson's hawk *Buteo swainsoni*	ST	Summer resident in California's Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	**No Potential.** The Study Area does not contain open grassland or agricultural areas to support foraging by this species. In addition, this species is a rare breeder in Santa Clara County, with recent nesting occurrences restricted to Coyote Valley.	No further actions are recommended for this species.
western snowy plover *Charadrius alexandrinus nivosus*	FT, SSC	Federal listing applies only to the Pacific coastal population. Found on sandy beaches, salt pond levees, and shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	**No Potential.** There are no sandy beach or alkali flat habitat within the Study Area. There are no documented occurrences within 5 miles of the Study Area (CDFW 2020b).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
northern harrier *Circus cyaneus*	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge.	**No Potential.** Open grassland habitat is not present within the Study Area to support nesting or foraging. No marsh habitat is present to be used by this species.	No further actions are recommended for this species.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT, SE	Summer resident, breeding in dense riparian forests and jungles, typically with early successional vegetation present. Utilizes densely-foliaged deciduous trees and shrubs. Eats mostly caterpillars. Current breeding distribution within California very restricted.	**No Potential.** The Study Area is outside of the current breeding distribution for this species.	No further actions are recommended for this species.
yellow rail *Coturnicops noveboracensis*	SSC	Summer resident in eastern Sierra Nevada in Mono County, breeding in shallow freshwater marshes and wet meadows with dense vegetation. Also a rare winter visitor along the coast and other portions of the state. Extremely cryptic.	**No Potential.** The Study Area does not contain freshwater marsh or wet meadow to support this species. The species has not been documented within 5 miles of the Study Area (CDFW 2020b).	No further actions are recommended for this species.
white-tailed kite *Elanus leucurus*	CFP	Year-long resident of coastal and valley lowlands. Preys on small diurnal mammals and occasional birds, insects, reptiles, and amphibians.	**Unlikely.** No grassland occurs within or directly adjacent to the Study Area to support foraging by this species. This species may occasionally fly over the Study Area.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
southwestern willow flycatcher *Empidonax traillii extimus*	FE, SE	Summer resident. Breeds in dense riparian forest and woodlands, usually in floodplain-like environments with standing or slow-moving water. Vegetative microhabitats used for nesting variable, and include willows and cottonwood.	**No Potential.** The Study Area is outside of this species range.	No further actions are recommended for this species.
American peregrine falcon *Falco peregrinus*	CFP	Resident and winter visitor to region. Occurs near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	**Unlikely**. This species has been observed in the vicinity. However, no tall cliffs or man-made structures are present to support nesting.	No further actions are recommended for this species.
San Francisco (saltmarsh) common yellowthroat *Geothlypis trichas sinuosa*	SSC	Resident of San Francisco bay region fresh and salt-water marshes. Requires thick, continuous cover down to water surface for foraging, tall grasses, tule patches, willows for nesting.	**No Potential**. No suitable marsh habitat is present to support this species.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
bald eagle *Haliaeetus leucocephalus*	SE, CFP, BGEPA	Frequents ocean shores, lake margins, and rivers for both nesting and wintering. Requires abundant fish and adjacent snags or other perches. Nests in large, old-growth, or dominant live tree with open branch-work.	**Unlikely.** The species had not been documented nesting in the vicinity. This species is occasionally observed at Stevens Creek Reservoir and may fly over the Study Area. However, the Study Area is primarily developed and disturbed through quarry operations and does not provide large dominant trees or an abundance of fish to support this species.	No further actions are recommended for this species.
California black rail *Laterallus jamaicensis coturniculus*	ST, CFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No Potential.** The Study Area does not contain marsh habitat with dense emergent vegetation to support nesting by this species.	No further actions are recommended for this species.
Alameda song sparrow *Melospiza melodia pusillula*	SSC	Year-round resident in tidal-influenced marshes along the eastern and southern portions of San Francisco Bay.	**No Potential.** The Study Area does not contain tidal salt-marsh habitat.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Bryant's savannah sparrow *Passerculus sandwichensis alaudinus*	SSC	Year-round resident associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats and adjacent areas; often found where wetland communities merge into grassland. May also occur in drier grasslands. Nests near the ground in taller vegetation, including along roads, levees, and canals.	**No Potential.** The Study Area does not contain any expanses of grassland to support nesting or foraging by this species.	No further actions are recommended for this species
purple martin *Progne subis*	SSC	Summer resident. Inhabits woodlands and low elevation coniferous forests. Nests in old woodpecker cavities and man-made structures. Nest is often located in tall, isolated tree or snag.	**Unlikely.** While oak woodland with potential to support nesting by this species is present, this species is not known to nest within this portion of Santa Clara County (Bousman 2007). Therefore, the species is unlikely to be present.	No further actions are recommended for this species
California Ridgway's (clapper) rail *Rallus obsoletus (longirostris) obsoletus*	FE, SE, CFP	Associated with tidal salt marsh and brackish marshes supporting emergent vegetation, upland refugia, and incised tidal channels.	**No Potential.** The Study Area does not contain tidal marsh to support this species.	No further actions are recommended for this species
black skimmer *Rynchops niger*	SSC	Found primarily in southern California; South San Francisco Bay has a small resident population. Nests colonially on gravel bars, low islets, and sandy beaches	**No Potential.** There are no sandy beaches, or gravel bars present within the Study Area to support nesting.	No further actions are recommended for this species

