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Biological Resources

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Biological Resources Appendix

Regulatory Setting

Federal Regulations

Federal Endangered Species Act

Under the federal ESA, it is unlawful to “take” any species listed as threatened or endangered. Take is defined as actions intended to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” An activity is defined as a take even if it is unintentional or accidental. Take provisions under the federal ESA apply only to listed fish and wildlife species under the jurisdiction of USFWS and/or the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project “may affect” or result in take of a listed species.

When a species is listed, USFWS and/or NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or NMFS is required for projects that include a federal action or federal funding if the project would modify designated critical habitat.

Clean Water Act Section 404

Under Section 404 of the Clean Water Act (CWA), the United States Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into US waters. US waters are those waters that have a connection to interstate commerce, either directly via a tributary system or indirectly through a nexus identified in USACE regulations. In nontidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high-water mark (OHWM) of a water body or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tidal line (HTL) or, where adjacent wetlands are present, beyond the HTL to the limit of the wetlands.

Wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions.” US waters essentially include any body of water not otherwise exempted that displays an OHWM.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions that would result in a “take” of migratory birds, their eggs, feathers, or nests. Take is defined in the MBTA to include any attempt at hunting, pursuing, wounding, killing, possessing, or transporting by any means or in any manner any migratory bird, nest, egg, or part thereof. More than 800 species of birds are protected under the MBTA.

Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or parts thereof. USFWS oversees enforcement of this act. The 1978 amendment authorizes the US Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations.

On September 11, 2009, USFWS announced a final rule on two new permit regulations that allows for the take of eagles and eagle nests under this act. The permits authorize limited non-purposeful take of bald eagles and golden eagles, authorizing individuals, companies, government agencies (including tribal governments), and other organizations to disturb or otherwise take eagles in the course of conducting lawful activities, such as operating utilities and airports. Most permits issued under the new regulations would authorize *disturbance*. In limited cases, a permit may authorize the physical take of eagles but only if every precaution is taken to avoid physical take. Removal of eagle nests would usually be allowed only when it is necessary to protect human safety or the eagles.

Population information for both eagle species will guide USFWS in determining how many permits, including other types of permits USFWS already issues, may be issued in any locality. Priority will be given to Native American requests for permits to take eagles (under existing regulations) where the take is necessary for traditional ceremonies. Because of the limited size of the bald eagle populations in the southwestern United States, permits may not be available in all locations. Disturbance or take of golden eagles is likely to be limited everywhere in the United States because of potential population declines.

State Regulations

California Endangered Species Act

Under CESA, it is unlawful to “take” any species listed as rare, threatened, or endangered. Take under CESA means to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project would result in “take” of a listed species.

California Code of Regulations, Sections 1600–1616

CDFW, through provisions of Sections 1600–1616 of the California Code of Regulations, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and the conveyance of at least ephemeral flows. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW also has jurisdiction over any riparian habitat areas associated with a river, stream, or lake. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the

banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat would automatically include any wetland areas. CDFW has not defined wetlands for jurisdictional purposes. Wetlands not associated with a lake, stream, or other regulated area are generally not subject to CDFW jurisdiction.

California Fish and Game Code Sections 3503, 3503.5, and 3513—Protection of Birds, Nests, and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit. Section 3513 states that it is unlawful to take or possess any migratory nongame bird, as designated in the MBTA, or any part of such migratory nongame bird.

California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) preserves, protects, and enhances endangered and rare plants in California. Specifically, it prohibits import, take, possession, or sale of any native plant designated by the CDFW Commission as rare or endangered, except under certain circumstances designated by the act.

Clean Water Act Section 401

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a Section 404 permit. The Regional Water Quality Control Board (RWQCB) regulates these activities and issues water quality certifications for those activities requiring a Section 404 permit. In addition, the RWQCB has authority to regulate the discharge of “waste” into waters of the state pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Porter-Cologne Water Quality Control Act (California Water Code Division 7)

The Porter-Cologne Water Quality Control Act (Porter-Cologne) seeks to preserve, enhance, and restore the quality of California's water resources. The Porter-Cologne Water Quality Act established the SWRCB and nine RWQCBs as the principal state agencies with the responsibility for controlling water quality in the state. The State of California regulates discharges of dredged and fill material to Waters of the State through its Water Quality Certification Program under the authorities of Porter-Cologne and CWA Section 401, a program that allows the state to ensure that activities requiring a federal permit or license comply with state water quality standards. The Water Quality Certification Program is the state's de facto wetland protection program. It protects all waters within the state's regulatory jurisdiction, but has special responsibilities for wetlands, riparian areas, and headwater

streams because these water bodies are not systematically protected by other state and regional board programs.

Local Regulations

Santa Cruz County General Plan

The Santa Cruz County General Plan and Local Coastal Program addresses biological resources, ecological communities and sensitive environmental habitats of the County.

Conservation and Open Space Element

LCP Objective 5.1 Biological Diversity. To maintain the biological diversity of the County through an integrated program of open space acquisition and protection, identification and protection of plant habitat and wildlife corridors and habitats, low-intensity and resource compatible land uses in sensitive habitats and mitigations on projects and resource extraction to reduce impacts on plant and animal life.

LCP Policy 5.1.1 Sensitive Habitat Designation. Designate the following areas as sensitive habitats: (a) areas shown on the County General Plan and LCP Resources and Constraints Maps; (b) any undesignated areas which meet the criteria (policy 5.1.2) and which are identified through the biotic review process or other means; and (c) areas of biotic concern shows on the Resources and Constraints Maps which contain concentrations of rare, endangered, threatened or unique species.

LCP Policy 5.1.2 Definition of Sensitive Habitat. An area is defined as a sensitive habitat if it meets one or more of the following criteria:

- (a) Areas of special biological significance as identified by the State Water Resources Control Board.
- (b) Areas which provide habitat for locally unique biotic species/communities, including coastal scrub, maritime chaparral, native rhododendrons and associated Elkgrass, mapped grasslands in the coastal zone and sand parkland; and Special Forests including San Andres Live Oak Woodlands, Valley Oak, Santa Cruz Cypress, indigenous Ponderosa Pine, indigenous Monterey Pine and ancient forests.
- (c) Areas adjacent to essential habitats of rare, endangered or threatened species as defined in (e) and (f) below.
- (d) Areas which provide habitat for Species of Special Concern as listed by the California Department of Fish and Game in the Special Animals list, Natural Diversity Database.
- (e) Areas which provide habitat for rare or endangered species which meet the definition of Section 15380 of the California Environmental Quality Act guidelines.
- (f) Areas which provide habitat for rare, endangered or threatened species as designated by the State Fish and Game Commission, United State Fish and Wildlife Service or California Native Plant Society.

- (g) Nearshore reefs, rocky intertidal areas, sea caves, islets, offshore rocks, kelp beds, marine mammal hauling grounds, sandy beaches, shorebird roosting, resting and nesting areas, cliff nesting areas and marine, wildlife or education/research reserves.
- (h) Dune plant habitats.
- (i) All lakes, wetlands, estuaries, lagoons, streams and rivers.
- (j) Riparian corridors.

LCP Policy 5.1.3 Environmentally Sensitive Habitats. Designate the areas described in 5.1.2 (d) through (j) as Environmentally Sensitive Habitats per the California Coastal Act and allow only uses dependent on such resources in these habitats within the Coastal Zone unless other uses are:

- (a) Consistent with sensitive habitat protection policies and serve as a specific purpose beneficial to the public;
- (b) It is determined through environmental review that any adverse impacts on the resources will be completely mitigated and that there is no feasible less-damaging alternative; and
- (c) Legally necessary to allow a reasonable economic use of the land, and there is no feasible less-damaging alternative.

LCP Policy 5.1.4 Sensitive Habitat Protection Ordinance. Implement the protection of sensitive habitats by maintaining the existing Sensitive Habitat Protection ordinance. The ordinance identifies sensitive habitats, determines the uses which are allowed in and adjacent to sensitive habitats, and specifies required performance standards for land in or adjacent to these areas. Any amendments to this ordinance shall require a finding that sensitive habitats shall be afforded equal or greater protection by the amended language.

