

MEMORANDUM

To: Shelan Zuhdi, Santa Clara County Parks and Recreation Department

From: Emily Scricca and Anna Touchstone, Dudek

Subject: Biological Technical Memorandum, Sanborn and Upper Stevens Creek County Parks Forest Health Plan Project

Date: May 19, 2023

cc: Matt Ricketts, Dudek
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Figures 3-1–3-3 – Proposed Project
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This technical memorandum summarizes the results of a biological resources assessment conducted by Dudek biologists for the Santa Clara County Parks Sanborn and Upper Stevens Creek County Parks Forest Health Plan Project (Project ID 2022-17) (Project), near Saratoga and Los Gatos, Santa Clara County, California. The Project is being proposed by the Santa Clara County Parks and Recreation Department to implement the Sanborn and Upper Stevens Creek County Parks Forest Health Plan, which recommends vegetation treatment activities on approximately 1,422 acres within Sanborn and Upper Stevens Creek County Parks to reduce wildfire risk and achieve other forest health benefits. The Project has been evaluated for California Environmental Quality Act (CEQA) compliance as an “activity” covered by the California Vegetation Treatment Program Program Environmental Impact Report (PEIR) (CBFFP 2019). The PEIR provides guidelines for impact assessment under CEQA disciplines, including biological resources. This memorandum provides a brief overview of the Project, a summary of the methods used to conduct the assessment, a description of existing conditions and assessment results, and recommendations for implementing PEIR requirements and mitigation measures.

1 Introduction

1.1 Project Description

Santa Clara County Parks proposes to implement the Forest Health Plan, and more specifically, implement the recommended projects identified in Figures 12 and 13 in Chapter 7 of the Forest Health Plan. The Forest Health Plan proposes to implement vegetation treatment activities on approximately 1,006 acres within Sanborn County Park and approximately 103 acres within Upper Stevens Creek County Park, for a total of 1,109 treatment acres.

Recommended projects identified in the Forest Health Plan are intended to reduce flammable vegetation; improve environmental conditions (e.g., forest health); provide defensible space to existing and proposed facilities and provide strategic locations where the wildfires can be slowed or stopped. This would be achieved by reducing, thinning, or removing mature fuel and dead/downed fuels, creating defensible space buffers and shaded fuel breaks along primary and secondary evacuation routes. Vegetation treatments would be implemented using manual and mechanical treatments, as well as prescribed burning.

1.2 Project Location

The Project site is within the Sanborn and Upper Stevens Creek County Parks in Santa Clara County. These parks are approximately 14 miles west of San Jose in the Santa Cruz Mountain Range. Sanborn Park is situated between Skyline Boulevard (State Route 35) to the west and the City of Saratoga to the east. Upper Stevens Creek Park is approximately 7 miles northwest of Sanborn County Park. Both parks are within a network of adjacent open spaces and preserves. Upper Stevens Creek Park is bordered by Monte Bello Open Space Preserve to the north, Saratoga Gap Open Space Preserve to the south, and Long Ridge Open Space preserve to the west (Figure 1, Project Location, and Figure 2, Project Site). Both parks provide recreational opportunities such as multi-use trails, camping, and day use areas.

1.3 Project Characteristics

The recommended projects identified in the Forest Health Plan consist of shaded fuel breaks and ecological restoration treatment types, and would be implemented using mechanical and manual vegetation removal, and prescribed burning (pile and broadcast) treatment activities. Table 1 provides further details on the extent of each treatment type and treatment activity within the parks. Treatment activities would be implemented according to the best management practices identified in the Forest Health Plan. These strategic treatments would help to reduce fire intensity during wildfires in areas directly adjacent to recreational values and in areas where firefighting resources can safely engage in suppression operations.

Access

Project employees and transport of equipment would use State Route 35, State Route 9, Sanborn Road, and Black Road to access Sanborn Park. Upper Stevens Creek Park can be accessed by Skyline Boulevard (State Route 35). No new roads are proposed. The Project would be accessed from public and Santa Clara County Parks roads. The Project would not include access agreements for private roads.

Biomass Disposal

Biomass would be managed by mastication, chipping, and removal to regional composting or biomass processing facilities, or burned in air curtain burners or pile burning. In some cases, logs may be stored temporarily on site prior to transport to biomass facilities. Mulch will not exceed an average of 6 inches of depth, and the spreading of mulch will be avoided within Watercourse and Lake Protection Zone (WLPZ) areas in accordance with SPR HYD-4, and in any areas where mammal burrows were identified during implementation of SPR BIO-10 (Surveys for Special-Status Wildlife; specifically, surveys for special-status amphibian refugia).

Equipment and Crews

Equipment needed to implement manual treatments would include hand-operated tools, such as chainsaws and pole saws, as well as trucks and personal vehicles for transport of crews and equipment. Chippers would be used to assist with manual treatments and would be staged on existing access roads, outside of steep-slope areas. For mechanical treatments, the Project would involve use of hand crews in combination with heavy equipment, including masticators, feller-bunchers, skidders, track-mounted chippers and grinders. Crew sizes would vary based on land cover, terrain, and treatment activities. It is anticipated that crew sizes would range from 12 to 24 crew members per project. Crews would consist of private contractors, Santa Clara County Parks staff, local fire agencies, tribal groups, or combinations of existing labor sources. In some instances, California Department of Forestry and Fire Protection (CAL FIRE) crews and/or private contractors may be used for fuel break construction and maintenance. Local FireSafe councils may also implement fuel reduction projects.

Project Timeline

Implementation of the recommended projects identified in the Forest Health Plan would occur over an approximately 10-year period, beginning as early as spring 2023.

1.4 Treatment Description

As shown in Figures 3-1 through 3-3, Proposed Project, and presented in Table 1, the Project is composed of multiple treatment areas. Treatment areas were identified due to varying conditions and to allow versatility of implementation based on site-specific requirements and conditions.

Treatments types proposed are consistent with the PEIR (CBFFP 2019) and include ecological restoration and fuel breaks, as follows:

- **Shaded Fuel Break Treatments.** Fuel breaks would consist of shaded fuel breaks around primary/secondary evacuation routes and other roads, existing and proposed campgrounds, recreational resources, and structures. No non-shaded (vegetation free) fuel breaks are proposed. Fuel breaks would increase the horizontal spacing between retained vegetation, increase the vertical separation between surface fuels and overstory tree canopies, and modify surface fuels (grasses, shrubs, debris) to reduce fire intensity and flame lengths. Recommended fuel breaks would vary in total width depending on terrain, vegetation, and proximity to developed uses, and may range from 20 to 400 feet.
- **Ecological Restoration Treatments.** Ecological restoration treatments would address overall forest health, increasing tree vigor, reducing susceptibility to pests and pathogens, increasing tolerance to drought and

climate change, and reducing the threat of high-severity wildfire. Treatments would consist of selective thinning and removal of mid- to large-diameter noncommercial trees affected by sudden oak death and/or large-diameter Douglas fir trees overtopping sensitive hardwood and brush species. The long-term goal is to return these forested stands to a condition with an increasingly diverse and regenerative forest, vigorous with larger trees, and increased the spacing between tree crowns and understory vegetation, through the use of prescribed fire as well as other vegetation management techniques. Selective thinning, treatment of understory vegetation (ladder fuels), removal of dead and dying trees, and control of invasive species (where applicable) would be integrated into treatment prescriptions.

The proposed treatment activities would be consistent with the PEIR and include manual treatments, mechanical treatments, and prescribed burning (pile and broadcast burning). Best management practices discussed in the Forest Health Plan would be implemented, as would Standard Project Requirements (SPRs) outlined in the PEIR.

- **Mechanical Treatments.** Mechanical treatments proposed under the Forest Health Plan include the use of masticators, tractors, chippers, grinders, skidder, and cable yarding systems.
- **Manual Treatments.** Manual treatments proposed under the Forest Health Plan include pruning, cutting, or removal of trees or other forest vegetation by hand or using hand-held equipment. Other hand-labor treatments would involve removing dead wood, piling material, lopping and scattering, and spreading chips/mulch. Where mechanized treatment is not feasible, handwork would be used to connect mechanically treated polygons in the highest priority areas.
- **Prescribing Burning Treatments.** Both pile and broadcast burning are proposed, as is use of an air curtain burner. It is anticipated that approximately 400 acres would be treated using pile or broadcast burning. A burn plan would be prepared for each controlled prescribed burn for broadcast burns. Pile burns would be located at or adjacent to treatment areas; they are not subject to a burn plan.

1.5 California Vegetation Treatment Program PEIR

The PEIR (CBFFP 2019) identified potential impacts to biological resources, as follows:

- **IMPACT BIO-1:** Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modification
- **IMPACT BIO-2:** Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modification
- **IMPACT BIO-3:** Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation That Leads to Loss of Habitat Function
- **IMPACT BIO-4:** Substantially Affect State or Federally Protected Wetlands
- **IMPACT BIO-5:** Interfere Substantially with Wildlife Movement or Impede use of Nurseries
- **IMPACT BIO-6:** Substantially Reduce Habitat or Abundance of Common Wildlife, Including Nesting Birds
- **IMPACT BIO-7:** Conflict with Local Policies or Ordinances Protecting Biological Resources
- **IMPACT BIO-8:** Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan

The PEIR includes several Standard Project Requirements (SPRs) designed to avoid and/or minimize the above-identified potential impacts. It also includes mitigation measures (MMs) to be implemented where impacts are still potentially significant after implementation of the SPRs. SPR BIO-1 requires data review and a

reconnaissance-level biological survey as the first steps to identifying potential impacts (CBFFP 2019). The following sections describe methods and results of the data review and reconnaissance-level survey, and provide recommendations for implementing the SPRs and MMs to ensure the Project does not result in significant impacts to biological resources.

Table 1 Proposed Project Treatment Areas

Map ID	Area	Project Name	Treatment Type	Treatment Activities	Park
9.842239574	01A	Skyline Boulevard Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
1.479493182	01B	Skyline Boulevard Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
14.65695307	01C	Skyline Boulevard Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
26.35143192	01D	Skyline Boulevard Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
19.66311927	01E	Skyline Boulevard Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
9.774791219	01F	Skyline Boulevard Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
9.605613121	01G	Skyline Boulevard Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
42.67615527	02	Table Mountain Christmas Tree Farm	Ecological Restoration	Mechanical, Manual	Upper Stevens Creek
8.687944617	03A	Charcoal Road-Table Mountain Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
38.89136568	03B	Charcoal Road-Table Mountain Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
0.718097708	04A	Defensible Space	Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
0.718097719	04B	Defensible Space	Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
0.628070782	04C	Defensible Space	Shaded Fuel Break	Mechanical, Manual	Sanborn
7.163833959	04D	Defensible Space	Shaded Fuel Break	Mechanical, Manual	Sanborn
5.20547116	04E	Defensible Space	Shaded Fuel Break	Mechanical, Manual	Sanborn
13.12953363	04F	Defensible Space	Shaded Fuel Break	Mechanical, Manual	Sanborn
1.575137313	04G	Defensible Space	Shaded Fuel Break	Mechanical, Manual	Sanborn
5.30339426	05A	Sanborn Road Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
33.05831567	05B	Sanborn Road Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
10.52052576	05C	Sanborn Road Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
5.18626208	06A*	Los Gatos Creek Watershed Collaborative Forest Health Grant – Area B – Santa Clara County Parks	Ecological Restoration/ Shaded Fuel Break	Manual	Sanborn
201.6065789	06B*	Los Gatos Creek Watershed Collaborative Forest Health Grant – Area B – Santa Clara County Parks	Ecological Restoration/ Shaded Fuel Break	Mechanical, Manual	Sanborn

Table 1 Proposed Project Treatment Areas

Map ID	Area	Project Name	Treatment Type	Treatment Activities	Park
61.38398761	06C*	Los Gatos Creek Watershed Collaborative Forest Health Grant – Area B – Santa Clara County Parks	Ecological Restoration/ Shaded Fuel Break	Mechanical, Manual	Upper Stevens Creek
25.30622433	07	Christensen Nursery – Future Camping	Shaded Fuel Break	Mechanical, Manual	Sanborn
36.16685703	07	Christensen Nursery – Future Camping – 100-foot Buffer	Shaded Fuel Break	Mechanical, Manual	Sanborn
6.553948044	08	Sanborn Walk-in Campground	Shaded Fuel Break	Mechanical, Manual	Sanborn
10.09796394	08	Sanborn Walk-in Campground – 100-foot Buffer	Shaded Fuel Break	Mechanical, Manual	Sanborn
312.1168442	09	Lake Ranch Res Wildfire Resiliency Project	Ecological Restoration	Mechanical, Manual	Sanborn
101.3565149	10	Primary and Secondary Evacuation Routes	Shaded Fuel Break	Mechanical, Manual	Sanborn
330.1196258	11	Lyndon Canyon Creek Wildfire Resiliency Project	Ecological Restoration	Mechanical, Manual	Sanborn
7.968178256	12	Black Road Shaded Fuel Break	Shaded Fuel Break	Mechanical, Manual	Sanborn
9.815362543	13	Christmas Tree Farm Fuels Reduction	Ecological Restoration	Mechanical, Manual	Sanborn

* In some instances, treatment areas identified by the Los Gatos Creek Watershed Collaborative Forest Health Grant overlap with treatment areas previously identified in the Forest Health Plan. As such, areas in this table present some overlap. Total acres proposed for treatment activities equals approximately 1,109 acres.