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
(Brester's) yellow warbler *Setophaga (= Dendroica) petechia brewsteri*	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration.	**Moderate Potential.** The Study Area contains streams and riparian vegetation that may support this species.	Perform ground disturbance and vegetation removal outside of the breeding bird season (Sep 1 – Jan 31). If project activities occur within the breeding bird season (Feb 1 – Aug 31), perform preconstruction breeding bird survey within 14 days start of work. Any active nests will be protected by work windows or exclusion buffers. See summary and recommendations section for further details.
California least tern *Sterna antillarum browni*	FE, SE, CFP	Nests along the coast from San Francisco bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	**No Potential.** There are no sandy beaches, gravel bars or salt ponds within the Study Area to support nesting by this species. There are no documented occurrences within 5 miles of the Study Area (CDFW 2020b).	No further actions are recommended for this species.
least bell's vireo *Vireo bellii pusillus*	FE, SE	Summer resident. Breeds in riparian habitat along perennial or intermittent rivers and creeks; prefers a multi-tiered canopy with dense early successional vegetation in the understory. Willows, mulefat and other understory species are typically used for nesting.	**No Potential.** The Study Area is outside the known distribution for this species (Bousman 2007).	No further actions are recommended for this species.
Reptiles and Amphibians				

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
western pond turtle *Actinemys [Emys] marmorata*	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter.	**Moderate Potential.** Detention ponds lacking vegetated banks and emergent vegetation are not suitable for this species. In addition, the Study Area does not provide friable soils for nesting. However, this species may occasionally occur within or disperse through streams or manmade ponds with vegetated banks within the Study Area	Recommended measures include preconstruction surveys, a Worker Environmental Awareness Program, and/or a biological monitor during initial ground disturbance. See summary and recommendations section for further details.
California tiger salamander *Ambystoma californiense*	FT, ST	Populations in Santa Barbara and Sonoma counties currently listed as endangered; threatened in remainder of range. Inhabits grassland, oak woodland, ruderal and seasonal pool habitats. Adults are fossorial and utilize mammal burrows and other subterranean refugia. Breeding occurs primarily in vernal pools and other seasonal water features.	**No Potential.** The last documented occurrence within 5 miles of the Study Area was in 1893 (CDFW 2020B). In addition, the noted individual is likely misidentified (Jennings per comm). Therefore the species likely never was present in the area and as such has no potential.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Santa Cruz black salamander *Aneides flavipunctatus niger*	SSC	Climbing salamanders of the genus *Aneides* frequent damp woodlands and are usually found hiding under various debris (i.e. bark, woodrat nests, logs). The Santa Cruz black salamander exists south of the San Francisco Bay and was only recently recognized as a separate and protected species. Santa Cruz black salamander is highly sedentary, preferring to stay hidden under riparian debris. Prey items include millipedes, spiders, and other insects (Stebbins and McGinnis 2012).	**Moderate Potential.** The creeks and forested habitat along the southern extent of the Study Area may provide suitable habitat for this species. The majority of the Study Area is disturbed and unvegetated and is not suitable for this species.	Recommended measures include preconstruction surveys, a Worker Environmental Awareness Program, and/or a biological monitor during initial ground disturbance. See summary and recommendations section for further details.
silvery legless lizard *Anniella pulchra pulchra*	SSC	Fossorial species, inhabiting sandy or loose loamy soils under relatively sparse vegetation. Suitable habitat includes dunes, stream terraces, and scrub and chaparral. Adequate soil moisture is essential.	**No Potential.** The Study Area does not contain loose sandy soils to support this species. There are no documented occurrences within 5 miles of the Study Area (CDFW 2020B).	No further actions are recommended for this species.
California giant salamander *Dicamptodon ensatus*	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**High Potential.** This species has been documented upstream of the Study Area in Montebello Creek (CDFW 2020B). The creeks and forested habitat along the southern extent of the Study Area may provide suitable habitat for this species.	Recommended measures include preconstruction surveys, a Worker Environmental Awareness Program, and/or a biological monitor during initial ground disturbance. See summary and recommendations section for further details.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
foothill yellow-legged frog *Rana boylii*	SSC	Found in or adjacent to rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	**Unlikely**. One occurrence of this species is known in the Steven's Creek watershed approximately 2 linear miles from the Study Area and is dated from 1939 (CDFW 2020B). However, streams within the Study Area are heavily shaded, or culverted and highly modified making it unlikely to support the species.	No further actions are recommended for this species.
California red-legged frog (CRLF) *Rana draytonii*	FT, SSC	Associated with quiet perennial to intermittent ponds, stream pools, and wetlands with adjacent upland habitat containing refugia. Prefers shorelines with extensive vegetation. Documented to disperse through upland habitats after rains.	**High Potential.** CRLF have been documented within 0.5 miles of the Study Area as recently as 2017 (CDFW 2020B). Ponded areas within the Study Area may provide suitable habitat.	Recommended measures include preconstruction surveys, a Worker Environmental Awareness Program, and/or a biological monitor during initial ground disturbance. See summary and recommendations section for further details.