LCP Policy 5.1.5 Land Division and Density Requirements on Sensitive Habitat. Allow land divisions in sensitive habitats on when the density and design of the subdivision are compatible with protection of these resources as determined by environmental assessment and applicable County land use and zoning standards. Apply the following land division and density standards to the habitats listed:

- (a) Grasslands – Prohibit land division of native and mixed native grassland habitat mapped in the Coastal Zone unless the area to be divided is removed from the mapped grassland habitat area by General Plan-Local Coastal Program amendment. On parcels with existing mapped native and mixed native grasslands and which contain developable land outside those habitats, allow development at the lowest density of the land use designation and require that development be clustered and located outside the habitat areas. Allow one single family dwelling unit per existing parcel or record. Where property owners upgrade grasslands on their parcels, outside of mapped areas, through resources management activities, the prevailing General Plan densities shall not be reduced.
- (b) Special Forests – Prohibit land divisions within designated Special Forests unless the area to be divided is removed from the mapped special forests habitat area by General Plan-Local Coastal Plan amendment. On parcels with existing mapped special forest areas which contain developable land outside those habitats, allow development at the lowest density of the land

use designation and require that development be clustered and located outside the habitat areas. Allow one single family dwelling unit per existing parcel or record. Where property owners upgrade special forest areas on their parcels, outside of mapped areas, through resources management activities, the prevailing General Plan densities shall not be reduced.

LCP Policy 5.1.6 Development Within Sensitive Habitats. Sensitive habitats shall be protected against any significant disruption of habitat values; and any proposed development within or adjacent to these areas must maintain or enhance the functional capacity of the habitat. Reduce in scale, redesign, or, if no alternative exists, deny any project which cannot sufficiently mitigate significant adverse impacts on sensitive habitats unless approval of a project is legally necessary to allow a reasonable use of the land.

LCP Policy 5.1.7 Site Design and Use Regulations. Protect sensitive habitats against any significant disruption or degradation of habitat values in accordance with the Sensitive Habitat Protection ordinance. Utilize the following site design and use regulations on parcels containing these resources, excluding existing agricultural operations:

- (a) Structures shall be placed as far from the habitat as feasible.
- (b) Delineate development envelopes to specify location of development in minor land divisions and subdivisions.
- (c) Require easements, deed restrictions, or equivalent measures to protect that portion of a sensitive habitat on a project parcel which is undisturbed by a proposed development activity or to protect sensitive habitats on adjacent parcels.
- (d) Prohibit domestic animals where they threaten sensitive habitats.
- (e) Limit removal of native vegetation to the minimum amount necessary for structures, landscaping, driveways, septic systems and gardens;
- (f) Prohibit landscaping with invasive or exotic species and encourage the use of characteristic native species.

LCP Policy 5.1.8 Chemicals Within Sensitive Habitats. Prohibit the use of insecticides, herbicides, or any toxic chemical substances in sensitive habitats, except when an emergency has been declared, when the habitat itself is threatened, when a substantial risk to public health and safety exists, including maintenance for flood control by Public Works, or when such use is authorized pursuant to a permit issued by the Agricultural Commissioner.

LCP Policy 5.1.9 Biotic Assessments. Within the following areas, require a biotic assessment as part of normal project review to determine whether a full biotic report should be prepared by a qualified biologist:

- (a) Areas of biotic concern, mapped;
- (b) Sensitive habitats, mapped & unmapped.

LCP Policy 5.1.10 Species Protection. Recognize that habitat protection is only one aspect of maintaining biodiversity and that certain wildlife species, such as migratory birds, may not utilize

specific habitats. Require protection of these individual rare, endangered and threatened species and continue to update policies as new information becomes available.

LCP Policy 5.1.11 Wildlife Resources Beyond Sensitive Habitats. For areas which may not meet the definition of sensitive habitat contain in policy 5.1.2, yet contain valuable wildlife resources (such as migration corridors or exceptional species diversity), protect these wildlife habitat values and species using the techniques outlined in policies 5.1.5 and 5.1.7 and use other mitigation measures identified through the environmental review process.

LCP Objective 5.2 Riparian Corridors and Wetlands. To preserve, protect and respite all riparian corridors and wetlands for the protection of wildlife and aquatic habitat, water quality, erosion control, open space, aesthetic and recreational values and the conveyance and storage of flood waters.

LCP Policy 5.2.3 Activities Within Riparian Corridors and Wetlands. Development activities, land alternation and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection Ordinance. As a condition of riparian exception, require evidence of approval for development from the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and other federal or state agencies that may have regulatory authority over activities within riparian corridors and wetlands.

LCP Policy 5.2.4 Riparian Corridor Setback. Require a buffer setback from riparian corridors in addition to the specified distances found in the definition of riparian corridor. This setback shall be identified I the Riparian Corridor and Wetland Protection ordinance and established based on stream characteristics, vegetation and slop. Allow reductions to the buffer setback only upon approval of a riparian exception. Require a 10 foot separation from the edge of the riparian corridor buffer to any structure.

LCP Policy 5.2.5 Setbacks from Wetlands. Prohibit development within the 100 foot riparian corridor of all wetlands. Allow exceptions only where consistent with the Riparian Corridor and Wetlands Protection ordinance, and in all cases, maximize distance between proposed structures and wetlands. Require measures to prevent water quality and degradation from adjacent land uses, as outlined in the Water Resources section.

LCP 5.2.6 Riparian Corridors and Development Density. Exclude land within riparian corridors in the calculation of development density per new parcel size. Grant full density credit for the portion of the property outside the riparian corridor which is within the required buffer setback, excluding areas over 30% slope, up to a maximum of 50% of the total area of the property which is outside the riparian corridor.

LCP 5.2.9 Management Plans for Wetland Protection. Require development in or adjacent to wetlands to incorporate the recommendations of a management plan which evaluates: migratory waterfowl use December 1 to April 30; compatibility with agricultural use and biotic and water quality protection; maintenance of biological productivity and diversity; and the permanent protection of adjoining uplands.

LCP Objective 5.4 Monterey Bay and Coastal Water Quality. To improve the water quality of Monterey Bay and other Santa Cruz County coastal waters by supporting and/or requiring the best

management practices for the control and treatment of urban run-off and wastewater discharges in order to maintain local, state and national water quality standards, protect County residents from health hazards of water pollution, protect the County's sensitive marine habitats and prevent the degradation of the scenic character of the region.

LCP Policy 5.4.1 Protecting the Monterey Bay National Marine Sanctuary from Adverse Impacts. Prohibit activities which could adversely impact sensitive habitats of the National Marine Sanctuary, including the discharge of wastes and hazardous materials. The main sources of concern are wastewater discharge, urban runoff, toxic agricultural drainage water, including that originating outside of Santa Cruz County, and the accidental release of oil or other hazardous material from coastal tanker traffic.

Objective 5.6 Maintaining Adequate Streamflows. To protect and restore in-stream flows to ensure a full range of beneficial uses including recreation, fish and wildlife habitat and visual amenities as part of an ecosystem-based approach to watershed management.

LCP Policy 5.6.1 Minimum Streamflows for Anadromous Fish. Pending a determination based on a biological assessment, preserve perennial stream flows at 95% of normal levels during summer months, and at 70% of the normal winter baseflow levels. Oppose new water rights application and time extensions, change petitions, or transfer of existing water rights which would individually diminish or cumulatively contribute to the diminishment of the instream flows necessary to maintain anadromous fish runs and riparian vegetation below the 95%/70% standard.

LCP Objective 5.7 Maintaining Surface Water Quality. To protect and enhance surface water quality in the County' streams, coastal lagoons and marshes by establishing best management practices on adjacent land uses.

LCP Policy 5.7.1 Impacts from New Development on Water Quality. Prohibit new development adjacent to marshes, streams and bodies of water if such development would cause adverse impacts on water quality which cannot be fully mitigated.

LCP Policy 5.7.2 Minimum Septic System Setback from Natural Waterways. Prohibit installation of septic tanks or leach fields within 100 feet of all natural waterways including perennial or intermittent streams, seasonal water channels and natural bodies of standing water. An exception may be made for the repair of existing systems, if the 100 foot setback cannot be maintained, and adequate provisions are made for water quality protection.

LCP Policy 5.7.3 Erosion Control for Stream and Lagoon Protection. For all new and existing development and land disturbances, require the installation and maintenance of sediment basins, and/or other strict erosion control measures, as needed to prevent siltation of streams and coastal lagoons.

LCP Policy 5.7.4 Control Surface Runoff. New development shall minimize the discharge of pollutants into surface water drainage by providing the following improvements or similar methods which provide equal or greater runoff control:

- (a) Include curbs and gutters on arterials, collectors and locals consistent with adopted urban street designs; and

(b) Oil, grease and silt traps for parking lots, land divisions or commercial and industrial development.

LCP Policy 5.7.5 Protecting Riparian Corridors and Coastal Lagoons. Require drainage facilities, including curbs and gutters in urban areas, as needed to protect water quality for all new development within 1,000 feet of riparian corridors or coastal lagoons.