2 Methods

SPR BIO-1 (Review and Survey Project-Specific Biological Resources) identifies sources to be consulted for the data review, the purposes of the reconnaissance-level survey, and steps to be taken based on the results of the data review and reconnaissance-level survey. This section describes the methods for the data review and reconnaissance-level survey conducted for the Project.

2.1 Data Review

SPR BIO-1 requires that the data review include “the biological resources setting, species and sensitive natural communities tables, and habitat information in [the] PEIR for the ecoregion(s) where the treatment will occur” and “the best available, current data for the area, including vegetation mapping data, species distribution/range information, California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, relevant BIOS queries, and relevant general and regional plans” (CBFFP 2019; CDFW 2022a; CNPS 2022a). In addition to reviewing the above source for the Project ecoregion (261A, Central California Coast), Dudek biologists reviewed the following databases:

- U.S. Fish and Wildlife Service’s (USFWS) Information for Planning and Consulting (IPaC) (USFWS 2022a)
- National Hydrography Dataset (USGS 2022)
- National Wetlands Inventory (USFWS 2022b)
- U.S. Department of Agriculture Natural Resources Conservation Service (USDA 2022)

Searches of the above-referenced databases were completed for the Mindego Hill and Castle Rock Ridge U.S. Geological Survey 7.5-minute quadrangles in which the Project site occurs, and the following surrounding quadrangles: Cupertino, Big Basin, and Los Gatos.

Dudek biologists also consulted the Santa Clara County Code of Ordinances Division (County of Santa Clara 2006) for policies and development standards that may apply to the Project, and consulted the County of Santa Clara’s Tree Removal in the Hillside Zoning District Ordinance (Section C16-6). In addition to conducting the data review, Dudek biologists coordinated with the California Department of Fish and Wildlife (CDFW) and USFWS with regard to the potential for the Project to affect resources entrusted to these agencies, such as species listed under the federal Endangered Species Act and California Endangered Species Act.

To determine lists of potentially occurring special-status plant and wildlife species, Dudek biologists first referred to PEIR Appendix BIO-3, Special-Status Species Tables (CBFFP 2019). The five-quad CNDDB query (Attachment A, Database Searches) provided a list of species for further analysis. The final list of species that have potential to occur was determined based on factors such as details of range, elevation range, and habitat suitability (Attachment B, Special-Status Plant Species Potential to Occur, and Attachment C, Special-Status Wildlife Species Potential to Occur).

2.2 Reconnaissance-Level Survey

Following the data review, Dudek biologists Emily Scricca and Anna Touchstone conducted reconnaissance-level field surveys of the Project site to identify and describe existing biological resources, including natural vegetation communities, aquatic resources (e.g., wetlands), and sensitive natural resources, such as vegetation communities considered sensitive by state/federal resource agencies and habitat potentially supporting special-status plant and wildlife species. Existing vegetation and land cover mapping from the Sanborn-Skyline County Parks Interim Natural Resource Plan (Santa Clara County Parks 2012) was referenced in the field and boundaries were updated as needed based on observed conditions and review of aerial imagery signatures (Google Earth Pro 2022). Natural communities were mapped based on constituent species and membership rules as defined in the Manual of California Vegetation Online (CNPS 2022b), and were classified to the level necessary to determine CDFW sensitivity rankings (CDFW 2022b). Determinations for the potential occurrence of special-status species were based on a review of habitat types, soils, and elevation preferences, as well as the known geographic range of each species and nearby documented occurrences. Species were considered “not expected to occur” when the Project site was clearly outside the known geographic range of the species or when potential habitat was absent from the Project site.

Dudek biologists met with Santa Clara County Parks staff on May 31 (Sanborn) and June 3 (Upper Stevens Creek) to receive general tours of the treatment areas and discuss access routes. Following these initial visits, Dudek biologists were able to conduct the reconnaissance-level surveys independently. Table 2 provides the dates and weather conditions observed during the reconnaissance-level field surveys.

Table 2. Survey Dates, Personnel, and Conditions

Date/Time	Visit Type	Location	Personnel	Conditions
5/31/2022 9:00 AM – 1:00 PM	Access/Site Tour	Sanborn County Park	Emily Scricca, Park Staff	Not recorded
6/2/2022 9:30 AM – 3:50 PM	Reconnaissance-Level Survey	Sanborn County Park	Emily Scricca, Anna Touchstone	68–80°F, 20–30% cloud cover, 3–5 mph winds
6/3/2022 10:00 AM – 1:30 PM	Access/Site Tour, Reconnaissance-Level Survey	Upper Stevens Creek County Park	Emily Scricca, Anna Touchstone, Park Staff	73–82°F, 10–20% cloud cover, 3–5mph winds, hazy
6/30/2022 9:00 AM – 2:00 PM	Reconnaissance-Level Survey	Sanborn County Park	Emily Scricca	56–72°F, 0% cloud cover, 3–5 mph winds

Reconnaissance-level site visits were conducted on foot and from vehicles to ensure visual coverage of the Project site. The survey was conducted within all accessible parts of the Project site to the level necessary to identify and describe existing biological resources. Biologists walked to all areas that were not visible from a vehicle using existing Parks trails. ESRI Collector on a mobile device and a Trimble® R1 GNSS Receiver with submeter accuracy with an overlay of the treatment area boundaries were used to record any sensitive biological resources. Representative photographs are included in Attachment D.

The surveys focused on biological resources covered in the PEIR impact analysis (Impacts BIO-1 through BIO-8, listed above), but also considered the potential for impacts not addressed in the PEIR. All plant and wildlife species observed during the survey were recorded. Plant species were identified to the lowest taxonomic group possible.

Nomenclature for plant species follow the Jepson Manual, Vascular Plants of California, Second Edition (Jepson Flora Project 2022). Wildlife species detected by sight, calls, tracks, scat, or other signs were recorded into a field notebook. The Project site was scanned with and without binoculars to aid in the identification of wildlife. Wildlife species not observed but expected to use the Project site were identified based on known habitat preferences and regional distribution. Full lists of plant and wildlife species observed during the reconnaissance-level field surveys are included in Attachment E, Plant Species Compendium, and Attachment F, Wildlife Species Compendium.

No formal wetland delineation or focused surveys for special-status plant or animal species were conducted. The field visit was sufficient to generally describe aquatic features on the Project site that could be subject to regulation by the U.S. Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board (RWQCB), and/or CDFW under Sections 404 of the federal Clean Water Act, the Porter-Cologne Water Quality Control Act, and Section 1600 of the California Fish and Game Code, respectively.

Table 3. Sensitive Natural Communities within the Project Site

Alliance	CaCode	CDFW CaCode/Association	State Rarity
Bog and Marsh			
Cattail marshes*	52.050.09	<i>Typha angustifolia</i> – <i>Typha latifolia</i> – <i>Typha domingensis</i> / <i>Schoenoplectus americanus</i>	–
Field horsetail – scouringrush horsetail – variegated scouringrushwet meadow	52.070.00	–	S3S4
Chaparral			
Chamise chaparral	37.101.19	<i>Adenostoma fasciculatum</i> – <i>Arctostaphylos manzanita</i>	Y
Forest and Woodland			
California bay forest and woodland	74.100.05	<i>Umbellularia California</i> – <i>Quercus agrifolia</i> / <i>Toxicodendron diversilobum</i> (<i>Corylus cornuta</i>)	Y
Coast live oak woodland and forest	71.060.26	<i>Quercus agrifolia</i> – <i>Arbutus menziesii</i> – <i>Umbellularia californica</i>	S3
Douglas fir forest and woodland	82.200.50	<i>Pseudotsuga menziesii</i> – <i>Arbutus menziesii</i>	Y
Douglas fir forest and woodland	82.200.60	<i>Pseudotsuga menziesii</i> – <i>Quercus kelloggii</i>	Y
Douglas fir forest and woodland	82.300.03	<i>Pseudotsuga menziesii</i> – <i>Quercus chrysolepis</i>	S3?
Douglas fir – tanoak forest and woodland	82.500.04	<i>Pseudotsuga menziesii</i> – <i>Notholithocarpus densiflorus</i> – <i>Umbellularia californica</i> / <i>Toxicodendron diversilobum</i>	Y
Redwood forest and woodland	86.100.00	–	S3
Redwood forest and woodland	86.100.14	<i>Sequoia sempervirens</i> – <i>Acer macrophyllum</i> – <i>Umbellularia californica</i>	S3
Riparian			
Bigleaf maple forest and woodland	61.450.01	<i>Acer macrophyllum</i> /(<i>Rubus ursinus</i>)	Y

Table 3. Sensitive Natural Communities within the Project Site

Alliance	CaCode	CDFW CaCode/Association	State Rarity
Bigleaf maple forest and woodland	61.450.04	<i>Acer macrophyllum</i> - <i>Pseudotsuga menziesii</i> / <i>Corylus cornuta</i>	Y
Goodding’s willow – red willow riparian woodland and forest	61.211.05	<i>Salix gooddingii</i> – <i>Salix laevigata</i>	Y
Scrub			
Coyote brush scrub	32.060.21	<i>Baccharis pilularis</i> /(<i>Nassella pulchra</i> – <i>Elymus glaucus</i> – <i>Bromus carinatus</i>)	S3

Notes: CDFW = California Department of Fish and Wildlife
 S4S3 = Apparently secure/vulnerable statewide; Y= Designated as being of S3 or rarer; S3 = Vulnerable statewide; ? = an inexact numeric rank due to insufficient data over the full expected range of the type, but existing information points to this rank (Master et. al. 2012)
 * Vegetation community that while not rare, is generally associated with aquatic features and thus constitutes high value for wildlife, and may be subject to the jurisdiction of CDFW.

3 Results

The data review and reconnaissance-level surveys identified several sensitive biological resources occurring or potentially occurring within the Project site that could be affected by vegetation treatment activities. A total of 15 CDFW sensitive natural communities were identified within the Project site (Table 3), as indicated by a state rarity ranking of S1–S3, or indicated as sensitive without a rarity ranking (CDFW 2022b). Additionally, oak woodland communities are considered sensitive under the PEIR (CBFFP 2019).

Several special-status plant and wildlife species also have potential to occur within the Project site (see Attachments B and C). Results of the CNDDDB and California Native Plant Society database searches identified 45 special-status plant species as occurring or potentially occurring in the Project vicinity. Of these, 30 were eliminated from further consideration due to a lack of suitable habitat or edaphic conditions (i.e., alkaline or serpentine soils), extent of habitat degradation within the Project site (e.g., regular mowing, presence of invasive species, previous disturbance), or the location of the Project site outside a species’ known range.

The 15 remaining species have at least a low potential to occur within the Project site based on the presence of suitable habitat types (Table 4).

Table 4. Special-Status Plants with Potential to Occur

Species	Status (Federal/ State/CRPR)	Vegetation Type			
		Valley and Foothill Grassland ¹	Chaparral Scrub or Woodland ²	Coniferous Forest ³	Riparian Woodland ⁴
Anderson’s manzanita (<i>Arctostaphylos andersonii</i>)	None/None/1B.2	—	X	X	—
Arcuate bush-mallow (<i>Malacothamnus arcuatus</i>)	None/None/1B.2	—	X	—	—

Table 4. Special-Status Plants with Potential to Occur

Species	Status (Federal/ State/CRPR)	Vegetation Type			
		Valley and Foothill Grassland ¹	Chaparral Scrub or Woodland ²	Coniferous Forest ³	Riparian Woodland ⁴
Bent-flowered fiddleneck (<i>Amsinckia lunaris</i>)	None/None/1B.2	X	X	—	—
Chaparral ragwort (<i>Senecio aphanactis</i>)	None/None/2B.2	—	X	—	—
Dudley’s lousewort (<i>Pedicularis dudleyi</i>)	None/SR/1B.2	X	X	X	—
King’s Mountain manzanita (<i>Arctostaphylos regismontana</i>)	None/None/1B.2	—	X	X	—
Loma Prieta hoita (<i>Hoita strobilina</i>)	None/None/1B.1	—	X	—	X
Minute pocket moss (<i>Fissidens pauperculus</i>)	None/None/1B.2	—	—	X	—
Most beautiful jewelflower (<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>)	None/None/1B.2	X	X	—	—
Sanford’s arrowhead (<i>Sagittaria sanfordii</i>)	None/None/1B.2	—	—	—	X*
San Mateo woolly sunflower (<i>Eriophyllum latilobum</i>)	FE/SE/1B.1	—	X	X	—
Santa Cruz clover (<i>Trifolium buckwestiorum</i>)	None/None/1B.1	—	X	—	—
Western leatherwood (<i>Dirca occidentalis</i>)	None/None/1B.2	—	X	X	X
White-flowered rein orchid (<i>Piperia candida</i>)	None/None/1B.2	—	X	X	—
Woodland woollythreads (<i>Monolopia gracilens</i>)	None/None/1B.2	X	X	X	—

Notes: Additional information is in Attachment B, Special-Status Plant Species Potential to Occur.