red-bellied newt *Taricha rivularis*	SSC	Inhabits coastal forests from southern Sonoma County northward, with an isolated population in Santa Clara County. Redwood forest provides typical habitat, though other forest types (e.g., hardwood) are also occupied. Adults are terrestrial and fossorial. Breeding occurs in streams, usually with relatively strong flow.	**Moderate Potential.** An isolated population of this species exists in Santa Clara County over 2 miles west of the Study Area (CDFW 2020B). This species has not been documented in Swiss Creek or its tributaries. However, given the proximity to a known population and the presence of stream habitat, this species has Moderate Potential to occur within the Study Area.	Recommended measures include preconstruction surveys, a Worker Environmental Awareness Program, and/or a biological monitor during initial ground disturbance. See summary and recommendations section for further details.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE, SE, CFP	Vicinity of freshwater marshes, ponds and slow moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	**Unlikely.** Santa Clara County is outside the accepted range of this sub-species. The nearest documented occurrence is 8 miles west of the Study Area (USFWS 2006).	No further actions are recommended for this species.
Fish				
Green sturgeon *Acipenser medirostris*	FT	Green Sturgeon spawn in the Sacramento and Klamath Rivers. Requires water temperatures between 8-14 degrees celsius to spawn. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	**No Potential.** Study Area is outside of the present distribution range of Green Sturgeon.	No further actions are recommended for this species
tidewater goby *Eucyclogobius newberryi*	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches; requires fairly still but not stagnant water and high oxygen levels.	**No Potential.** Study Area is outside of the present distribution range of tidewater goby.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
Delta smelt *Hypomesus transpacificus*	FT, SE	Lives in the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt; most often at salinities < 2 ppt.	**No Potential.** The Study Area is outside of the present distribution range of Delta smelt.	No further actions are recommended for this species.
Coho salmon - Central CA Coast ESU *Oncorhynchus kisutch*	FE, SE	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	**No Potential.** The Study Area is outside of the present distribution range of this species.	No further actions are recommended for this species.
steelhead, Central California Coast ESU *Oncorhynchus mykiss irideus*	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** Stevens Creek Dam is a complete barrier to upstream migration and precludes the passage of returning adult steelhead.	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
longfin smelt *Spirinchus thaleichthys*	FC, ST	Found in open waters of estuaries, mostly in the middle or bottom of the water column. This species prefers salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater.	**No Potential.** The Study Area is outside of the present distribution range of longfin smelt.	No further actions are recommended for this species.
Invertebrates				
Crotch bumblebee *Bombus crotchii*	SC	Range largely restricted to California, favoring grassland and scrub habitats. Typical of bumble bees, nests are usually constructed underground.	**Unlikely**. The Study Area is outside of this species known current distribution. There are no recent documented occurrences of this species in the vicinity of the Study Area (CDFW 2020B).	No further actions are recommended for this species.
western bumblebee *Bombus occidentalis*	SC	Once widespread in the western United States and Canada, populations of this insect have drastically declined in recent decades. Pollinates a variety of wild flowering plants and crops. Nests in the ground, usually in association with small mammal burrows with sunny aspects. Current populations are thought to be restricted to high elevation sights in the Sierras with scattered occurrences on the northern California coast (Xerces, 2018).	**Unlikely**. The Study Area is outside of this species known current distribution. There are no recent documented occurrences of this species in the vicinity of the Study Area (CDFW 2020B).	No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	RECOMMENDATIONS
San Bruno elfin butterfly *Callophrys mossii bayensis*	FE	Limited to the vicinity of San Bruno Mountain, San Mateo County. Colonies are located on in rocky outcrops and cliffs in coastal scrub habitat on steep, north-facing slopes within the fog belt. Species range is tied to the distribution of the larval host plant, Sedum spathulifolium.	**No Potential.** The Study Area is outside of this species known current distribution.	No further actions are recommended for this species.
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *O. purpurscens* are the secondary host plants.	**No Potential.** Suitable serpentine soil habitat is not present in the Study Area. The Study Area is not within one of the few known ranges for this species.	No further actions are recommended for this species.
vernal pool tadpole shrimp *Lepidurus packardi*	FE	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**No Potential.** Only one occurrence of this species has been recorded in the vicinity of the Study Area in the CNDDB, and is located on the eastern side of San Francisco Bay more than 13 miles from the Study Area (CDFW 2020B). Additionally, no vernal pools or other suitable habitat is present to support this species. No grass bottomed swales or other typical habitat is present within the Study Area.	No further actions are recommended for this species.