Biological Species List

Table 1. Special-Status Plant Species and Their Potential to Occur in the Program Area

Name	*Status	Habitat	Potential for Occurrence in Program Area
Federal or State Endangered, Rare, or Threatened Species			
Marsh sandwort (<i>Arenaria paludicola</i>)	FE, SE, CRPR 1B.1	Sandy areas or openings in freshwater or brackish marshes and swamps. Often growing up through dense mats of cattail (<i>Typha</i> spp.), rush, or bulrush (<i>Scirpus</i> spp.). It occurs from 10 to 558 ft in elevation.	Present. Historically known from the Scotts Valley area and is presumed to be extirpated from that location. Known from planted introduction in Wilder Ranch State Park.
Ben Lomond spineflower (<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>)	FE, CRPR 1B.1	Maritime ponderosa pine and lower montane coniferous forest sandhills in the Santa Cruz Mountains. Occurs on Zayante coarse sands from 295 to 2,001 ft in elevation.	Present. Known from the North Coast and Mountain Regions. Also known from the Carbonera Planning Area in the Urban Region. The species is largely restricted to the Zayante sandhills habitat.
Monterey spineflower (<i>Chorizanthe pungens</i> var. <i>pungens</i>)	FT, CRPR 1B.2	Sandy soils in coastal dunes or on sandy soils more inland habitats, including maritime chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland communities from 10 to 1,476 ft in elevation.	Present. Known from the Agricultural Region and the Aptos Planning Area in the Urban Region.
Scotts Valley spineflower (<i>Chorizanthe robusta</i> var. <i>hartwegii</i>)	FE, CRPR 1B.1	This variety occurs on mudstone and Purisima outcrops in sandy meadows, seeps, and valley and foothill grassland habitats from 755 to 804 ft in elevation.	May be Present. Known from the Carbonera Planning Area, but only inside the city limits of Scotts Valley. Possibly present in the vicinity surrounding Scotts Valley or from a historic occurrence documented in the Zayante sandhills area near Felton in the San Lorenzo Valley Planning Area.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Robust spineflower (<i>Chorizanthe robusta</i> var. <i>robusta</i>)	FE, CRPR 1B.1	Sandy soils in chaparral, coastal dune, coastal scrub, sandy coastal prairie sites, and openings in cismontane woodland communities with coarse soils and relatively sparse ground cover. This species requires sand- or gravel-based soils and is found at elevations from 10 to 1,000 ft.	Present. Known from all four Regions, but most commonly found in the Agricultural Region. All records are from areas within approximately 5 mi of the coast.
Santa Cruz wallflower (<i>Erysimum teretifolium</i>)	FE, SE, CRPR 1B.1	Inland marine sands in chaparral and lower montane coniferous forest from 394 to 2,001 ft in elevation.	Present. Known from the northern portion of the County. Occurs in the Bonny Doon, Carbonera, San Lorenzo Valley, and Skyline Planning Areas. This species is known from, but not restricted to, areas with Zayante sandhills formations.
Monterey gilia (<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>)	FE, ST, CRPR 1B.2	Sandy openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub habitats from 0 to 148 ft in elevation.	Present. Known from one occurrence in the County in the San Andreas Planning Area.
Santa Cruz cypress (<i>Hesperocyparis</i> <i>abramsiana</i> var. <i>abramsiana</i>)	FT, SE, CRPR 1B.2	Sandstone or granitic soils in closed-cone coniferous forest, chaparral, or lower montane coniferous forest at elevation from 980 to 3,560 ft in elevation. Often associated with knobcone pine or redwood.	Present. Known from occurrences in the Bonny Doon and San Lorenzo Valley Planning Areas. It can occur in, but is not restricted to, Zayante sandhills formations.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Santa Cruz tarplant (<i>Holocarpha macradenia</i>)	FT, SE, CRPR 1B.1	Grassy coastal terraces at elevations ranging from 33 to 726 ft. Suitable habitats include coastal prairie, coastal scrub, and valley and foothill grasslands. Often occurs on moderately disturbed, sandy or clay soils; however, specific microhabitat preferences for this plant are not well known and some populations occur on loamy soils. Can occur with non-natives.	Present. Known from the Agricultural and Urban Regions.
Dudley's lousewort (<i>Pedicularis dudleyi</i>)	SR, CRPR 1B.2	Maritime chaparral, cismontane woodlands, North Coast coniferous forests, and valley and foothill grassland habitats along the California central coast at an elevational range of approximately 195 to 2,980 ft. Can occur in varied habitats and is known from deep, shady woods in older redwood forest as well as maritime chaparral.	May be Present. Known from only two records in the County in the San Lorenzo Valley and Aptos Planning Areas. The Aptos record is considered to be possibly extirpated. Both records are historic occurrences and were last seen in the late 1800s.
White-rayed pentachaeta (<i>Pentachaeta bellidiflora</i>)	FE, SE, CRPR 1B.1	Cismontane woodlands and valley and foothill grassland habitats at elevations of approximately 115 to 2,050 ft. Known from dry rocky slopes and grassy areas.	May be Present. Known from four occurrences, three of which are considered to be possibly extirpated in the County. The extant record is in the North Coast Planning Area but was last seen in the 1950s. The likely extirpated records are from the San Lorenzo and Carbonera Planning Areas.
San Francisco popcorn-flower (<i>Plagiobothrys diffusus</i>)	SE, CRPR 1B.1	This coastal species occurs within moist valley and foothill grasslands and coastal prairies at elevations of approximately 195 to 1,200 ft.	Present. Known from the North Coast and Urban Regions. Occurrences in Santa Cruz County are considered to need taxonomic review.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Scotts Valley polygonum (<i>Polygonum hickmanii</i>)	FE, SE, CRPR 1B.1	Mudstone- and sandstone-derived substrates in valley and foothill grassland habitats from 689 to 820 ft in elevation. Areas are typically vernal moist from runoff.	Present. Only known from two occurrences in the Scotts Valley vicinity in the Carbonera Planning Area.
California Rare Plant Rank			
Blasdale's bent grass (<i>Agrostis blasdalei</i>)	CRPR 1B.2	Coastal bluff scrub, coastal dunes, and coastal prairie habitats at elevations of 16 to 492 ft. Known from sandy or gravelly soil close to rocks and often in nutrient poor soil with sparse vegetation.	Present. Known from coastal occurrences in the North Coast Region. Restricted to coastal areas.
Bent-flowered fiddleneck (<i>Amsinckia lunaris</i>)	CRPR 1B.2	Cismontane woodland, coastal bluff scrub, and valley and foothill grassland habitat at elevations from 10 to 1,640 ft.	Present. Known from the North Coast Planning Area and the city limits of Scotts Valley. There is potential for the species to occur in the Carbonera Planning Area based on the Scotts Valley occurrence.
Anderson's manzanita (<i>Arctostaphylos andersonii</i>)	CRPR 1B.2	Openings and along the edges of broadleafed upland forest, chaparral, and North Coast coniferous forest habitats at elevations of 197 to 2,395 ft.	Present. Known from 44 occurrences in the County. It occurs predominantly in the Mountain and North Coast Regions. It is known from the summit areas of the Eureka Canyon Planning Area and the Aptos area.
Schreiber's manzanita (<i>Arctostaphylos glutinosa</i>)	CRPR 1B.2	Diatomaceous shale soils in closed-cone coniferous forest and chaparral habitats from 558 to 2,247 ft in elevation. Often occurs with knobcone pine.	Present. Known from five occurrences in the North Coast Planning Area.
Hooker's manzanita (<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>)	CRPR 1B.2	Sandy soils in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub habitats at elevations from 279 to 1,759 ft.	Present. Known from two occurrences in the County. Both are in coastal oak woodland in the Agricultural Region.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Ohlone manzanita (<i>Arctostaphylos ohloneana</i>)	CRPR 1B.1	Siliceous shale (Monterey shale) in closed-cone coniferous forest or coastal scrub from 1,480 to 1,740 ft in elevation.	Present. Known from four occurrences in the County. All are from the North Coast Planning Area.
Pajaro manzanita (<i>Arctostaphylos pajaroensis</i>)	CRPR 1B.1	Sandy soils in chaparral at elevations from 98 to 2,493 ft.	May be Present. Known from one occurrence, but it may be extirpated. Prior location is a best guess by CNDDB and located in the Aptos Hills Planning Area.
Kings Mountain manzanita (<i>Arctostaphylos regismontana</i>)	CRPR 1B.2	Granitic or sandstone substrates in broadleafed upland forest, chaparral, and North Coast coniferous forest habitats from 1,000 to 2,395 ft in elevation.	Present. Known from two occurrences in the County. Known from montane North Coast and northern tip of the Skyline Planning Area.
Bonny Doon manzanita (<i>Arctostaphylos silvicola</i>)	CRPR 1B.2	Inland marine sands in closed-cone coniferous forest, chaparral, and lower montane coniferous forest habitats from 394 to 1,969 ft in elevation.	Present. Known from 16 occurrences in the northern sections of the County. Known from the Mountain, North Coast, and Urban Regions. In the Urban Region, all occurrences are in the Scotts Valley vicinity and north in the Carbonera Planning Area. Records are known from the Zayante sandhills formation but the species is not restricted to it.
Santa Cruz Mountains pussypaws (<i>Calyptridium parryi</i> var. <i>hesseae</i>)	CRPR 1B.1	Sandy or gravelly openings in chaparral and cismontane woodland habitats from approximately 1,000 to 5,020 ft in elevation.	Present. Known from the Mountain and North Coast Regions. This species is restricted to higher elevation areas. It is known from, but not restricted to, Zayante sandhills formations.
Swamp harebell (<i>Campanula californica</i>)	CRPR 1B.2	Mesic soils in bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marshes and swamps, and North Coast coniferous forest habitats from 3 to 1,329 ft in elevation.	May be Present. Known from the Scotts Valley vicinity and may occur in the Carbonera Planning Area.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Bristly sedge (<i>Carex comosa</i>)	CRPR 2B.1	Seeps and wetland edges in valley and foothill grassland, marshes or swamps along lake margins, and coastal prairies below approximately 2,065 ft.	Present. Known from one occurrence in the Summit Planning Area. Associated with wet places and lake margins.
Deceiving sedge (<i>Carex saliniformis</i>)	CRPR 1B.2	Mesic soils in coastal prairie, coastal scrub, meadows and seeps, and coastal salt marshes and swamp habitats from 10 to 755 ft in elevation.	Presumed Absent. Presumed extirpated from Santa Cruz County. The single historic record is presumed extirpated but was attributed to the Scotts Valley area based on a 1940s collection. The Scotts Valley area is surrounded by the Carbonera Planning Area.