X = occurs; — = does not occur

Status Legend:

FE: Federally listed as endangered

SE: State listed as endangered

SR: State rare

California Rare Plant Rank (CRPR) 1B: Plants rare, threatened, or endangered in California and elsewhere

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

.1 Seriously threatened in California (over 80% of 80% of occurrences threatened/high degree and immediacy of threat)

.2 Moderately threatened in California (20–80% occurrences threatened/moderate degree and immediacy of threat)

¹ Valley and foothill grassland vegetation in the Project site includes the non-native grasslands community, which is present intermittently throughout the Project site.

² Chaparral and cismontane woodland vegetation in the Project site includes the coyote brush scrub, chamise chaparral, canyon live oak forest and woodland, coast live oak woodland and forest, mixed oak forest and woodland, California bay forest, and woodland alliances, which are present in abundance throughout the Project site.

³ Coniferous forest vegetation in the Project site includes the Douglas fir forest and woodland, Douglas fir-tanoak forest and woodland, and redwood forest and woodland alliances, which are present in abundance throughout the Project site.

- 4 Riparian woodland vegetation in the Project site includes Goodding’s willow–red willow riparian woodland and forest and bigleaf maple forest and woodland alliances, which are limited throughout the Project site.
- * Sanford’s arrowhead occurs in marshes and swamps, which are present in the cattail marshes and field horsetail – scouring rush horsetail – variegated scouring rush wet meadow alliance, open water, and riverine and palustrine features of the Project site.

Results of the CNDDDB and USFWS IPaC database searches identified 31 special-status wildlife as occurring or potentially occurring within the Project site or vicinity. Of these, 12 species were eliminated from consideration due to the absence of suitable habitat within the Project site or the Project site’s location outside of the species’ known range.

The remaining 19 species were observed during the June 2022 field survey or determined to have at least a low potential to occur within the Project site based on the presence of suitable habitat (Table 5).

Table 5. Special-Status Wildlife with Potential to Occur

Species	Status (Federal/State)	Habitat Associations
Amphibians		
California giant salamander (<i>Dicamptodon ensatus</i>)	None/SSC	Known from wet coastal forests and chaparral near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, and occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.
California red-legged frog (<i>Rana draytonii</i>)	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby, or emergent vegetation associated with deep, still, or slow-moving water; uses adjacent uplands.
Foothill yellow-legged frog – central coast DPS (<i>Rana boylei</i> pop. 4)	FPT/SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland.
Red-bellied newt (<i>Taricha rivularis</i>)	None/SSC	Redwood forests (and sometimes other forest types) along coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 kilometer to breed, typically in streams with moderate flow and clean rocky substrate.
Santa Cruz black salamander (<i>Aneides flavipunctatus niger</i>)	None/SSC	Restricted to mesic forests in the fog belt of the outer Coast Range of San Mateo, Santa Cruz, and Santa Clara Counties. Mixed deciduous and coniferous woodlands and coastal grasslands. Occurs in moist streamside microhabitats and is found under rocks, talus, and damp woody debris.
Birds		
American peregrine falcon (<i>Falco peregrinus anatum</i>)	FPD/FP, SCD	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, and croplands, especially where waterfowl are present.
Golden eagle (<i>Aquila chrysaetos</i>)	None/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, and open desert rimrock terrain; nests in large trees and on cliffs in open areas, and forages in open habitats.

Table 5. Special-Status Wildlife with Potential to Occur

Species	Status (Federal/State)	Habitat Associations
Least Bell's vireo (<i>Vireo belli pusillus</i>)	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season.
Long-eared owl (<i>Asio otus</i>)	BCC/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, and edges of coniferous forest; forages in nearby open habitats.
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	FT/SE	Nests in old-growth coastal forests; forages in subtidal and pelagic habitats.
Purple martin (<i>Progne subis</i>)	None/SSC	Nests and forages in woodland habitats, including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region, often nests in weep holes under elevated freeways.
White-tailed kite (<i>Elanus leucurus</i>)	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands.
Invertebrates		
Crotch bumble bee (<i>Bombus crotchii</i>)	SC	Inhabits open grassland and scrub habitats and is commonly associated with the following plant families: <i>Fabaceae</i> , <i>Apocynaceae</i> , <i>Asteraceae</i> , <i>Lamiaceae</i> , <i>Hydrophyloideae</i> , <i>Asclepiadoideae</i> , and <i>Boraginaceae</i> . Example food plants include the genera <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , and <i>Salvia</i> . Nests underground and overwinters in soft, disturbed soil. The flight period for queens occurs from late February to late October, peaking in early April and again in July. The flight period for workers/males occurs from late March through September, peaking in early July.
Western bumble bee (<i>Bombus occidentalis occidentalis</i>)	SC	Inhabits meadows and grasslands and is commonly associated with plants that bloom from early February to late November, specifically plants in the following genera: <i>Cirsium</i> , <i>Erigonum</i> , <i>Solidago</i> , <i>Aster</i> , <i>Ceanothus</i> , <i>Centaurea</i> , and <i>Penstemon</i> . Nests primarily in underground cavities such as rodent burrows and occasionally aboveground in logs. Overwinters in the soil up to 2 inches from the surface. The flight period for queens occurs from early February to late November, peaking in late June and late September. The flight period for workers/males occurs from early April to early November, peaking in early August and early September.
Mammals		
Pallid bat (<i>Antrozous pallidus</i>)	None/SSC	Grasslands, shrublands, woodlands, and forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in tress and human-made structures.

Table 5. Special-Status Wildlife with Potential to Occur

Species	Status (Federal/State)	Habitat Associations
Puma (<i>puma concolor</i>)	None/SC	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts.
Ringtail (<i>Bassariscus astutus</i>)	None/FP	Mixed forests and shrublands near rocky areas or riparian habitats; forages near water and is seldom found more than 1 kilometer (0.62 miles) from a water source.
San Francisco dusky-footed woodrat (<i>Neotoma fuscipes annectens</i>)	None/SSC	Forest habitats with a moderate canopy and moderate to dense understory.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, human-made structures, and tunnels.
Reptiles		
San Francisco garter snake (<i>Thamnophis sirtalis tetrataenia</i>)	FE/FP, SE	Wide range of habitats, including grasslands or wetlands adjacent to ponds, marshes, and sloughs.
Western pond turtle (<i>Actinemys marmorata</i>)	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter.

Notes: Additional information is in Attachment C, Special-Status Wildlife Species Potential to Occur.

Status Legend:

- FE: Federally listed as endangered
- FT: Federally listed as threatened
- FPT: Federally proposed for listing as threatened
- FPD: Federally proposed for delisting
- BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
- FP: California Fully Protected Species
- SSC: California Species of Special Concern
- WL: California Watch List Species
- SE: State listed as endangered
- SC: State candidate for listing as threatened or endangered
- SCD: State candidate for delisting

Aquatic resources potentially subject to U.S. Army Corps of Engineers, RWQCB, and/or CDFW jurisdiction occur throughout the Project site. Jurisdictional aquatic resources may be regulated under the Clean Water Act, Porter-Cologne Water Quality Act, and/or Section 1602 of the California Fish and Game Code. Within Upper Stevens Creek County Park, runoff from the steep terrain is channeled into ephemeral drainages and ravines that flow northeast toward Stevens Creek, generally outside of the Project site. Within Sanborn County Park, numerous ephemeral, intermittent, and perennial drainages channel runoff from the rugged, sloping terrain northeast toward major tributary drainages to Saratoga Creek, including Booker Creek, Bonjetti Creek, McElroy Creek, Todd Creek, Aubry Creek, and Sanborn Creek. Portions of Bonjetti, Todd, Aubry, and Sanborn Creeks occur within the Project site. Lyndon Canyon Creek and its unnamed tributaries, portions of which occur within the Project site, drain the southern portion of Sanborn County Park in a southeasterly direction toward Lexington Reservoir. Lake Ranch Reservoir is an impoundment of Lyndon Canyon that collects runoff from the numerous surrounding drainages and supports perennial hydrology and adjacent wetland areas.

Two types of riparian habitat were identified within the Project site: bigleaf maple forest and woodland and Goodding's willow – red willow riparian woodland and forest. Riparian vegetation communities occurring along streams, ponds, rivers, and lakes are considered sensitive because of their high habitat value for native wildlife, and may be subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code.

3.1 Environmental Setting

The Project site occurs within the eastern extensions of the Santa Cruz Mountains, at elevations ranging from approximately 840 feet to 3,120 feet above mean sea level. Both Sanborn and Upper Stevens Creek County Parks are generally undeveloped and support mostly natural lands. Land uses include open space; picnic areas; recreational trails; and small sections of agriculture, such as former Christmas tree farms and native herb gardens. Several forest and woodland communities dominate the treatment areas, including several sensitive communities. In general, a mixture of coast live oak (*Quercus agrifolia*) and Douglas fir (*Pseudotsuga menziesii*) forest and woodland communities dominate the Project site, with areas of coast redwood (*Sequoia sempervirens*), broadleafed riparian trees, scrub, ornamental plantings, and grassland. Soils are variable and include sandy types, degraded siltstone and sandstone, and loamy and clay soils. Vegetation types and soils within each treatment area are described below.

3.1.1 Treatment Areas 01A, 01B, and 01C

Treatment Areas 01A, 01B, and 01C are part of the Skyline Boulevard Shaded Fuel Break Project located along the west and southwest sides of Upper Stevens Creek Park. These are 9.8-acre (01A), 1.5-acre (01B), and 14.7-acre (01C) parcels of vegetation that run northwest/southeast along Skyline Boulevard, along the eastern side of the road. Soils in these treatment areas are dominated by the Ben Lomond–Casrock complex, which is composed of slope alluvium derived from sandstone (USDA 2022). The Aptos Loam complex is also found in Treatment Areas 01A and 01C, primarily in a section of grassland, and is composed of residuum weathered from mudstone (USDA 2022). A small section of Ben Lomond–Felton soils complex can be found in the northwestern section of Treatment Area 01C, which contains siltstone derivatives (USDA 2022). None of these soil types are considered hydric soils or are known to support edaphic special-status plant species (i.e., the soils of these treatment areas are neither serpentine nor alkaline).

Vegetation communities in these treatment areas are from the Douglas fir forest and woodland alliance, which is dominated by Douglas fir and California bay (*Umbellularia californica*) in the canopy, and intermixed with coast live oak and other broadleafed tree species. Several coast redwood saplings and individual toyon (*Heteromeles arbutifolia*) shrubs are present along the roadway. Mixed oak forest and woodland is also prominent in these treatment areas, which is dominated by coast live oak and black oak (*Quercus kelloggii*) in the canopy, and intermixed with California bay and other broadleafed species. Small patches of wild oats and annual brome grassland are intermixed with the mixed oak forest and woodland, and composed of mostly wild oat (*Avena fatua*) and brome grasses (*Bromus* spp.). Coyote brush (*Baccharis pilularis*) and Scotch broom (*Cytisus scoparius*) were observed growing along the roadside. Vegetation communities occurring within Treatment Areas 01A and 01B are not identified as sensitive (CDFW 2022b).

Vegetation communities within Treatment Area 01C consist of two associations of the Douglas fir forest and woodland alliance: the *Pseudotsuga menziesii* – *Umbellularia californica*/*Toxicodendron diversilobum* association, located within a small section along the northwest portion of the treatment area, and the *Pseudotsuga*

menziesii – *Quercus kelloggii* association, located within the remainder of the treatment area. The *Pseudotsuga menziesii* – *Quercus kelloggii* association is sensitive (CDFW 2022b).

USFWS's National Wetlands Inventory (NWI) mapped a freshwater forested/shrub wetland linear feature approximately 100 feet outside of the Treatment Area 01A boundary (USFWS 2022b); however, no potentially jurisdictional aquatic features were discovered to be encroaching into this treatment area, or within Treatment Areas 01B and 01C, during the reconnaissance-level field surveys.

The data review identified one historical occurrence of a California Rare Plant Rank 1B plant, King's Mountain manzanita (*Arctostaphylos regismontana*), that was documented within Treatment Areas 01A and 01B, as well as Treatment Areas 04A and 04B. However, this occurrence is mapped generally in the vicinity of Peters Creek and locational details are unsubstantiated. Given the habitat types within Treatment Areas 01A, 01B, and 01C, these areas have the potential to support several special-status plants, including Anderson's manzanita (*Arctostaphylos andersonii*), arcuate bush-mallow (*Malacothamnus arcuatus*), bent-flowered fiddleneck (*Amsinckia lunaris*), chaparral ragwort (*Senecio aphanactis*), Dudley's lousewort (*Pedicularis dudleyi*), King's Mountain manzanita, Loma Prieta hoita (*Hoita strobilina*), minute pocket moss (*Fissidens pauperculus*), most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus*), San Mateo woolly sunflower (*Eriophyllum latilobum*), Santa Cruz clover (*Trifolium buckwestiorum*), western leatherwood (*Dirca occidentalis*), white-flowered rein orchid (*Piperia candida*), and woodland woollythreads (*Monolopia gracilens*).