*** Key to status codes:**

CFP	CDFW Fully Protected
BGEPA	Bald and Golden Eagle Protection Act

FC	Federal Candidate for listing
FE	Federal Endangered
FT	Federal Threatened
SC	State Candidate for listing
SE	State Endangered
SSC	California Department of Fish and Wildlife Species of Special Concern
ST	State Threatened
WBWG	Western Bat Working Group Medium or High Priority Species
Rank 1A	California Native Plant Society (CNPS) Rank 1A: Plants presumed extirpated in California and rare or extinct elsewhere
Rank 1B.1	California Native Plant Society (CNPS) Rank 1B.1: Plants rare, threatened or endangered in California and elsewhere (seriously threatened in California)
Rank 1B.2	California Native Plant Society (CNPS) Rank 1B.2: Plants rare, threatened, or endangered in California and elsewhere(moderately threatened in California)
Rank 2B.2	California Native Plant Society (CNPS) Rank 2B.2: Plants rare, threatened, or endangered in California, but more common elsewhere (moderately threatened in California)
Rank 4.3	California Rare Plant Rank 4.3: Plants of Limited Distribution - A Watch List (not very threatened in California)

****Potential species occurrence definitions:**

Present. Species was observed on the site during site visits or has been recorded (i.e. CNDDB, other reports) on the site recently.

High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species has a low probability of being found on the site.

No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).