Congdon's tarplant (<i>Centromadia parryi</i> ssp. <i>congdonii</i>)	CRPR 1B.1	Occurs in valley and foothill grasslands, particularly those with alkaline substrates, and in slumps or disturbed areas where water collects. It is restricted to lower elevation wetlands below approximately 760 ft.	Present. Two occurrences known from the County in the Agricultural Region. Likely extirpated from an occurrence in Pajaro Valley Planning Area but it is known from the San Andreas Planning Area.
San Francisco collinsia (<i>Collinsia multicolor</i>)	CRPR 1B.2	Closed-cone coniferous forest and coastal scrub habitats at elevations from 98 to 820 ft. On decomposed shale (mudstone) mixed with humus and sometimes on serpentine.	Present. Known from several occurrences in the North Coast Planning Area, centered in the Swanton area.
Tear drop moss (<i>Dacryophyllum falcifolium</i>)	CRPR 1B.3	Carbonate soils in North Coast coniferous forest from 164 to 902 ft in elevation. Limestone and rock outcrops.	Present. Known from two occurrences in the Mountain and North Coast Regions. Associated with redwood forest and limestone.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Ben Lomond buckwheat (<i>Eriogonum nudum</i> var. <i>decurrens</i>)	CRPR 1B.1	Sandy soils in lower montane coniferous forests, chaparral, cismontane woodland, and maritime ponderosa pine sandhill habitats at an elevation range of 164 to 2,625 ft.	Present. Known from four occurrences in the County in the Mountain and Urban Regions on Zayante sandhills formations.
Sand-loving wallflower (<i>Erysimum ammophilum</i>)	CRPR 1B.2	Sandy soils in openings in chaparral, coastal dunes, and coastal scrub habitats from 0 to 197 ft in elevation.	Present. Known from two occurrences in the County in the San Andreas Planning Area.
Minute pocket moss (<i>Fissidens pauperculus</i>)	CRPR 1B.2	Damp coastal soil in North Coast coniferous forest from 33 to 3,360 ft in elevation.	Present. Two records known from the County in the Mountain and North Coast Region.
Toren's grimmia (<i>Grimmia torenii</i>)	CRPR 1B.3	Openings, rocky, boulder and rock walls, carbonate, or volcanic areas in chaparral, oak woodland, montane hardwood conifer forest from 1,060 to 3,800 ft in elevation.	Present. Three records known from the County in the North Coast Planning Area. High elevation and exposed or open areas.
Vaginulate grimmia (<i>Grimmia vaginulata</i>)	CRPR 1B.1	Openings, rocky, boulder and rock walls, carbonate areas in chaparral from 2,250 to 3,700 ft in elevation.	Present. One record known from the County. Record known from North Coast Planning Area. High elevation and exposed or open areas.
Short leaved evax (<i>Hesperovax sparsiflora</i> var. <i>brevifolia</i>)	CRPR 1B.2	Coastal dunes and sandy coastal bluff scrub at elevations from 0 to 705 ft. Sandy bluffs and flats.	Present. Known from one occurrence in the County, in the San Lorenzo Valley Planning Area.
Kellogg's Horkelia (<i>Horkelia cuneata</i> var. <i>sericea</i>)	CRPR 1B.1	Sandy or gravelly soils near openings in closed-cone coniferous forest, maritime chaparral, coastal dune, and coastal scrub habitat at elevations from 33 to 656 ft.	Present. Known from all four Regions in the County. The majority of the records are in the northern portion of the County, in the North Coast Region and the northern portion of the Carbonera Planning Area. One record each is known from the Agricultural and Mountain Regions. Records are known from the Zayante sandhills formations, but the plant is not restricted to this soil type.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Point Reyes horkelia (<i>Horkelia marinensis</i>)	CRPR 1B.2	Sandy soils in coastal dune, coastal prairie, and coastal scrub habitat at elevations from 16 to 1,148 ft.	Present. Known from the North Coast Region. It can occur on Zayante sandhills formations, but it is not restricted to these soils.
Perennial goldfields (<i>Lasthenia californica</i> ssp. <i>macrantha</i>)	CRPR 1B.2	Coastal bluff scrub, coastal dunes, and coastal scrub habitats at elevations from 16 to 610 ft.	Present. Known from one occurrence in the County, in Aptos Planning Area. Restricted to coastal areas, including coastal grasslands.
Small-leaved lomatium (<i>Lomatium parvifolium</i>)	CRPR 4.2	Closed-cone coniferous forest, chaparral, coastal scrub, and riparian woodland habitats from 66 to 2,297 ft in elevation.	Present. Known from the Aptos Hills Planning Area. Santa Cruz County is considered the northern extent of its known range.
Arcuate bush-mallow (<i>Malacothamnus arcuatus</i>)	CRPR 1B.2	Chaparral and cismontane woodland communities at elevations between 49 and 1,165 ft.	Present. Known from the Mountain and North Coast Regions.
Marsh microseris (<i>Microseris paludosa</i>)	CRPR 1B.2	Closed cone coniferous forests, cismontane woodland, coastal scrub, and valley and foothill grassland habitats at elevations of approximately 15 to 1,000 ft.	Present. Known from three non-specific occurrences in the County, in the North Coast and Urban Regions.
Northern curly-leaved monardella (<i>Monardella sinuata</i> ssp. <i>nigrescens</i>)	CRPR 1B.2	Sandy soils in coastal dunes, coastal scrub, chaparral, lower montane coniferous forest from 0 to 990 ft in elevation. Ponderosa pine sandhills.	Present. Known from four occurrences in the County, in the San Lorenzo Valley and Carbonera (Scotts Valley vicinity) Planning Areas. Restricted to Zayante sandhills formations.
Woodland woollythreads (<i>Monolopia gracilens</i>)	CRPR 1B.2	Broadleafed upland forest openings, chaparral openings, cismontane woodland, North Coast coniferous forest openings, or valley and foothill grassland at elevation from 328 through 3,936 ft.	Present. Known from 12 occurrences in the County. All records are from the Agricultural and Mountain Regions, except for a non-specific one outside the Program Area and in the City of Santa Cruz. Known from the Zayante sandhills formation but not restricted to it.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Kellman's bristle moss (<i>Orthotrichum kellmanii</i>)	CRPR 1B.2	Sandstone or carbonate substrates in chaparral and cismontane woodland communities at elevations between 1,125 and 2,247 ft.	Present. Known from one occurrence in the North Coast Planning Area.
Santa Cruz Mountains beardtongue (<i>Penstemon rattanii</i> var. <i>kleei</i>)	CRPR 1B.2	Chaparral, lower montane coniferous forest, and North Coast coniferous forest habitats from 1,312 to 3,609 ft in elevation. Sandy shale slopes and sometimes in the transition between forest and chaparral.	Present. Known from the Mountain and North Coast Regions. Can occur on Zayante sandhills formations, but it is not restricted to it.
Monterey pine (<i>Pinus radiata</i>)	CRPR 1B.1	Closed-cone coniferous forests and cismontane woodlands from 82 to 607 ft in elevation on dry bluffs and slopes. Only three primary stands are considered native to California, this species is widely planted.	Present. One occurrence known from the North Coast Planning Area. Although the population does appear to be expanding to the south, additional occurrences in the County are unlikely to occur because of the perennial nature of the species would not likely have been overlooked.
White-flowered rein orchid (<i>Piperia candida</i>)	CRPR 1B.2	Broadleaved upland forests, lower montane coniferous forests, and North Coast coniferous forests at an elevation range of approximately 99 to 4,325 ft.	Present. Known from two occurrences in the northern portion of the County, in the North Coast and San Lorenzo Valley Planning Areas.
Choris' popcornflower (<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>)	CRPR 1B.2	Mesic sites in chaparral, coastal scrub, and coastal prairie habitats at elevations of approximately 48 to 530 ft.	Present. Known from all four Regions in the County.
California alkali grass (<i>Puccinellia simplex</i>)	CRPR 1B.2	Prefers alkaline and vernal moist areas in sinks, flats, and lake margins at elevations from 7 to 3,050 ft in elevation.	Present. Only known from one occurrence in the southern portion of the County in the Salispuedes Planning Area.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Pine rose (<i>Rosa pinetorum</i>)	CRPR 1B.2	Closed-cone coniferous forest from 7 to 984 ft in elevation.	May be Present. Known from one historic occurrence in the North Coast Planning Area.
Chaparral ragwort (<i>Senecio aphanactis</i>)	CRPR 2B.2	Chaparral, cismontane woodland, and coastal scrub habitats from 50 to 2,625 ft in elevation. Drying alkaline flats.	Present. Known from one occurrence in the County, in the Bonny Doon Planning Area. This species may occur on Zayante sandhills formation, but is not restricted to it.
San Francisco campion (<i>Silene verecunda</i> ssp. <i>verecunda</i>)	CRPR 1B.2	Coastal bluff scrub, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland habitats at elevations of 98 to 2,116 ft. Often on sandy, mudstone, or shale soils.	Present. Known from four occurrences in the County. All occurrences are in the North Coast Planning Area.
Santa Cruz microseris (<i>Stebbinsoseris decipiens</i>)	CRPR 1B.2	Open areas in broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland habitats at elevations from 33 to 1,640 ft. In loose or disturbed soils, usually derived from sandstone, shale, or serpentine. On seawards slopes.	Present. Known from 11 occurrences in the County, in the North Coast Region only. The vast majority of these records are in the North Coast Planning Area. In the Bonny Doon Planning Area, the record is centered on Zayante sandhills formations, but the species is not restricted to it.
Santa Cruz clover (<i>Trifolium buckwestiorum</i>)	CRPR 1B.1	Gravelly margins of broadleafed upland forest, cismontane woodland, and coastal prairie habitats from 344 to 2,001 ft in elevation. In moist grassland.	Present. Known from the Mountain, North Coast, and Urban Regions.
Saline clover (<i>Trifolium hydrophilum</i>)	CRPR 1B.2	Mesic, alkaline, or saline sites in valley and foothill grassland habitat, in vernal pool habitat, or in marshes and swamps at elevations from 0 to 984 ft.	Present. One record from the southeast portion of the County, in the Salsipuedes Planning Area.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Methuselah's beard lichen (<i>Usnea longissima</i>)	CRPR 4.2	Grows in the redwood zone on tree branches of a variety of trees. In North Coast coniferous forest and broadleaved upland forest from 150 to 4,800 ft in elevation.	May be Present. Known from one inexact location in County. The occurrence is centered just outside the Skyline Planning Area in San Mateo County. Santa Cruz County is considered the southern extent of its known range.