The data review identified red-bellied newt (*Taricha rivularis*), a California Species of Special Concern, as occurring on numerous occasions from 2010 through 2016 within Treatment Area 01A and along Grizzly Flat Trailhead and Upper Stevens Creek (Occ. No. 135) (CDFW 2022a). Given the habitat types within Treatment Areas 01A, 01B, and 01C, these areas also have potential to support several additional special-status wildlife, including Santa Cruz black salamander (*Aneides flavipunctatus niger*), California giant salamander (*Dicamptodon ensatus*), long-eared owl (*Asio otus*), marbled murrelet (*Brachyramphus marmoratus*), purple martin (*Progne subis*), white-tailed kite (*Elanus leucurus*), least Bell's vireo (*Vireo bellii pusillus*), pallid bat (*Antrozous pallidus*), ringtail (*Bassariscus astutus*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), puma (*puma concolor*), Crotch bumble bee (*Bombus crotchii*), and western bumble bee (*Bombus occidentalis occidentalis*).

3.1.2 Treatment Areas 01D, 01E, 01F, 01G, and 13

Treatment Areas 01D, 01E, 01F, and 01G are part of the Skyline Boulevard Shaded Fuel Break Project located along the west side of Sanborn Skyline County Park. These are 26.4-acre (01D), 19.7-acre (01E), 9.8-acre (01F), and 9.6-acre (01G) stretches of vegetation that run northwest/southeast along Skyline Boulevard, along the eastern side of the road. Treatment Area 13 is part of the Christmas Tree Farm Fuels Reduction Project that overlaps with Treatment Area 01G. Soils in these treatment areas are mostly residuum weathered from sandstone/mudstone complexes, such as Ben Lomond sandy loam, Casrock-skyridge-rock outcrop, Ben Lomond-Casrock, and Madonna loam (USDA 2022).

Sensitive vegetation communities within these treatment areas include three associations of the Douglas fir forest and woodland alliance: *Pseudotsuga menziesii* – *Umbellularia californica*/*Toxicodendron diversilobum* association, *Pseudotsuga menziesii* – *Arbutus menziesii* association, and the *Pseudotsuga menziesii* – *Notholithocarpus densiflorus* – *Umbellularia californica*/*Toxicodendron diversilobum* association (CDFW 2022b). These associations consist of Douglas fir trees in the canopy intermixed/co-dominant with California bay, Pacific madrone (*Arbutus menziesii*), tanoak

(*Notholithocarpus densiflorus*), and coast live oak, with a primarily poison oak (*Toxicodendron diversilobum*) understory. The sensitive *Umbellularia californica* – *Quercus agrifolia*/*Toxicodendron diversilobum* association, also dominated by California bay and other broadleaved species, also occurs in Treatment Areas 01F and 01G (CDFW 2022b). Additionally, Treatment Area 01E contains the *Quercus agrifolia* – *Arbutus menziesii* – *Umbellularia californica* association, which is dominated by coast live oak, Pacific madrone, and California bay in the canopy, intermixed with bigleaf maple (*Acer macrophyllum*), Douglas fir, and poison oak in the shrub layer, and the *Acer macrophyllum* – *Pseudotsuga menziesii*/*Corylus cornuta* association, which occurs along a perennial drainage located downslope. These two associations are also sensitive (CDFW 2022b).

Non-sensitive communities within Treatment Areas 01D, 01E, 01F, and 01G include communities within the mixed oak forest and woodland, Douglas fir forest and woodland, and broom patches alliances. A large patch of Spanish broom (*Spartium junceum*) occurs within the southeastern portion of the Treatment Area 01E, and also contains coyote brush and Scotch broom. Treatment Area 01G borders rural-residential homes, and Black Road bisects Treatment Area 01G to the southeast. The southeastern-most section of Treatment Area 01G contains a small patch of non-native grassland and a former Christmas tree farm (Treatment Area 13), which is characterized by the ornamental plantings land cover type and composed of cultivated firs (*Abies* sp.), pines (*Pinus* sp.), and giant sequoia trees (*Sequoiadendron giganteum*) that are interspersed with naturally occurring Douglas fir, Pacific madrone, and tanoak.

Potentially jurisdictional aquatic features are absent from all five treatment areas, but Lyndon Canyon Creek occurs within a canyon immediately below Treatment Area 01F, runs underneath Skyline Boulevard, and crosses underneath the southern portion of the treatment area from east to west.

There are no documented special-status plant occurrences within these treatment areas, but they do have the potential to support several special-status plants, including Anderson's manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley's lousewort, King's Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, San Mateo woolly sunflower, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

There are no documented special-status wildlife species occurrences within these treatment areas, but Treatment Areas 01D, 01E, 01F, and 01G have the potential to support a number of special-status amphibians, including Santa Cruz black salamander, the California giant salamander, and red-bellied newt, as well as least Bell's vireo. These species are not expected to occur in Treatment Area 13 due to lack of aquatic habitat and presence of ornamental plantings. All five treatment areas may support long-eared owl, marbled murrelet, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, and puma.

3.1.3 Treatment Areas 02, 03A, and 03B

Treatment Area 02 is part of the Table Mountain Christmas Tree Farm Wildland/Urban Interface Fuel Reduction Project, and Treatment Areas 03A and 03B are part of the Charcoal Road-Table Mountain Shaded Fuel Break Project, all located within Upper Stevens Creek Park. These are 42.7-acre (02), 8.7-acre (03A), and 38.9-acre (03B) parcels of vegetation that run north/south along the Charcoal Road Pedestrian Trail. Soils in these treatment areas are sandy-based soils composed of the Ben Lomond–Casrock and Ben Lomond gravelly sandy loam complexes (USDA 2022).

Vegetation communities in these treatment areas are largely composed of woodland and forest associations, including *Pseudotsuga menziesii* – *Arbutus menziesii* and *Quercus agrifolia* – *Arbutus menziesii* – *Umbellularia californica* associations, both sensitive, and *Pseudotsuga menziesii* – *Umbellularia californica*/(*Toxicodendron diversilobum*) association in the northernmost section of Treatment Areas 02 and 03B, throughout Treatment Area 03A, and on either side of the Charcoal Road Pedestrian Trail (CDFW 2022b). The center of Treatment Areas 02 and 03B is composed of a former Christmas tree farm surrounded by patches of coyote brush scrub that has established within previously cleared/disturbed areas. Along the northwestern edge of Treatment Area 03A, Dudek biologists mapped a small patch of chamise chaparral, the sensitive *Adenostoma fasciculatum* – *Arctostaphylos manzanita* association (CDFW 2022b) that is intermixed with canyon live oak (*Quercus chrysolepis*), lotus (*Acmispon* spp.), bush monkey flower (*Diplacus aurantiacus*), and tree poppy (*Dendromecon rigida*). Stands of coast live oak and non-native grassland were observed to be mixed in with the dominant vegetation communities.

The USFWS NWI mapped a freshwater forested/shrub wetland linear feature immediately outside of Treatment Area 02 (USFWS 2022b), but this feature was not discovered to be encroaching into the treatment area during the reconnaissance-level field surveys. A tributary of Stevens Creek overlaps with the northwestern-most section of Treatment Area 03B, and is mapped by the USFWS NWI as a freshwater forested/shrub wetland linear feature (USFWS 2022b). Because of this feature’s connectivity to Stevens Creek, it may be subject to RWQCB and/or CDFW jurisdiction under the Porter-Cologne Water Quality Act and California Fish and Game Code Section 1602, and any activities involving ground disturbance in the bed or bank of this feature may require permits from these agencies. No additional potentially jurisdictional aquatic features were discovered within the treatment areas.

There are no documented special-status plant occurrences within Treatment Areas 02, 03A, or 03B, but all three areas have potential to support several special-status plants, including Anderson’s manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley’s lousewort, King’s Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, San Mateo woolly sunflower, Santa Cruz clover, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

California giant salamander (Occ. No. 98) and red-bellied newt (Occ. No. 135) have been documented on numerous occasions within 500 to 1,000 feet outside of the northern section of Treatment Area 03B within Upper Stevens Creek and associated riparian woodland (CDFW 2022a). There are historical observations of foothill yellow-legged frog (*Rana boylei*) within Stevens Creek (Occ. No. 2081); however, it is now believed that the species is extirpated from the area (CDFW 2022a). The tributary to Stevens Creek that overlaps with the northwestern corner of Treatment Area 03B does not contain pools with gravel or rocky substrate suitable for breeding by foothill yellow-legged frog.

Treatment Areas 02, 03A, and 03B also have potential to support the Santa Cruz black salamander, long-eared owl, marbled murrelet, purple martin, white-tailed kite, least Bell’s vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, and puma. Treatment Area 03A has low potential to support Crotch bumble bee and western bumble bee.

3.1.4 Treatment Areas 04A and 04B

Treatment Areas 04A and 04B are part of a defensible space project immediately east of Treatment Area 01B within Upper Stevens Creek Park in two 1.4-acre parcels of vegetation east of Skyline Boulevard. Soils in these treatment areas consist entirely of siltstone-derived soils, specifically the Ben Lomond–Felton complex (USDA 2022). The dominant vegetation community in these treatment areas is the Douglas fir forest and woodland alliance. Sensitive vegetation communities and potentially jurisdictional aquatic features are absent from these treatment areas.

King's Mountain manzanita has been historically documented within Treatment Areas 04A and 04B. Additionally, these treatment areas have the potential to support several other special-status plants, including Anderson's manzanita, Dudley's lousewort, minute pocket moss, San Mateo woolly sunflower, western leatherwood, whiteflowered rein orchid, and woodland woollythreads.

There are no documented special-status wildlife species occurrences within these treatment areas, but both areas may support several special-status wildlife species, including Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, marbled murrelet, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, and puma.

3.1.5 Treatment Areas 04C and 04D

Treatment Areas 04C and 04D are part of a defensible space project within the northern and eastern sections of Sanborn Skyline County Park, in a small 0.6-acre parcel of vegetation southwest of Big Basin Way (04C), and in several small parcels of vegetation (a total of 7.2 acres) surrounding pedestrian hiking trails, such as the Vernon J. Pick Trail and San Andreas Fault Trail (04D). Soils in these treatment areas are sandy-based soils composed of the Ben Lomond-Casrock complex (USDA 2022). The main vegetation community within these treatment areas consists of redwood forest and woodland, which is sensitive (CDFW 2022b). These areas are dominated by coast redwood trees, with a subcanopy of Douglas fir and a variety of broadleaf species and a sparse understory. The Welch-Hurst House, as well as several other county park structures, are present within Treatment Area 04D, along with several dirt pedestrian trails and paved pedestrian trails and facilities.

Treatment Area 04C overlaps with the confluence of two perennial streams, Bonjetti and McElroy Creeks, and is mapped by the USFWS NWI as Upper Perennial Riverine features (USFWS 2022b). Several potentially jurisdictional aquatic features are present within and immediately adjacent to Treatment Area 04D, including Todd Creek, several unnamed drainages and small creeks, and a freshwater pond. All these features may be subject to CDFW jurisdiction under California Fish and Game Code 1602 and/or RWQCB jurisdiction under the Porter-Cologne Water Quality Control Act.

There are no documented special-status plant occurrences within these treatment areas, but both areas have potential to support several special-status plants, including Anderson's manzanita, Dudley's lousewort, King's Mountain manzanita, minute pocket moss, San Mateo woolly sunflower, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

Although there are no documented special-status wildlife species occurrences within these treatment areas, Bonjetti, McElroy, and Todd Creeks may support breeding and/or foraging/dispersal habitat for California red-legged frog (*Rana draytonii*) and foothill yellow-legged frog, and potentially several other special-status wildlife species, including western pond turtle (*Actinemys marmorata*), Santa Cruz black salamander, California giant salamander, red-bellied newt, and least Bell's vireo. The freshwater pond immediately adjacent to Treatment Area 04D and adjacent to the Welch-Hurst House may support San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) due to the presence of aquatic vegetation surrounding the pond; however, the high levels of pedestrian activity surrounding this feature and the lack of connectivity to other breeding sites may preclude this species from occurring. The freshwater pond within this treatment area may also support western pond turtle and red-bellied newt, and a large number of newt (*Taricha* sp.) species were observed within this feature during the site visit. The Welch-Hurst House and other structures within Treatment Area 04D provide suitable roosting habitat for pallid bat

and Townsend's big-eared bat, but these species may also occur throughout the woodland areas of both treatment areas. Additionally, long-eared owl, marbled murrelet, purple martin, white-tailed kite, ringtail, San Francisco dusky-footed woodrat, and puma may occur within both treatment areas.