Status Codes:

FE = Federally Endangered

FT = Federally Threatened

SE = State Endangered

ST = State Threatened

SR = State Rare

CRPR 1B = Plants rare, threatened, or endangered in California and elsewhere

CRPR Rank 2B = Plants rare, threatened, or endangered in California, but more common elsewhere

CRPR Rank 4 = Plants of limited distribution - watch list.

0.1 = seriously threatened in California

0.2 = moderately threatened in California

0.3—not very endangered in California

Table 2. Potential Occurrence of Special-Status Plant Species by Planning Area

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Federal or State Endangered, Rare, or Threatened Species															

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Marsh sandwort (<i>Arenaria paludicola</i>)			P	S				S				S			
Ben Lomond spineflower (<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>)			P	P				P			P	P			
Monterey spineflower (<i>Chorizanthe pungens</i> var. <i>pungens</i>)	P	P			P		S		S	P					P
Scotts Valley spineflower (<i>Chorizanthe robusta</i> var. <i>hartwegii</i>)			S	S				S				P	S		
Robust spineflower (<i>Chorizanthe robusta</i> var. <i>robusta</i>)	P	P	P	P	P	S	P		S	P		S	S	S	S
Santa Cruz wallflower (<i>Erysimum teretifolium</i>)			P	P				S			P	P	S		
Monterey gilia (<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>)	S						S			P					
Santa Cruz cypress (<i>Hesperocyparis abramsiana</i> var. <i>abramsiana</i>)			P	S				S				P			

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Santa Cruz tarplant (<i>Holocarpha macradenia</i>)	S	P		P	P	P	S		P	P		S	S	P	S
Dudley's lousewort (<i>Pedicularis dudleyi</i>)	S							S			S	S			
White-rayed pentachaeta (<i>Pentachaeta bellidiflora</i>)			S	S				P				S	S		
San Francisco popcorn-flower (<i>Plagiobothrys diffusus</i>)	S		P	P		S	S	P		S				P	
Scotts Valley polygonum (<i>Polygonum hickmanii</i>)				P							S	S	S		
CNPS Ranked Plants															
Blasdale's bent grass (<i>Agrostis blasdalei</i>)			P					P							
Bent-flowered fiddleneck (<i>Amsinckia lunaris</i>)	S	S	S	S	S	S	S	P	S	S	S	S	S	S	S
Anderson's manzanita (<i>Arctostaphylos andersonii</i>)	P	S	P	S	P		P	P	S		P	P	P	S	
Schreiber's manzanita (<i>Arctostaphylos glutinosa</i>)			S					P							

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Hooker's manzanita (<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>)		P					S		S	P					
Ohlone manzanita (<i>Arctostaphylos ohloneana</i>)			S					P							
Pajaro manzanita (<i>Arctostaphylos pajaroensis</i>)		P			S				S	S					
Kings Mountain manzanita (<i>Arctostaphylos regismontana</i>)								P			P	S			
Bonny Doon manzanita (<i>Arctostaphylos silvicola</i>)			P	P				P			P	P	S		
Santa Cruz Mountains pussypaws (<i>Calyptridium parryi</i> var. <i>hesseae</i>)		S	P	S	S			P			S	P	S		
Swamp harebell (<i>Campanula californica</i>)			S	S				S				S	S		
Bristly sedge (<i>Carex comosa</i>)	S	S			S				S			S	P		
Deceiving sedge (<i>Carex saliniformis</i>)				S								S			

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Congdon's tarplant (<i>Centromadia parryi</i> ssp. <i>congdonii</i>)									P	P					S
San Francisco collinsia (<i>Collinsia multicolor</i>)			S					P							
Tear drop moss (<i>Dacryophyllum falcifolium</i>)			P	S				S			S	P			
Ben Lomond buckwheat (<i>Eriogonum nudum</i> var. <i>decurrans</i>)			S	P				S			S	P	S		
Sand-loving wallflower (<i>Erysimum ammophilum</i>)	S		S			S	S	S		P				S	
Minute pocket moss (<i>Fissidens pauperculus</i>)	S	S	P	S				S				S	P	S	S
Toren's grimmia (<i>Grimmia torenii</i>)			S					P				S			
Vaginulate grimmia (<i>Grimmia vaginulata</i>)								P				S			
Short leaved evax (<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>)			S	S				S				P			
Kellogg's horkelia (<i>Horkelia cuneata</i> var. <i>sericea</i>)		S	P	P				P	S	P	S	P	S		

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Point Reyes horkelia (<i>Horkelia marinensis</i>)			P	S				P				S	S		
Perennial goldfields (<i>Lasthenia californica</i> ssp. <i>macrantha</i>)	P		S			S	S	S	S						
Small-leaved lomatium (<i>Lomatium parvifolium</i>)		P					S			S					
Arcuate bush-mallow (<i>Malacothamnus arcuatus</i>)		S		S	S			P			S	S	P	S	
Marsh microseris (<i>Microseris paludosa</i>)			P	P				P				S			
Northern curly-leaved monardella (<i>Monardella sinuata</i> ssp. <i>nigrescens</i>)			S	S				S				P	S		
Woodland woollythreads (<i>Monolopia gracilens</i>)	P		S	S	P			S	S		P	P	P	S	P
Kellman's bristle moss (<i>Orthotrichum kellmanii</i>)								P				S			
Santa Cruz Mountains beardtongue (<i>Penstemon rattanii</i> var. <i>kleei</i>)			P	S				P			S	P	P	S	

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Monterey pine (<i>Pinus radiata</i>)								P							
White-flowered rein orchid (<i>Piperia candida</i>)	S	S	S	S	S			P			S	P	S	S	
Choris' popcornflower (<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>)	S	S	S	S	S	S	S	P	S	S		P	S	S	S
California alkali grass (<i>Puccinellia simplex</i>)									S	S					P
Pine rose (<i>Rosa pinetorum</i>)			S					S							S
Chaparral ragwort (<i>Senecio aphanactis</i>)			P	S				S			S	S	S		
San Francisco campion (<i>Silene verecunda</i> ssp. <i>verecunda</i>)			S					P							
Santa Cruz microseris (<i>Stebbinsoseris decipiens</i>)			P					P							
Santa Cruz clover (<i>Trifolium buckwestiorum</i>)	S	S	S	P	S			P				S	P	P	
Saline clover (<i>Trifolium hydrophilum</i>)															P

Common Name (Scientific Name)	Planning Area														
	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Methuselah's beard lichen (<i>Usnea longissima</i>)	☺	☺	☺	☺	☺			☺			☺	☺	☺	☺	☺

Table 3. Special-Status Animal Species and Their Potential to Occur in the Program Area

Name	*Status	Habitat	Potential for Occurrence in Program Area
Federal or State Endangered, Threatened, or Candidate Species			
Mount Hermon June beetle (<i>Polyphylla barbata</i>)	FE	Restricted to Zayante sandhills in the Santa Cruz Mountains of Santa Cruz County.	Present. The Mount Hermon June beetle is endemic to Zayante sandhills habitat in the Program Area, where it inhabits both the sand parkland and sand chaparral communities. Sandhills occur on outcrops of sand soil known as the Zayante Series in the central portion of the County near the towns of Scotts Valley, Felton, Ben Lomond, Boulder Creek, and Bonny Doon (CNDDDB 2017). These locations are within the Carbonera and San Lorenzo Valley Planning Areas.
Ohlone tiger beetle (<i>Cicindela ohlone</i>)	FE	Endemic to Santa Cruz County, where it is known only from coastal terraces supporting remnant patches of native grassland habitat (Watsonville loam or Bonnydoon soil types).	Present. The Ohlone tiger beetle is known to occur in four narrow geographic areas within Santa Cruz County: northwest of Soquel, within Scotts Valley, west of the City of Santa Cruz, and northwest of the City of Santa Cruz (CNDDDB 2017). These locations are within the Bonny Doon and Live Oak Planning Areas.
Smith’s blue butterfly (<i>Euphilotes enoptes smithi</i>)	FE	Coastal sand dunes and coastal sage scrub where buckwheat (<i>Eriogonum</i> spp.) is present.	Absent. One record from 1983 is located in Santa Cruz County in sand dune habitat just north of Mount Hermon (CNDDDB 2017); however, the current northern limit of the species' range is generally considered to be the Salinas River (Monterey County).
Zayante band-winged grasshopper (<i>Trimerotropis infantilis</i>)	FE	Restricted to Zayante sandhills ecosystem in the Santa Cruz Mountains of Santa Cruz County.	Present. The Zayante band-winged grasshopper is endemic to Zayante sandhills habitat in the Program Area and is only known to occur at five sites, where it primarily inhabits the rare sand parkland habitat (CNDDDB 2017). These locations are within the Carbonera and San Lorenzo Valley Planning Areas.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Green sturgeon (<i>Acipenser medirostris</i>)	FT, CSSC	Spawns in large river systems such as the Sacramento River; forages in nearshore oceanic waters, bays, and estuaries.	Absent. This species may forage in Monterey Bay but is not expected to occur in streams in the Program Area.
Tidewater goby (<i>Eucyclogobius newberryi</i>)	FE	Restricted to coastal lagoons and the uppermost brackish zone of larger estuaries in water less than 3.3 ft deep.	Present. Known to occur (or to have occurred) in Waddell Creek, Scott Creek, Laguna Creek, Baldwin Creek, Moore Creek, Corcoran Lagoon, Moran Lagoon, Soquel lagoon, Aptos Lagoon, and the Pajaro River up to Highway 1 (USFWS 2007a).
Central California coast Coho salmon (<i>Oncorhynchus kisutch</i>)	FE, SE	Open ocean, estuaries, and rivers.	Present. Known to occur in Waddell Creek, Scott Creek, San Vicente Creek, San Lorenzo River, Soquel Creek, and Aptos Creek (Spence et al. 2005).
Central California coast steelhead (<i>Oncorhynchus mykiss</i>)	FT	Cool streams with suitable spawning habitat and conditions allowing migration between spawning and marine habitats.	Present. This steelhead Distinct Population Segment (DPS) occurs in all steelhead watersheds north of the Pajaro River, including Aptos Creek, Soquel Creek, San Lorenzo River, Baldwin Creek, Majors Creek, Laguna Creek, Liddell Creek, San Vicente Creek, Scott Creek, and Waddell Creek (NMFS 2005).
South Central California coast steelhead (<i>Oncorhynchus mykiss</i>)	FT	Cool streams with suitable spawning habitat and conditions allowing migration between spawning and marine habitats.	Present. This steelhead DPS occurs in the Pajaro River watershed, including the Pajaro River and Corralitos Creek (NMFS 2005).
California tiger salamander (<i>Ambystoma californiense</i>)	FT, ST	Vernal or temporary pools in annual grasslands or open woodlands.	Present. Two CNDDDB (2017) records in Santa Cruz County; one from Ellicott Slough and one from Buena Vista Pond in the San Andreas Planning Area. May also occur in other suitable habitat in the southern portion of the County.

Name	*Status	Habitat	Potential for Occurrence in Program Area
California red-legged frog (<i>Rana draytonii</i>)	FT, CSSC	Streams, freshwater pools, and ponds with emergent or overhanging vegetation.	Present. Primarily occurs in suitable habitat in the northwest portion of the County (west of Highway 9 to the coast) and southwest (west of Highway 1 in the Pajaro Valley).
Santa Cruz long-toed salamander (<i>Ambystoma macrodactylum croceum</i>)	FE, SE, SP	Dense riparian vegetation such as willows, thick coastal scrub, and oak woodland. Breeds in ponds.	Present. Known to occur in only a handful (less than 20) of ponds and wetlands from Aptos south to the Santa Cruz/Monterey County line (CNDDDB 2017)). These locations are within the Aptos, Aptos Hills, Eureka Canyon, La Selva, and San Andreas Planning Areas.
San Francisco garter snake (<i>Thamnophis sirtalis tetrataenia</i>)	FE, SE, SP	Freshwater marshes, ponds, and slow-moving streams along the coast.	May be Present. The only location where the San Francisco garter snake has been recorded in Santa Cruz County is on the northern border at Rancho del Oso in Big Basin Redwoods State Park (CNDDDB 2017). This location is within the North Coast Planning Area.
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	FT, SE	Requires dense, mature forests of redwood and Douglas-fir for breeding.	Present. Primarily occurs in the forested northern portion of Santa Cruz County in the North Coast, San Lorenzo Valley, and Skyline Planning Areas. Critical habitat for this species exists in Henry Cowell, Wilder Ranch, and Big Basin State Park.
California least tern (<i>Sterna antillarum browni</i>)	FE, SE, SP	Nests along the coast on bare or sparsely vegetated, flat substrates. In San Francisco Bay, nests in salt pans and on an old airport runway. Forages for fish in open waters.	Absent as Breeder. California least terns may be observed occasionally near the coast but they are not expected to nest in Santa Cruz County.