3.1.6 Treatment Areas 04E and 07

Treatment Area 04E is part of a defensible space project within the northeastern section of Sanborn Skyline County Park, in a few small parcels of vegetation (a total of 5.2 acres) within the Christensen Nursery, east of Sanborn Road. Treatment Area 07 also encompasses the Christensen Nursery, and is part of the Christensen Nursery Future Camping Project. Treatment Area 07 is a 25-3-acre parcel with a 100-foot (81.8-acre) buffer for additional analysis. Soils in these treatment areas consist of sandy-based soils and rock-out crop soil types composed of the Ben Lomond-Casrock, Ben Lomond gravelly sandy loam, and Sanikara-Mouser-Rock outcrop complexes (USDA 2022).

These treatment areas are dominated by ornamental vegetation associated with plantings of the Christensen Nursery and several open areas in which recent vegetation clearing occurred. There are several structures within these treatment areas, such as an old barn, old sheds, and old maintenance facilities. Vegetation communities within these treatment areas are composed of oak woodland and forest, including the sensitive *Quercus agrifolia* – *Arbutus menziesii* – *Umbellularia californica* association, the non-sensitive mixed oak – *Quercus agrifolia*/*Toxicodendron diversilobum* association, and the non-sensitive *Pseudotsuga menziesii* – *Umbellularia californica*/*Toxicodendron diversilobum*) association (CDFW 2022b). A small area of broom patches alliance is present along the western side of Treatment Area 07.

Portions of Todd Creek and unnamed tributaries to Lyndon Canyon Creek occur within the northwestern section of Treatment Area 07, and two constructed detention basins are present within the center of the treatment area. All these features may be considered jurisdictional.

There are no documented special-status plant occurrences within this treatment area, but the area has potential to support several special-status plants, including Anderson's manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley's lousewort, King's Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, Sanford's arrowhead (*Sagittaria sanfordii*), San Mateo woolly sunflower, Santa Cruz clover, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

There are no documented special-status wildlife species occurrences within these treatment areas, but the perennial drainage may support California red-legged frog and foothill yellow-legged frog foraging and dispersal; adjacent uplands may also be used for dispersal. The perennial high stream flow nature of both streams may preclude breeding due to flows moving any egg masses that may have been laid. Todd Creek and the unnamed tributaries to Lyndon Canyon Creek may support least Bell's vireo breeding habitat. Additional special-status wildlife that may occur within Treatment Areas 04E and 07 include Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, marbled murrelet, purple martin, white-tailed kite, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, and puma.

3.1.7 Treatment Areas 04F, 04G, and 08

Treatment Areas 04F and 04G are part of a defensible space project within the eastern section of Sanborn Skyline County Park in several small parcels of vegetation (a total of 14.7 acres) surrounding the Sanborn County Park main entrance, group picnic areas, and walk-in campground, south of Sanborn Road. Treatment Area 08 is part of the Sanborn Walk-In Campground Project in the eastern section of Sanborn Skyline County Park in a 6.6-acre parcel within the existing walk-in campground along the Sanborn Trail. A 100-foot (17.3-acre) buffer has been established around this treatment area for additional analysis. Soils in these treatment areas are sandy-based soils composed of the Ben Lomond–Casrock and Ben Lomond gravelly sandy loam complexes (USDA 2022).

Vegetation in these treatment areas varies based on location, with Douglas fir forest and woodland being the most prominent within the parcels to the north, east, and south, and redwood forest and woodland being the most prominent within the parcels to the west within the campground. Of these, the *Pseudotsuga menziesii* – *Notholithocarpus densiflorus* – *Umbellularia californica*/*Toxicodendron diversilobum* association and *Sequoia sempervirens* – *Acer macrophyllum* – *Umbellularia californica* association are sensitive (CDFW 2022b). The central parcels of Treatment Area 04F are dominated by the urban/developed land cover type composed of structures, park facilities, roadways, and paved pedestrian trails. These parcels contain a public picnic area, mapped as the ornamental plantings land cover type, which is composed of irrigated turf with retained Douglas fir and redwood trees and a manicured understory.

Several potentially jurisdictional unnamed drainages and aquatic features occur within and immediately adjacent to the parcels to the west, including a large perennial tributary to Todd Creek that bisects the parcels from east to west.

There are no documented special-status plant occurrences within these treatment areas, but the areas have potential to support several special-status plants, including Anderson’s manzanita, Dudley’s lousewort, King’s Mountain manzanita, minute pocket moss, San Mateo woolly sunflower, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

Although there are no documented special-status wildlife occurrences within these treatment areas, several of the drainages and creeks may support breeding and/or foraging/dispersal habitat for California red-legged frog and foothill yellow-legged frog, and potentially several other special-status wildlife species including western pond turtle, Santa Cruz black salamander, California giant salamander, red-bellied newt, and least Bell’s vireo. Structures and trees within these treatment areas may provide suitable roosting habitat for pallid bat and Townsend’s big-eared bat. Additionally, long-eared owl, marbled murrelet, purple martin, white-tailed kite, ringtail, San Francisco dusky-footed woodrat, and puma may occur within these treatment areas.

3.1.8 Treatment Areas 05A, 05B, and 05C

Treatment Areas 05A, 05B, and 05C are part of the Sanborn Road Shaded Fuel Break Project located in the northeastern section of Sanborn Skyline County Park in 5.3-acre (05A), 33.1-acre (05B), and 10.5-acre (05C) strips of vegetation that run north/south along both sides of Sanborn Road. Soils in these treatment areas are sandy-based soils composed of Ben Lomond–Casrock, Ben Lomond gravelly sandy loam, Katykat–Sanikara complex, and Sanikara–Mouser-Rock outcrop complexes, none of which are considered hydric soils or are known to support edaphic special-status plant species (USDA 2022).

Vegetation with the northern portions of these treatment areas, encompassing Treatment Areas 05A and 05B, consists of non-sensitive associations within the Douglas fir forest and woodland and mixed oak woodland alliances (CDFW 2022b). The southeastern section of the Sanborn Road Shaded Fuel Break Project, within Treatment Area 05C, consists of some sensitive vegetation, including the *Sequoia sempervirens* – *Acer macrophyllum* – *Umbellularia californica* association and *Pseudotsuga menziesii* – *Notholithocarpus densiflorus* – *Umbellularia californica*/*Toxicodendron diversilobum* association (CDFW 2022b). The remainder of Treatment Area 05C is composed of the *Pseudotsuga menziesii* – *Umbellularia californica*/*Toxicodendron diversilobum* association and urban/developed land cover associated with the park facilities and roads.

McElroy Creek overlaps Treatment Area 05B at its confluence with Todd Creek, as well as another unnamed tributary to Saratoga Creek. An unnamed perennial tributary to Todd Creek overlaps with Treatment Area 05C in the northwest section, and another unnamed drainage flows from south to north through the eastern end. All of these features may be considered jurisdictional.

There are no documented special-status plant occurrences within these treatment areas, but these areas have potential to support several special-status plants, including Anderson's manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley's lousewort, King's Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, San Mateo woolly sunflower, Santa Cruz clover, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

California giant salamander has been documented within Treatment Area 05B using upland habitat underneath downed logs within the vicinity of Sanborn Road and Bonjetti Creek (Occ. No. 100) (CDFW 2022a). Perennial creeks, drainages, and their tributaries within Treatment Areas 05B and 05C may support breeding and/or foraging/dispersal habitat for California red-legged frog and foothill yellow-legged frog, and potentially several other special-status wildlife species, including western pond turtle, Santa Cruz black salamander, red-bellied newt, and least Bell's vireo. Woodland habitat within all three treatment areas may provide suitable roosting habitat for pallid bat. Additionally, long-eared owl, marbled murrelet, purple martin, white-tailed kite, ringtail, San Francisco dusky-footed woodrat, and puma may occur within these treatment areas.

3.1.9 Treatment Area 06A

Treatment Area 06A is part of the Los Gatos Creek Watershed Collaborative Forest Health Grant Project for handwork fuels reduction in the northwestern section of Sanborn Skyline County Park in a 5.2-acre parcel of vegetation surrounding Summit Rock. Soils in this treatment area are composed of the Casrock–Skyridge–Rock outcrop complex, the Ben Lomond gravelly sandy loam complex, and the Ben Lomond–Casrock complex, none of which are considered hydric soils or are known to support edaphic special-status plant species (USDA 2022).

Vegetation within this treatment area consists of three non-sensitive associations within the Douglas fir forest and woodland, mixed oak woodland, and non-native grassland alliances. Potentially jurisdictional aquatic features are absent from this treatment area.

There are no documented special-status plant occurrences within this treatment area, but the area has potential to support a number of special-status plants, including Anderson's manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley's lousewort, King's Mountain manzanita, Loma Prieta hoita, minute pocket

moss, most beautiful jewelflower, San Mateo woolly sunflower, Santa Cruz clover, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

Several special-status wildlife species are known to occur or could potentially occur in this treatment area. Summit rock is known to support a breeding pair of American peregrine falcons (*Falco peregrinus anatum*), which annually nest within the site (County of Santa Clara 2019). Summit rock may also provide suitable breeding habitat for golden eagle (*Aquila chrysaetos*). The treatment area may support several additional special-status wildlife, including Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, marbled murrelet, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, and puma.

3.1.10 Treatment Areas 06B and 06C

Treatment Areas 06B and 06C are part of the Los Gatos Creek Watershed Collaborative Forest Health Grant Project for mechanized fuels reduction located in parcels of vegetation throughout Upper Stevens Creek and Sanborn Skyline County Parks totaling 201.6 acres (06B) and 61.4 acres (06C). A variety of different soil types occur throughout these treatment parcels, largely composed of sandstone and mudstone derivatives. Soil types in these treatment areas include the Ben Lomond gravelly sandy loam complex, Ben Lomond sandy loam complex, Ben Lomond-Casrock complex, Madonna loam complex, and Aptos loam complex; none of these are considered hydric soils or are known to support edaphic special-status plant species (USDA 2022).

Because Treatment Areas 06B and 06C contain numerous parcels throughout both parks, the dominant vegetation communities are varied and include the following eight sensitive natural communities: *Pseudotsuga menziesii* – *Quercus chrysolepis* association, *Pseudotsuga menziesii* – *Arbutus menziesii* association, *Quercus agrifolia* – *Arbutus menziesii* – *Umbellularia californica* association, *Pseudotsuga menziesii* – *Notholithocarpus densiflorus* – *Umbellularia californica*/*Toxicodendron diversilobum* association, *Acer macrophyllum*/*Rubus ursinus* association, *Acer macrophyllum* – *Pseudotsuga menziesii*/*Corylus cornuta* association, *Baccharis pilularis*/*Nassella pulchra* – *Elymus glaucus* – *Bromus carinatus* association, and *Pseudotsuga menziesii* – *Quercus kelloggii* association (CDFW 2022b). The *Pseudotsuga menziesii* – *Umbellularia californica*/*Toxicodendron diversilobum* association is prominent on either side of the Charcoal Road Pedestrian Trail in Treatment Area 06C. Other vegetation communities in these treatment areas include Spanish broom patches, coyote brush scrub, non-native grassland, former Christmas tree farms characterized as ornamental plantings land cover type, and non-sensitive associations within the Douglas fir forest and woodland and mixed oak forest and woodland alliances. Portions of Todd Creek and unnamed tributaries to Lyndon Canyon Creek, as well as two human-made detention basins, occur within Treatment Area 06B, and all these features may be considered jurisdictional. The USFWS NWI has mapped a freshwater forested/shrub wetland linear feature immediately outside of the Treatment Area 06C boundary (USFWS 2022b), but no potentially jurisdictional aquatic features were observed within the treatment area during the reconnaissance-level field surveys.

There are no documented special-status plant occurrences within these treatment areas, but the areas have potential to support several special-status plants, including Anderson's manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley's lousewort, King's Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, San Mateo woolly sunflower, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

Although there are no documented special-status wildlife species occurrences within this treatment area, the drainage feature in the northern section of Treatment Area 06B may support breeding and/or foraging/dispersal habitat for California red-legged frog and foothill yellow-legged frog, and potentially several other special-status wildlife species, including western pond turtle, Santa Cruz black salamander, California giant salamander, red-bellied newt, and least Bell's vireo. Santa Cruz black salamander, California giant salamander, and red-bellied newt may also occur in Treatment Area 06C. Trees within and adjacent to both treatment areas provide suitable roosting habitat for pallid bat, and long-eared owl, marbled murrelet, purple martin, white-tailed kite, ringtail, San Francisco dusky-footed woodrat, and puma may occur within both treatment areas. The coyote brush scrub and non-native grassland habitats provide low-quality habitat for Crotch bumble bee and western bumble bee.