Name	*Status	Habitat	Potential for Occurrence in Program Area
California Ridgway's rail (<i>Rallus longirostris obsoletus</i>)	FE, SE, SP	Salt marsh habitat dominated by pickleweed and cordgrass.	Absent. The Program Area is outside the current range of the California Ridgeway's rail. A small population of Ridgway's rails were observed in Elkhorn Slough (Monterey County) in the 1960s and 1970s (CNDDDB 2017), but that population is extirpated and the species is now restricted to San Francisco Bay marshes.
Black rail (<i>Laterallus jamaicensis coturniculus</i>)	FT, SP	Breeds in fresh, brackish, and tidal salt marsh.	Absent as Breeder. There is one occurrence of a black rail in Santa Cruz County (CNDDDB 2017): a series of four observations at the Waddell Creek lagoon between August 1995 and September 1998. Breeding was not confirmed. This species is only expected to occur in the Program Area as a rare nonbreeding visitor, if at all.
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	FT, CSSC	Sandy beaches on marine and estuarine shores.	Absent. Snowy plovers currently nest primarily in the southern portion of Santa Cruz County, including the Pajaro River mouth and Sunset and Manresa State Beaches. Prior to 2010, snowy plovers also nested at pocket beaches (Wilder, Laguna, Scott, and Wilder beaches) along the northern coastline (USFWS 2007b). Critical habitat includes beaches from Jetty Road (Monterey County) to Aptos, Wilder Creek Beach, Scott Creek beach, and Waddell Creek beach in Santa Cruz County. Plovers use other beaches in Santa Cruz County during the non-breeding season. Because the snowy plover's distribution is limited to beaches, a community that is not present in the Program Area, this species is considered absent from the Program Area.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Bald eagle (<i>Haliaeetus leucocephalus</i>)	SE, SP	Occurs mainly along seacoasts, rivers, and lakes; nests in tall trees or in cliffs, occasionally on electrical towers. Feeds mostly on fish.	Present. Bald eagles have successfully nested at Harkins Slough in the San Andreas Planning Area in recent years. Suitable habitat is present in other parts of Santa Cruz County, but is not known to be occupied. They can be observed soaring throughout the Program Area.
Bank swallow (<i>Riparia riparia</i>)	ST (nesting)	Colonial nester on vertical banks or cliffs with fine-textured soils near water.	Absent as Breeder. Historically nested in Santa Cruz County at “Santa Cruz” (likely the Seabright area) until the 1950s and at the Pajaro River mouth until 1987, but no recent nesting records from the County (CNDDDB 2017); therefore, this species is not expected to breed in the Program Area but could occur as a migrant.
Least Bell’s vireo (<i>Vireo bellii pusillus</i>)	FE, SE	Nests in heterogeneous riparian habitat, often dominated by cottonwoods and willows.	Absent as Breeder. A least Bell’s vireo was observed along the Pajaro River in May 1996 (Cornell Lab of Ornithology 2017). However, this species does not nest in Santa Cruz County and only occurs in the County as a rare visitor.
Tricolored blackbird (<i>Agelaius tricolor</i>)	CSSC, SC	Nests near fresh water in dense emergent vegetation.	May be Present. Tricolored blackbirds have nested sporadically in the Program Area over the past 20 years. Past nesting locations include the sloughs in the Pajaro Valley, ponds and lagoons in mid-County, and along the North Coast. The only current nesting location is north of Highway 1 and 1.3 mi northwest of Wilder Beach (CNDDDB 2017) in the Bonny Doon Planning Area.

California Species of Special Concern

Name	*Status	Habitat	Potential for Occurrence in Program Area
Monterey roach (<i>Lavinia symmetricus subditus</i>)	CSSC	Coastal streams to mountain foothill streams; predominately found in small warm streams but also capable of thriving in larger colder streams with diverse conditions.	Present. The Monterey roach occurs in suitable habitat within the Pajaro River watershed.
Foothill yellow-legged frog (<i>Rana boylei</i>)	CSSC	Partially shaded shallow streams and riffles with a rocky substrate. Occurs in a variety of habitats in coast ranges.	Present. The foothill yellow-legged frog is nearly extirpated from much of Santa Cruz County, including the San Lorenzo River drainage, Pajaro River, and Waddell Creek. Small to moderate populations may persist in the Program Area in the Soquel and Aptos Creek drainages (CNDDDB 2017).
California giant salamander (<i>Dicamptodon ensatus</i>)	CSSC	Adults found in wet forests under rocks and logs near streams. Uses cold, clear streams for breeding.	Present. The California giant salamander occurs in suitable habitat in the Program Area, particularly the redwood and mixed conifer forests.
Santa Cruz black salamander (<i>Aneides niger</i>)	CSSC	Mixed deciduous and coniferous woodlands and coastal grasslands. Adults found under rocks, talus, and moist woody debris.	Present. Santa Cruz black salamanders are widespread in the Program Area and occur in suitable habitat from near sea level to at least 2,240 ft.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Western pond turtle (<i>Actinemys marmorata</i>)	CSSC	Permanent or nearly permanent water in a variety of habitats.	Present. Pond turtles occur in suitable aquatic habitat throughout the Program Area.
Blainville's horned lizard (<i>Phrynosoma blainvillii</i>)	CSSC	Open habitats with sandy, loosely textured soils, such as chaparral, coastal scrub, annual grassland, and clearings in riparian woodlands with the presence of native harvester ants (<i>Pogonomyrmex barbatus</i>).	Present. Blainville's horned lizards occur in suitable habitat throughout all but the North Coast region of the Program Area
Black legless lizard (<i>Anniella pulchra nigra</i>)	CSSC	Sandy dune areas with bush lupine and mock heather and moist soil.	Absent. Black legless lizards have a very limited range in Santa Cruz County and are only known to occur in coastal dune habitat in the southern portion of the Program Area (California Herps 2017). Because the black legless lizard's distribution is limited to coastal sand dunes, this species is considered absent from the Program Area.
Northern harrier (<i>Circus cyaneus</i>)	CSSC (nesting)	Nests in marshes and moist fields, forages over open areas.	Present. Northern harriers likely nest in suitable habitat along the North Coast during the breeding season.
Long-eared owl (<i>Asio otus</i>)	CSSC (nesting)	Riparian bottomlands with tall, dense willows and cottonwood stands (also dense live oak and California Bay along upland streams); forages primarily in adjacent open areas.	Present. Long-eared owls are rare but regular breeders in the Program Area. The majority of the breeding season records are from the Soquel Creek drainage in the Summit Planning Area (Cornell Lab of Ornithology 2017).

Name	*Status	Habitat	Potential for Occurrence in Program Area
Burrowing owl (<i>Athene cunicularia</i>)	CSSC	Open grasslands and ruderal habitats with suitable burrows, usually those made by California ground squirrels.	Absent as Breeder. Regular visitor during the non-breeding season along the North Coast (e.g. Wilder Ranch) and in the Pajaro Valley. Last confirmed breeding record in the County was in 1987 from the East Remote Parking Lot on the UC Santa Cruz campus.
Vaux's swift (<i>Chaetura vauxi</i>)	CSSC (nesting)	Nests in snags in coastal coniferous forests or, occasionally, in chimneys; forages aerially.	Present. Vaux's swifts nest throughout the Program Area where suitable forested habitat is available.
Black swift (<i>Cypseloides niger</i>)	CSSC (nesting)	Nest on cliffs and coastal bluffs; forage aerially for insects.	May be Present. Nesting has not been confirmed in the County since the early 1990s (CNDDDB 2017); however, individuals have recently been observed foraging and exhibiting behavior suggestive of breeding pairs near the coastal bluffs in the vicinity of Wilder Ranch State Park in the Bonny Doon Planning Area during the nesting season (Cornell Lab of Ornithology 2017).
Olive-sided flycatcher (<i>Contopus cooperi</i>)	CSSC (nesting)	Breeds in mature forests with open canopies, along forest edges in more densely vegetated areas, in recently burned forest habitats, and in selectively harvested landscapes (Altman and Sallabanks 2000, Robertson and Hutto 2007).	Present. Olive-sided flycatchers are relatively common in suitable habitat throughout the Program Area.
Purple martin (<i>Progne subis</i>)	CSSC (nesting)	Nest in abandoned woodpecker holes.	Present. The only current known purple martin nesting location in Santa Cruz County is at the Bonny Doon Ecological Reserve in the Bonny Doon Planning Area. Also known to nest just across the Santa Clara County line at Loma Prieta.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Yellow warbler (<i>Setophaga petechia</i>)	CSSC (nesting)	Nests in riparian woodlands.	Present. Yellow warblers nest sparsely in suitable habitat throughout most of the Program Area (e.g., riparian corridors along Aptos Creek, Soquel Creek, Corralitos Creek, and the San Lorenzo River) and are abundant in riparian vegetation along the lower reaches of the Pajaro River during the nesting season (Timmer et al. 2011). This species is also common during migration.
San Francisco common yellowthroat (<i>Geothlypis trichas sinuosa</i>)	CSSC (nesting)	Nests in herbaceous vegetation, usually in wetlands or moist floodplains.	May be Present. The range of the San Francisco common yellowthroat is restricted to the very northwest corner of Santa Cruz County in the North Coast Planning Area, if at all, with one CNDDDB (2017) record from Scott Creek in 1988. In general, the southern extent of the breeding range is considered to be Año Nuevo (San Mateo County).
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	CSSC (nesting)	Breeds and forages in grasslands, meadows, fallow fields, and pastures.	Present. Grasshopper sparrows occur in suitable habitat along the North Coast.
Bryant's savannah sparrow (<i>Passerculus sandwichensis alaudinus</i>)	CSSC (nesting)	Nests in pickleweed dominant salt marsh and adjacent ruderal habitat.	Present. Bryant's savannah sparrows are rare but occur in suitable habitat along the North Coast.
San Francisco dusky-footed woodrat (<i>Neotoma fuscipes annectens</i>)	CSSC	Nests in a variety of habitats including riparian areas, oak woodlands, and scrub.	Present. Abundant throughout the Program Area in suitable habitat such as wooded and scrub areas.