3.1.11 Treatment Area 09

Treatment Area 09 is part of the Lake Ranch Reservoir Wildfire Resiliency Project located in the southern section of Sanborn Skyline County Park in a 312.1-acre parcel bordering Lake Ranch Reservoir to the southwest. Soil types in this treatment area include the Casrock–Skyridge–Rock outcrop complex, Ben Lomond–Casrock complex, Madonna loam complex, and Aptos loam complex; none of these are considered hydric soils or are known to support edaphic special-status plant species (USDA 2022).

Vegetation within Treatment Area 09 is dominated by non-sensitive associations within mixed oak woodland and Douglas fir forest and woodland alliances. However, areas of sensitive riparian associations, *Acer macrophyllum* – *Pseudotsuga menziesii*/*Corylus cornuta* association and *Umbellularia californica* – *Quercus agrifolia*/*Toxicodendron diversilobum* association, occur along unnamed perennial tributaries to Lyndon Canyon Creek that run east through the treatment area, all of which may be considered jurisdictional (CDFW 2022b). This treatment area is west and upslope of Lake Ranch Reservoir.

There are no documented special-status plant occurrences within this treatment area, but the area has potential to support several special-status plants, including Anderson's manzanita, arcuate bush-mallow, bent-flowered fiddle neck, chaparral ragwort, Dudley's lousewort, King's Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, San Mateo woolly sunflower, Santa Cruz clover, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

California giant salamander has been previously documented within the southeast corner of this treatment area in upper Lyndon Canyon along two creek crossings of the John Nicholas Trail (Occ. No. 123) (CDFW 2022a). Additionally, the drainages and creeks within the treatment area and surrounding forest habitat may support breeding and foraging habitat for California red-legged frog, foothill yellow-legged frog, Santa Cruz black salamander, and red-bellied newt. Riparian habitat may also support breeding least Bell's vireo. Forest habitat within Treatment Area 09 may also support long-eared owl, marbled murrelet, purple martin, white-tailed kite, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, and puma.

3.1.12 Treatment Area 10

Treatment Area 10 is part of the Primary and Secondary Evacuation Routes Shaded Fuel Break Projects along the eastern boundary of Sanborn Skyline County Park in a 101.4-acre strip of vegetation along Sanborn Road, Lake Ranch Trail, and the southeastern section of the John Nicholas Trail that connects with Black Road. Soils in

this treatment area are sandy-based soils composed of the Ben Lomond–Casrock and Ben Lomond gravelly sandy loam complexes (USDA 2022).

Treatment Area 10 is dominated by non-sensitive associations within mixed oak woodland and Douglas fir forest and woodland alliances. However, stands of sensitive woodland and forest vegetation are present throughout, including the *Pseudotsuga menziesii* – *Notholithocarpus densiflorus* – *Umbellularia californica*/*Toxicodendron diversilobum* association, *Sequoia sempervirens* – *Acer macrophyllum* – *Umbellularia californica* association, and *Umbellularia californica* – *Quercus agrifolia*/*Toxicodendron diversilobum* association (CDFW 2022b). Small stands of sensitive riparian vegetation, including the *Acer macrophyllum* – *Pseudotsuga menziesii*/*Corylus cornuta* association and *Salix gooddingii* – *Salix laevigata* association occur along the northern side of Lake Ranch Reservoir. Redwood, California bay, and riparian communities are mostly prevalent along drainages of the treatment area. Non-native grassland and *Typha angustifolia* – *Typha latifolia* – *Typha domingensis*/*Schoenoplectus americanus* association are also present along the northern banks of Lake Ranch Reservoir. Cattail marshes do not have a sensitivity ranking (CDFW 2022b) but are generally associated with aquatic features and are thus considered to have high habitat value for wildlife and may be subject to the jurisdiction of CDFW. Along the south side of Lake Ranch Reservoir along the John Nicholas pedestrian trail, a small patch of field horsetail (*Equisetum arvense*) is present within a freshwater emergent wetland and is considered sensitive (CDFW 2022b).

Treatment Area 10 contains several potentially jurisdictional aquatic features, including portions of Todd Creek and Lyndon Canyon Creek and numerous unnamed tributary drainages, in addition to a portion of Lake Ranch Reservoir, freshwater ponds, emergent wetlands, and shrub scrub wetlands. All of these features may be considered jurisdictional.

There are no documented special-status plant occurrences within this treatment area, but the area has potential to support several special-status plants, including Anderson’s manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley’s lousewort, King’s Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, Sanford’s arrowhead, San Mateo woolly sunflower, Santa Cruz clover, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

Western pond turtle has been previously documented within Lake Ranch Reservoir; an adult turtle was observed basking on the northeastern bank of the reservoir in 2003 (Occ. No. 1146) (CDFW 2022a). California giant salamander has also been previously documented in Treatment Area 10 in an area that overlaps with Treatment Area 09 (described above). Additionally, the other drainages and creeks within the treatment area and surrounding forest habitat may support breeding and foraging habitat for California red-legged frog, foothill yellow-legged frog, Santa Cruz black salamander, red-bellied newt, and least Bell’s vireo. Forest habitat within Treatment Area 10 may also support long-eared owl, marbled murrelet, purple martin, white-tailed kite, pallid bat, Townsend’s big-eared bat, ringtail, San Francisco dusky-footed woodrat, and puma. Golden eagle and peregrine falcon may use the Lake Ranch area as foraging due to the open nature of lake and surrounding landscape, and the abundance of aquatic and terrestrial resources that support prey items. The non-native grassland habitat may support low-quality habitat for Crotch bumble bee and western bumble bee.

3.1.13 Treatment Areas 11 and 12

Treatment Area 11 is part of the Lyndon Canyon Creek Wildfire Resiliency Project in the southern section of Sanborn Skyline County Park in a 330.1-acre parcel on both sides of the southeastern section of the John Nicholas Trail. Treatment Area 11 also overlaps with Treatment Area 12, which is part of the Black Road Shaded

Fuel Break Project in a 8-acre stretch of vegetation that is on both sides of Black Road between John Nicholas Trail and Skyline Boulevard. Soil types in these treatment areas include the Ben Lomond gravelly sandy loam complex, Ben Lomond–Casrock complex, Madonna loam complex, and Aptos loam complex; none of these are considered hydric soils or are known to support edaphic special-status plant species (USDA 2022).

Vegetation within Treatment Areas 11 and 12 is largely dominated by the *Pseudotsuga menziesii* – *Notholithocarpus densiflorus* – *Umbellularia californica*/*Toxicodendron diversilobum* association. The *Umbellularia californica* – *Quercus agrifolia*/*Toxicodendron diversilobum* (*Corylus cornuta*) association occurs along an unnamed perennial drainage that runs east/west across the northern boundary of Treatment Area 11. The *Sequoia sempervirens* – *Acer macrophyllum* – *Umbellularia californica* association surrounds another unnamed perennial drainage in the center of Treatment Area 11. All three vegetation communities are sensitive (CDFW 2022b). In addition to the two perennial drainages that support sensitive riparian vegetation in Treatment Area 11, the area contains several unnamed tributaries to Lyndon Canyon Creek that are potentially jurisdictional. Two potentially jurisdictional drainages run underneath the existing Black Road alignment in Treatment Area 12 via culverts.

The literature and data review identified one historical occurrence of a California Rare Plant Rank 1B plant, woodland woollythreads, that overlaps the southeastern corner of Treatment Area 11. Both Treatment Areas 11 and 12 have potential to support this species, in addition to a number of other special-status plants, including Anderson’s manzanita, arcuate bush-mallow, bent-flowered fiddleneck, chaparral ragwort, Dudley’s lousewort, King’s Mountain manzanita, Loma Prieta hoita, minute pocket moss, most beautiful jewelflower, San Mateo woolly sunflower, Santa Cruz clover, western leatherwood, white-flowered rein orchid, and woodland woollythreads.

California giant salamander has been previously documented within the center of Treatment Area 11 in upper Lyndon Canyon along two creek crossings of the John Nicholas Trail (Occ. No. 123) (CDFW 2022a). Additionally, the drainages and creeks within Treatment Areas 11 and 12 and surrounding forest habitat may support breeding and foraging habitat for California red-legged frog, foothill yellow-legged frog, Santa Cruz black salamander, red-bellied newt, and least Bell’s vireo. Dense woodland habitat within both treatment areas may also support long-eared owl, marbled murrelet, purple martin, white-tailed kite, pallid bat, Townsend’s big-eared bat, ringtail, San Francisco dusky-footed woodrat, and puma.

3.2 Sensitive Biological Resources

Table 6 identifies sensitive resources by treatment area and PEIR biological resource impact. Figures 4-1 through 4-3, Vegetation Communities and Potentially Jurisdictional Aquatic Resources, and Figures 5-1 through 5-3, Biological Resources – CNDDB Occurrences and Wildlife Observations, provide specific locations of some sensitive resources and potential sensitive resources. Because the surveys conducted under SPR BIO-1 are only reconnaissance-level surveys, many of the resources identified have not been mapped. Resources that must be avoided should be mapped and marked in the field prior to Project implementation, as described in the SPRs and mitigation measures in the PEIR (CBFFP 2019), and as discussed in Chapter 4, Recommendations, below.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
01A	Dudley's lousewort, San Mateo woolly sunflower	King's Mountain manzanita (historically documented), others may occur.	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma, Crotch bumble bee, western bumble bee	None	Mixed oak woodland	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.
01B	Dudley's lousewort, San Mateo woolly sunflower	King's Mountain manzanita (historically documented), others may occur.	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma, Crotch bumble bee, western bumble bee	None	None	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 5.
01C	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail,	None	Douglas fir forest and woodland	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
					San Francisco dusky-footed woodrat, puma, Crotch bumble bee, western bumble bee										
01D	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Douglas fir forest and woodland, Douglas fir – tanoak forest and woodland, mixed oak woodland	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.
01E	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	Bigleaf maple forest and woodland	Coast live oak woodland and forest, Douglas fir forest and woodland, bigleaf maple forest and woodland	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 4, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.
01F	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail,	None	California bay forest and woodland, Douglas fir forest and woodland, Douglas fir – tanoak woodland,	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
					San Francisco dusky-footed woodrat, puma		mixed oak woodland								
01G	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Douglas fir – tanoak forest and woodland	None	Yes, but impacts LTS	No significant sites, but see “Non-Listed Special-Status Wildlife”	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.
02	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Coast live oak woodland and forest, Douglas fir forest and woodland	None	Yes, but impacts LTS	No significant sites, but see “Non-Listed Special-Status Wildlife”	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.
03A	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma,	None	Chamise chaparral, Douglas fir forest and woodland	None	Yes, but impacts LTS	No significant sites, but see “Non-Listed Special-Status Wildlife”	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 5, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
					Crotch bumble bee, western bumble bee										
03B	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Coast live oak woodland and forest, Douglas fir forest and woodland	Tributary of Steven's Creek, freshwater forested / shrub wetland linear feature, in north-western section	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
04A	Dudley's lousewort, San Mateo woolly sunflower	King's Mountain manzanita (historically documented), others may occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	None	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.
04B	Dudley's lousewort, San Mateo woolly sunflower	King's Mountain manzanita (historically documented), others may occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	None	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
04C	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Redwood forest and woodland	Overlaps with two perennial riverine features, Bonjetti and McElroy Creeks	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
04D	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, San Francisco garter snake, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Redwood forest and woodland	Todd Creek, several unnamed drainages and small creeks, and a fresh-water pond	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
04E	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	None	Pallid bat, Townsend's big-eared bat, white-tailed kite, San Francisco dusky-footed woodrat	None	Coast live oak woodland	Human-made detention basins	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2b, 2e, 2g, 3a, 4, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
04F	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Douglas fir – tanoak forest and woodland, redwood forest and woodland	Several unnamed drainages and aquatic features, including a perennial tributary to Todd Creek	Yes, but impacts LTS	No significant sites, but see “Non-Listed Special-Status Wildlife”	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
04G	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Redwood forest and woodland	Several unnamed drainages and aquatic features, including a perennial tributary to Todd Creek	Yes, but impacts LTS	No significant sites, but see “Non-Listed Special-Status Wildlife”	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
05A	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	None	None	Yes, but impacts LTS	No significant sites, but see “Non-Listed Special-Status Wildlife”	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
05B	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Mixed oak woodland	McElroy Creek overlaps the treatment area at its confluence with Todd Creek, as well as another unnamed tributary to Saratoga Creek,	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
05C	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Douglas fir – tanoak forest and woodland, redwood forest and woodland	Unnamed drainages and tributary to Todd Creek	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
06A	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, American peregrine falcon, golden eagle, long-eared owl, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-	None	Mixed oak woodland	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3	Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs	
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances		Conflict with HCP or Other Plan
					footed woodrat, puma										
06B	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma, Crotch bumble bee, western bumble bee	Bigleaf maple forest and woodland	Coast live oak woodland and forest, coyote brush scrub, Douglas fir forest and woodland, Douglas fir – tanoak forest and woodland, bigleaf maple forest and woodland	Portions of Todd Creek and unnamed tributaries to Lyndon Canyon Creek	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 4, 5, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
06C	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma, Crotch bumble bee, western bumble bee	None	Coast live oak woodland and forest, Douglas fir forest and woodland	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 5.
07	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least	None	Coast live oak woodland and forest	Todd Creek, two human-made detention basins	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
					Bell's vireo, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma										
08	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Redwood forest and woodland	Several unnamed drainages and aquatic features, including perennial tributary to Todd Creek	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
09	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet.	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma	Bigleaf maple forest and woodland, California bay forest and woodland	Bigleaf maple forest and woodland, California bay forest and woodland	Unnamed perennial tributaries to Lyndon Canyon Creek	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 4, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
10	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, American peregrine falcon, golden eagle, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, western pond turtle, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma, Crotch bumble bee, western bumble bee	Bigleaf maple forest and woodland, cattail marshes, field horsetail - scouringrush horsetail - variegated scouringrush wet meadow, Goodding's willow - red willow riparian woodland and forest	California bay forest and woodland, bigleaf maple forest and woodland, Douglas fir - tanoak forest and woodland, redwood forest and woodland	Portions of Todd Creek, Lyndon Canyon Creek, several unnamed tributary drainages, Lake Ranch Reservoir, freshwater ponds, emergent wetlands, shrub scrub wetlands	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 4, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
11	Dudley's lousewort, San Mateo woolly sunflower	Woodland woollythreads (historically documented), others may occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma	California bay forest and woodland, redwood forest and woodland	California bay forest and woodland, Douglas fir - tanoak forest and woodland, redwood forest and woodland	Two perennial drainages, and several unnamed tributaries to Lyndon Canyon Creek	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 4, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.

Table 6. Sensitive Resource by Treatment Area and California Vegetation Treatment Program Program Environmental Impact Report Bio Impact

Treatment Area No.	Impact BIO-1			Impact BIO-2		Impact BIO-3		Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	Applicable SPRs and MMs
	Potentially Occurring Listed Plants (MM BIO-1a)	Non-Listed Special-Status Plants (MM BIO-1b)	Survey Recommendation (SPR BIO-7, MM BIO-1a, 1b)	Listed Wildlife (MM BIO-2a)	Non-Listed Special-Status Wildlife (SPR BIO-10, MM BIO-2b)	Riparian Habitat (SPR BIO-4)	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Wetlands (MM BIO-4)	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds (SPR BIO-12)	Local Plans, Policies, Ordinances	Conflict with HCP or Other Plan	
12	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	California red-legged frog, foothill yellow-legged frog, marbled murrelet	Santa Cruz black salamander, California giant salamander, red-bellied newt, long-eared owl, purple martin, white-tailed kite, least Bell's vireo, pallid bat, Townsend's big-eared bat, ringtail, San Francisco dusky-footed woodrat, puma	None	Douglas fir - tanoak forest and woodland	Two drainages	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 3, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 3a, 4, 5.
13	Dudley's lousewort, San Mateo woolly sunflower	May occur	Two survey passes: one in April and one in June	Marbled murrelet	Long-eared owl, purple martin, white-tailed kite, pallid bat, ringtail, San Francisco dusky-footed woodrat, puma	None	None	None	Yes, but impacts LTS	No significant sites, but see "Non-Listed Special-Status Wildlife"	LTS impacts	Yes	Consistent	None	SPR BIO-1, 2, 6, 7, 9, 10, 12; MM BIO-1a, 1b, 2a, 2b, 2e, 2g, 5.

Source: CBFFP 2019
 MM = Mitigation Measure; SPR = Standard Project Requirement; HCP = Habitat Conservation Plan; LTS = less than significant

4 Recommendations

This section provides recommendations for implementing PEIR SPRs and MMs specific to the proposed treatments. For some SPRs, no additional details are described below, but the measures should be implemented as described in the project description and as required in the PEIR (CBFFP 2019). These are as follows:

- SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub
- SPR BIO-6: Prevent Spread of Plant Pathogens

SPRs that do not apply to the proposed treatment are SPR BIO-8: Identify and Avoid or Minimize Impacts to Coastal Zone ESHAs, and SPR BIO-11: Install Wildlife Friendly Fencing (Prescribed Herbivory). The latter does not apply because prescribed herbivory is not proposed.

The recommendations below incorporate those provided by CDFW during coordination (CDFW 2023; Attachment G). The recommendations below include several to avoid take of California red-legged frog, foothill yellow-legged frog, marbled murrelet, and federally listed plants. Any recommendations provided by USFWS, or additional recommendations by CDFW, should be incorporated into the final treatment plan.

SPR BIO-1: Review and Survey Project-Specific Biological Resources. Data review and reconnaissance-level field surveys were conducted for all 30 treatment areas. The data reviewed included the biological resources setting, species and sensitive natural communities tables, and habitat information in the PEIR for the ecoregions where the treatments will occur. It also included review of vegetation mapping data, species distribution/range information, CNDDDB, California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, relevant BIOS queries, and relevant general and regional plans. The reconnaissance-level field surveys included visual and auditory inspection for biological resources, identifying and documenting sensitive resources, and an assessment of habitat suitability for special-status plant and animal species. Where it is determined that suitable habitat for sensitive biological resources is present but adverse effects on the suitable habitat can clearly be avoided, one of the following avoidance methods will be implemented prior to initiating treatment and will remain in effect throughout the treatment: physical avoidance of the suitable habitat (establishing a buffer using flagging, fencing, stakes, or existing landscape demarcations to delineate the boundary of the avoidance area) or seasonal avoidance (conducting treatment outside of the season when a sensitive resource could be present within the suitable habitat or outside the season of sensitivity, such as the breeding or blooming season). If any new treatment areas are added or treatment area boundaries are expanded, a reconnaissance-level survey must be conducted in the new areas prior to implementation of treatment.

SPR BIO-2: Require Biological Resource Training for Workers. All crew members and contractors are required to receive training from a biologist prior to beginning a treatment project. The training will include the identification, life history information, and avoidance of special-status species; identification and avoidance of sensitive natural communities and habitats; appropriate work practices necessary to comply with the biological SPRs, mitigation measures, and applicable environmental laws and regulations; impact minimization procedures; and reporting requirements. The training will instruct workers when it is appropriate to stop work and allow wildlife encountered during treatment activities to leave the area unharmed and when it is necessary to report encounters to a qualified biologist. The biologist will immediately contact CDFW or USFWS, as appropriate, if any wildlife protected by the California Endangered Species Act (CESA) or Federal Endangered Species Act (ESA) is encountered and cannot

leave the site on its own (without being handled). This SPR applies to all treatment activities and treatment types, including treatment maintenance. Resources to be addressed are those described in this memorandum. Special-status species to be addressed in the training should include, at minimum, the following

- Dudley’s lousewort
- San Mateo woolly sunflower
- King’s Mountain manzanita
- Woodland woollythreads
- California red-legged frog
- Foothill yellow-legged frog
- Santa Cruz black salamander
- California giant salamander
- Red-bellied newt
- Western pond turtle
- American peregrine falcon
- Golden eagle
- Long-eared owl
- Purple martin
- White-tailed kite
- Least Bell’s vireo
- Marbled murrelet
- Crotch bumble bee
- Western bumble bee
- Pallid bat
- Townsend’s big-eared bat
- Ringtail
- San Francisco dusky-footed woodrat
- Puma

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats. Sensitive natural communities have been mapped within the treatment areas in accordance with CDFW’s Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2021). These 17 sensitive natural communities and their rarity rankings are provided in Table 3, and their locations are identified in Figures 4-1 through 4-3. This SPR applies to all treatment activities and treatment types, including treatment maintenance.

- **MM BIO-3a Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands:** The project proponent will implement the following measures when working in treatment areas that contain sensitive natural communities identified during surveys conducted pursuant to SPR BIO-3:
 - Reference the *Manual of California Vegetation*, Appendix 2, Table A2, *Fire Characteristics* (Sawyer et al. 2009 or current version, including updated natural communities data at <http://vegetation.cnps.org/>) or other best available information to determine the natural fire regime of the specific sensitive natural community type (i.e., alliance) present. The condition class and fire return interval departure of the vegetation alliances present will also be determined.
 - Design treatments in sensitive natural communities and oak woodlands to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function of the affected sensitive natural community. Treatments will be designed to replicate the fire regime attributes for the affected sensitive natural community or oak woodland type including seasonality, fire return interval, fire size, spatial complexity, fireline intensity, severity, and fire type as described in *Fire in California’s Ecosystems* (Van Wagendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at <http://vegetation.cnps.org/>). Treatments will not be implemented in sensitive natural communities that are within their natural fire return interval (i.e., time since last burn is less than the average time required for that vegetation type to recover from fire) or within Condition Class 1.

- To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled).
- To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation relative cover from a stand of sensitive natural community vegetation in sensitive natural communities with a rarity rank of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation (i.e., if the sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break).
- Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at <http://vegetation.cnps.org/>).
- Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory.
- The feasibility of implementing the avoidance measures will be determined by the project proponent based on whether implementation of this mitigation measure will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. If the avoidance measures are determined by the project proponent to be infeasible, the project proponent will document the reasons implementation of the avoidance strategies are infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report).
- A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented.

- The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required.

SPR BIO-4: Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function. Three sensitive riparian associations within the bigleaf maple forest and woodland and the Goodding's willow – red willow – riparian woodland and forest alliances were identified within the treatment areas. If impacts to these associations cannot be avoided, treatment activities would be designed to avoid loss or degradation of riparian habitat function in accordance with SPR BIO-4, specifically:

- Treatment activities will be designed to retain at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within the limits of riparian habitat identified and mapped during surveys conducted pursuant to SPR BIO-3. Native riparian vegetation will be retained in a well distributed multi-storied stand composed of a diversity of species similar to that found before the start of treatment activities.
- Treatments will be limited to removal of uncharacteristic fuel loads (e.g., removing dead or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the riparian vegetation types characteristic of the region. This includes hand removal (or mechanized removal where topography allows) of dead or dying riparian trees and shrubs, invasive plant removal, selective thinning, and removal of encroaching upland species.
- Treatments will minimize the removal of large, native riparian hardwood trees (e.g., willow, ash, maple, oak, alder, sycamore, cottonwood) to the extent feasible and 75 percent of the pretreatment native riparian hardwood tree canopy will be retained. Because tree size varies depending on vegetation type present and site conditions, the tree size retention parameter will be determined on a site-specific basis depending on vegetation type present and setting; however, live, healthy, native trees that are considered large for that type of tree and large relative to other trees in that location will be retained. A scientifically-based, project-specific explanation substantiating the retention size parameter for native riparian hardwood tree removal will be provided in the Biological Resources Discussion of the PSA. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, presence of sufficient seed trees, light availability, and changes in stream shading may inform the tree size retention requirements.
- Removed trees will be felled away from adjacent streams or waterbodies and piled outside of the riparian vegetation zone (unless the applicable regulatory agencies approve otherwise).
- Vegetation removal that could reduce stream shading and increase stream temperatures will be avoided.
- Ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments. This will consist of the minimum disturbance area necessary to reduce hazardous

fuels and return the riparian community to a natural fire regime (i.e., Condition Class 1) considering historic fire return intervals, climate change, and land use constraints.

- Only hand application of herbicides approved for use in aquatic environments will be allowed and only during low-flow periods or when seasonal streams are dry.
- The project proponent will notify CDFW pursuant to California Fish and Game Code Section 1602 prior to implementing any treatment activities in riparian habitats. Notification will identify the treatment activities, map the vegetation to be removed, identify the impact avoidance identification methods to be used (e.g., flagging), and appropriate protections for the retention of shaded riverine habitat, including buffers and other applicable measures to prevent erosion into the waterway.
- In consideration of spatial variability of riparian vegetation types and condition and consistent with California Forest Practice Rules Section 916.9(v) (February 2019 version), a different set of vegetation retention standards and protection measures from those specified in the above bullets will be implemented on a site-specific basis if the qualified RPF and the project proponent demonstrate through substantial evidence that alternative design measures provide a more effective means of achieving the treatment objectives and would result in effects to the Beneficial Functions of Riparian Zones equal or more favorable than those expected to result from application of the above measures. Deviation from the above design specifications, different protection measures and design standards will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW.

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub. One sensitive chaparral community, chamise chapparal, was mapped within Treatment Area 3A (see Figures 4-1 through 4-3). If impacts to this area cannot be avoided, treatment activities would be designed to avoid type conversion in accordance with SPR BIO-5. Specifically:

- The treatment design will include evaluating and determining the appropriate spatial scale of the type conversion and demonstrating that the habitat function would be at least maintained within the identified spatial scale. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, spatial needs of sensitive species, presence of sufficient seed plants and nurse plants, light availability, and edge effects may inform the determination of an appropriate spatial scale.
- The treatment design will maintain a minimum percent cover of mature native shrubs within the treatment area to maintain habitat function; the appropriate percent cover will be identified by the project proponent in the development of treatment design and be specific to the vegetation alliances that are present in the identified spatial scale used to evaluate type conversion. Mature native shrubs that are retained will be distributed contiguously or in patches within the stand. If the stand consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity, to the extent needed to avoid type conversion.