Name	*Status	Habitat	Potential for Occurrence in Program Area
Pallid bat (<i>Antrozous pallidus</i>)	CSSC	Forages over many habitats; roosts in caves, rock outcrops, buildings, and hollow trees.	May be Present. Pallid bats may occur sporadically throughout open areas and along roads in the North Coast and Santa Cruz Mountains regions. One modern CNDDDB (2017) record from 2003 located at the top of Old San Jose-Soquel Road; remaining records are historical.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	CSSC	Roosts in caves and mine tunnels, and occasionally in deep crevices in trees such as redwoods or in abandoned buildings, in a variety of habitats.	May be Present. Present in low numbers in suitable habitat in the Program Area. Only two CNDDDB (2017) records from the past twenty years: 1995 record from Big Basin State Park and a 2010 record from the Empire Grade area.
Western red bat (<i>Lasiurus blossevillii</i>)	CSSC	Roosts in foliage in forest or woodlands, especially in or near riparian habitat.	Absent as Breeder. The western red bat occurs as a migrant and winter resident, but does not breed in the Program Area. Small numbers may roost in foliage in trees virtually anywhere in the County, but primarily roost in riparian areas.
American badger (<i>Taxidea taxus</i>)	CSSC	Burrows in grasslands and occasionally in infrequently disked agricultural areas.	May be Present. There are few records of badgers in Santa Cruz County (CNDDDB 2017) but this species may occur in low numbers suitable habitat in the Program Area. Suitable habitat likely restricted to grasslands along the North Coast and in the Santa Cruz Mountains.
State Fully Protected Species			
White-tailed kite (<i>Elanus leucurus</i>)	SP	Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.	Present. The white-tailed kite is an uncommon resident and breeder in suitable habitat in the Program Area.

Name	*Status	Habitat	Potential for Occurrence in Program Area
American peregrine falcon (<i>Falco peregrinus anatum</i>)	SP	Forages in many habitats; nests on cliffs and tall bridges and buildings.	Present. Peregrine falcons are rare breeders in Santa Cruz County. Known to have nested at several locations in the Program Area, including Summit Rock in Castle Rock State Park, Whalebone Gulch, and Majors Creek (Cornell Lab of Ornithology 2017). May nest at other unknown locations. Also uncommon migrant and wintering visitor.
Golden eagle (<i>Aquila chrysaetos</i>)	SP	Breeds on cliffs or in large trees (rarely on electrical towers), forages in open areas.	Present. Golden eagles are rare residents and breeders in the Program Area, with at least a couple of pairs present in suitable habitat. Known pairs include one pair near U.C. Santa Cruz; other pairs are likely present in Loma Prieta area and along the North Coast.
Ringtail (<i>Bassariscus astutus</i>)	SP	Cavities in rock outcrops and talus slopes, as well as hollows in trees, logs, and snags that occur in riparian habitats and dense woodlands, usually in close proximity to water.	May be Present. Ringtails are likely rare residents in suitable habitat in the Program Area.

SPECIAL-STATUS SPECIES CODE DESIGNATIONS:

- FE = Federally listed Endangered
- FT = Federally listed Threatened
- FC = Federal Candidate for listing
- SE = State listed Endangered
- ST = State listed Threatened
- SC = State Candidate for listing
- CSSC = California Species of Special Concern
- SP = State Fully Protected Species

Table 4. Potential Occurrence of Special-Status Animals by Planning Area

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Federal or State Endangered, Rare, or Threatened Species															
Mount Hermon June beetle Section 1. <i>(Polyphyl la barbata)</i>				X								X			
Ohlone tiger beetle Section 2. <i>(Cicindel a ohlone)</i>			X			X									
Zayante band-winged grasshopper Section 3. <i>(Trimerot ropis infantilis)</i>				X								X			
Section 4. Tidewater goby <i>(Eucyclog obius newberry i)</i>	X		X			X		X		X					
Section 5. Central California coast Coho salmon Section 6. <i>(Oncorhy nchus kisutch)</i>	X	X	X	X				X				X		X	

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Section 7. Central California coast steelhead (<i>Oncorhynchus mykiss</i>)	X	X	X	X	X	X	X	X			X	X	X	X	
Section 8. South Central California coast steelhead (<i>Oncorhynchus mykiss</i>)					X				X	X					X
California tiger salamander Section 9. (<i>Ambystoma californiense</i>)									X	X					X
California red-legged frog Section 10. (<i>Rana draytonii</i>)			X				X	X	X	X		X			X

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Santa Cruz long-toed salamander Section 11. <i>(Ambystoma macrodactylum croceum)</i>	X	X			X		X			X					
San Francisco garter snake Section 12. <i>(Thamnophis sirtalis tetrataenia)</i>								X							
Marbled murrelet Section 13. <i>(Brachyramphus marmoratus)</i>			X					X			X	X	X		
Black rail Section 14. <i>(Laterallus jamaicensis coturniculus)</i>			X					X	X	X					

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Western snowy plover Section 15. <i>(Charadrius alexandrinus nivosus)</i>			X					X		X					
Bald eagle Section 16. <i>(Haliaeetus leucocephalus)</i>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bank swallow <i>(Riparia riparia)</i>	Extirpated														
Tricolored blackbird <i>(Agelaius tricolor)</i>			X					X		X					X
California Species of Special Concern															
Monterey roach Section 17. <i>(Lavinia symmetricus subditus)</i>		X			X				X	X					X
Foothill yellow-legged frog Section 18. <i>(Rana boylei)</i>	X	X	X	X	X			X			X	X	X	X	

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
California giant salamander Section 19. (<i>Dicamptodon ensatus</i>)	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Santa Cruz black salamander Section 20. (<i>Aneides niger</i>)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Western pond turtle Section 21. (<i>Actinemys marmorata</i>)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Blainville's horned lizard Section 22. (<i>Phrynosoma blainvillii</i>)	X	X	X	X	X	X	X		X	X	X	X	X	X	X
Northern harrier Section 23. (<i>Circus cyaneus</i>)			X					X							
Long-eared owl Section 24. (<i>Asio otus</i>)		X			X				X				X	X	X
Vaux's swift Section 25. (<i>Chaetura vauxi</i>)			X	X				X			X	X	X		

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Black swift Section 26. <i>(Cypseloides niger)</i>			X					X				X			
Olive-sided flycatcher Section 27. <i>(Contopus cooperi)</i>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Purple martin Section 28. <i>(Progne subis)</i>			X										X		
Yellow warbler Section 29. <i>(Setophaga petechia)</i>	X	X	X	X	X	X			X	X		X	X	X	X
San Francisco common yellowthroat Section 30. <i>(Geothlypis trichas sinuosa)</i>								X							
Grasshopper sparrow Section 31. <i>(Ammodramus savannarum)</i>			X					X							

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
Bryant's savannah sparrow Section 32. (<i>Passerculus sandwichensis alaudinus</i>)			X					X							
San Francisco dusky-footed woodrat Section 33. (<i>Neotoma fuscipes annectens</i>)	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Pallid bat Section 34. (<i>Antrozous pallidus</i>)			X		X			X			X	X	X		
Townsend's big-eared bat Section 35. (<i>Corynorhinus townsendii</i>)			X					X				X			
American badger Section 36. (<i>Taxidea taxus</i>)			X		X			X			X		X		X
State Fully Protected Species															

Common Name (Scientific Name)	1-Aptos	2-Aptos Hills	3-Bonny Doon	4-Carbonera	5-Eureka Canyon	6-Live Oak	7-La Selva	8-North Coast	9-Pajaro Valley	10-San Andreas	11-Skyline	12-San Lorenzo Valley	13-Summit	14-Soquel	15-Salsipuedes
White-tailed kite Section 37. (<i>Elanus leucurus</i>)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
American peregrine falcon Section 38. (<i>Falco peregrinus anatum</i>)			X					X			X	X			
Golden eagle Section 39. (<i>Aquila chrysaetos</i>)			X					X					X		X
Ringtail Section 40. (<i>Bassariscus astutus</i>)		X	X	X	X			X			X	X	X		X