These SPR requirements apply to all treatment activities and all treatment types, including treatment maintenance.

Additional measures will be applied to ecological restoration treatment types:

- For ecological restoration treatment types, complete removal of the mature shrub layer will not occur.

- Ecological restoration treatments will not be implemented in vegetation types that are within their natural fire return interval unless the habitat function would be improved.
- A minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density. Biological considerations that may inform a deviation from the minimum 35 percent relative cover retention include soil moisture requirements, increased soil temperatures, changes in light/shading, presence of sufficient seed plants and nurse plants, erosion potential, and site hydrology.
- If the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity.

These SPR requirements apply to all treatment activities and only the ecosystem restoration treatment type, including treatment maintenance.

The project proponent will be responsible for defining type conversion in the context of the project and making the finding that type conversion would not occur, as required by SB 1260. The project proponent will determine its criteria for defining and avoiding type conversion and, in making its findings, may draw upon information presented in the PEIR.

SPR BIO-7: Survey for Special-Status Plants. Two survey passes in April and June should be adequate to detect all special-status plant species with potential to occur within the treatment areas. The surveys will follow the methods in the current version of CDFW's "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities." Surveys to determine the presence or absence of special-status plant species will be conducted in suitable habitat that could be affected by the treatment and timed to coincide with the blooming or other appropriate phenological period of the target species (as determined by a qualified RPF or botanist), or all species in the same genus as the target species will be assumed to be special-status. If potentially occurring special-status plants are listed under CESA or ESA, protocol-level surveys to determine presence/absence of the listed species will be conducted in all circumstances, unless determined otherwise by CDFW or USFWS. For other special-status plants not listed under CESA or ESA, as defined in Section 3.6.1 of this PEIR, surveys will not be required under the following circumstances: If protocol-level surveys, consisting of at least two survey visits (e.g., early blooming season and later blooming season) during a normal weather year, have been completed in the 5 years before implementation of the treatment project and no special-status plants were found, and no treatment activity has occurred following the protocol-level survey, treatment may proceed without additional plant surveys.

- If the target special-status plant species is an herbaceous annual, stump-sprouting, or geophyte species, the treatment may be carried out during the dormant season for that species or when the species has completed its annual lifecycle without conducting presence/absence surveys provided the treatment will not alter habitat or destroy seeds, stumps, or roots, rhizomes, bulbs and other underground parts in a way that would make it unsuitable for the target species to reestablish following treatment.
 - **MM BIO-1a Avoid Loss of Special-Status Plants Listed under ESA or CESA:** If listed plants are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will avoid and protect these species by establishing a no-disturbance buffer around the area occupied by listed plants and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway), exceptions to this requirement are listed later in this measure. The no-disturbance buffers will generally be a minimum of 50 feet from listed

plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid killing or damaging listed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate buffer size will be determined based on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. For example, paint-on or wicking application of herbicides to invasive plants may be implemented within 50 feet of listed plant species without posing a risk, especially if the listed plants are dormant at the time of application. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform the determination of buffer width. If a no-disturbance buffer is reduced below 50 feet from a listed plant, a qualified RPF or botanist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report) with a science-based justification for the deviation. No fire ignition (and associated use of accelerants) will occur within 50 feet of listed plants.

- For species listed under ESA or CESA, if the project proponent cannot avoid loss by implementing no-disturbance buffers, the project proponent will implement Mitigation Measure BIO-1c.
- The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist, in consultation with CDFW and USFWS, as appropriate depending on species status and location, that the listed plants would benefit from treatment in the occupied habitat area even though some of the listed plants may be lost during treatment activities. For a treatment to be considered beneficial to listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to listed plants, no compensatory mitigation for loss of individuals will be required.
- **MM BIO-1b Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA:** If non-listed special-status plant species (i.e., species not listed under ESA or CESA, but meeting the definition of special-status as stated in Section 3.6.1 of the Program EIR) are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will implement the following measures to avoid loss of individuals and maintain habitat function of occupied habitat:
 - Physically avoid the area occupied by the special-status plants by establishing a no-disturbance buffer around the area occupied by species and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The no-disturbance buffers will generally be a minimum of 50 feet from special-status plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid loss of or damaging to special-status plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate size and shape of the buffer zone will be determined by a qualified RPF or botanist and will depend on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and

environmental conditions and terrain. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform an appropriate buffer size and shape.

- Treatments may be conducted within this buffer if the potentially affected special-status plant species is a geophytic, stump-sprouting, or annual species, and the treatment can be conducted outside of the growing season (e.g., after it has completed its annual life cycle) or during the dormant season using only treatment activities that would not damage the stump, root system or other underground parts of special-status plants or destroy the seedbank.
- Treatments will be designed to maintain the function of special-status plant habitat. For example, for a fuel break proposed in treatment areas occupied by special-status plants, if the removal of shade cover would degrade the special-status plant habitat despite the requirement to physically or seasonally avoid the special-status plant itself, habitat function would be diminished and the treatment would need to be modified or precluded from implementation.
- No fire ignition (and associated use of accelerants) will occur within the special-status plant buffer.
- A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment would not maintain habitat function of the special-status plant habitat (i.e., the habitat would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented.
- The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife. This SPR would be implemented in all treatment areas. Where Spanish broom has been mapped in Treatment Areas 1E, 6B, and 7 (Figures 4-1 through 4-3), and where invasive plants, noxious weeds, and invasive wildlife occur throughout the treatment areas, these invasive species would be removed in accordance with SPR BIO-9. No other significant areas of invasive non-native species were identified in the treatment areas. The majority of the forest health actions proposed under the Forest Health Plan would not involve herbicides. Only broom and other invasive plant species would be controlled using herbicide in accordance with the County's IPM Policy and Ordinance. For areas that contain broom and other invasive plant species that need to be treated with herbicide, these treatments would not be applied in any area within 300 feet of potential aquatic California red-legged frog/foothill yellow-legged frog habitat (all NWI wetland types shown in Figures 5-1 through 5-3). CDFW may recommend implementation of all measures included in SPR BIO-9 to protect Dudley's lousewort and San Mateo woolly sunflower from invasive plant establishment. Specific measures include:

- All clothing, footwear, and equipment must be appropriately decontaminated before entering the treatment area and when leaving an area with invasive species;
- All heavy equipment and vehicles entering treatment zones must be inspected and pressure washed or otherwise decontaminated at a designated weed-cleaning station prior to entering the treatment area. Anti-fungal wash agents could be specified if the equipment was exposed to any pathogens that could affect native species;
 - Equipment must be staged in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area;
 - Significant infestations of invasive plant species identified during reconnaissance-level surveys will be targeted for removal during treatment activities. Treatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles;
 - treat invasive plant biomass onsite to eliminate seeds and propagules and prevent reestablishment or dispose of invasive plant biomass offsite at an appropriate waste collection facility (if not kept on site); transport invasive plant materials in a closed container or bag to prevent the spread of propagules during transport; and
 - implement Fire and Fuel Management BMPs outlined in the "Preventing the Spread of Invasive Plants: Best Management Practices for Land Managers" (Cal-IPC 2012, or current version).

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites. No surveys are required under any established survey protocol. However, to comply with the PEIR (CBFFP 2019), implementation of this SPR and of MM BIO-2a, MM BIO-2b, MM BIO-2e, and MM BIO-2g would include the following:

- *Surveys for special-status amphibians.* Pre-activity surveys for California giant salamander, California red-legged frog, foothill yellow-legged frog, red-bellied newt, and Santa Cruz black salamander would be conducted no more than 48 hours prior to initial treatment activities within all areas of suitable habitat that would be directly affected by vegetation removal activities, and within 50 feet of such areas. Suitable habitat for these species within the treatment areas consist of damp upland forested areas near and adjacent to existing aquatic features (all NWI wetland types shown in Figures 5-1 through 5-3). Suitable California red-legged frog and foothill yellow-legged frog refugia habitat consists of areas that have consistent summer moisture, including downed logs, burrows, hollows in trees or roots, moist leaf litter, and similar microhabitats. Appropriate no-work buffers would be established around aquatic features that may host sensitive amphibian species and around suitable habitat areas for frog refugia. These features would be completely avoided during vegetation removal activities. Biological monitoring by a qualified biologist during mechanical and manual treatment activities within or adjacent to sensitive habitat areas would be implemented to avoid injury to or mortality of individual special-status amphibians. If the qualified biologist detects a special-status amphibian during treatments, a non-disturbance buffer of 100 feet will be implemented around the individual unless it is determined by a qualified biologist that a different sized buffer is appropriate to avoid injury or mortality. Treatment activities will cease within the buffer until the animal has left the area or has been moved out of harm's way and to other nearby habitat suitable for the species by the qualified biologist.
- *Seasonal work restrictions for special-status bats and other roosting bats.* If treatment area activities require the removal of trees during peak activity timeframes when young or overwintering bats may be present (generally March through April, and August through October), such activities could directly impact active bat roosts. To avoid impacts to active bat roosts, tree removals would occur outside peak bat activity timeframes to the extent feasible. Additionally, it is recommended that daily restrictions on the timing of any work activities be limited to daylight hours to reduce disturbance to roosting (and-foraging) bat species.
- *Surveys for special-status bats, and other roosting bats.* A biologist with demonstrated experience conducting bat habitat assessments and roost surveys would conduct a focused survey of trees identified for removal no more than 30 days prior to any removals during peak bat activity timeframes. The survey would include a determination on whether active bat roosts are present on or within 50 feet of the treatment site. If pallid bat or Townsend's big-eared bat is detected to be roosting within any of the treatment areas, CDFW would be contacted for additional instruction. If a non-breeding and non-wintering common bat colony is found, the individuals would be evicted under the direction of a qualified biologist to ensure their protection and avoid unnecessary harm. If a maternity colony or overwintering colony is found within the treatment areas, then avoidance would be implemented in accordance with MM BIO-2b. If a special-status bat roost is detected during SPR BIO-10 focused surveys, a no-disturbance buffer of 250 feet will be established around the roost during the bat maternity season (April 1–August 31), and no treatment activities will occur within this buffer until the roost is no longer being used as determined by a qualified biologist.
- *Surveys for San Francisco dusky-footed woodrat.* Pre-activity surveys for San Francisco dusky-footed woodrat and houses would be conducted within 30 days prior to the commencement of vegetation removal activities to identify, flag, and map any active woodrat houses within or adjacent to the treatment areas. If San Francisco dusky-footed woodrat or woodrat middens are observed, avoidance

would be implemented in accordance with MM BIO- 2b. Specifically, woodrat nests would be given a buffer of 5 to 10 feet where feasible. If San Francisco dusky-footed woodrat nests within treatment areas cannot be avoided, a qualified biologist would implement nest relocation procedures outside of the woodrat breeding season (April through mid-July). The biologist would dismantle the woodrat nest by hand and rebuild the nest outside of the treatment footprint. Rebuilt nests would be located in the vicinity (approximately 50 feet) of other existing nests (when other nests occur outside of the treatment area), and in the same habitat type as the original nest when feasible. Nest removal efforts would take place at dusk or dawn when woodrats are least susceptible to predation. Nest removal would not take place during inclement or extreme weather conditions. Prior to nest removal, personal protective equipment should be worn to minimize potential human exposure to possible diseases carried by woodrats. In areas of existing woodrat habitat, pile burning should take place as soon as feasible to reduce the risk of woodrats occupying the debris piles. Prior to burning, debris piles should be disturbed to ensure any woodrats inside of the piles have the opportunity to escape.

- *No work during or after rain events.* No work would be scheduled within 300 feet of potential California red-legged frog or foothill yellow-legged frog habitat (all NWI wetland types shown in Figures 5-1 through 5-3) when rain is forecast or within 48 hours after a rain event.
- *California red-legged frog and foothill yellow-legged avoidance (all NWI wetland types shown in Figures 5-1 through 5-3).* To avoid any potential for take, mechanized equipment or vehicles would not be used in scrub, woodland, or riparian habitats within 300 feet of all NWI wetland-type features shown in Figures 5-1 through 5-3.
- *San Francisco garter snake avoidance.* Prior to any vegetation removal activity within Treatment Area 04D, a qualified biologist will visually inspect the treatment area for the presence of San Francisco garter snake. If a San Francisco garter snake is encountered in the project area, the snake will not be handled; a no-disturbance buffer will be implemented; and the snake will be left alone until it leaves the area of its own volition. All vehicles and equipment staged near suitable San Francisco garter snake habitat must be checked for the snake before moving.
- *Marbled murrelet habitat assessment, surveys, and avoidance measures:* In areas where marbled murrelet nesting habitat may be present, a qualified biologist would conduct a habitat assessment prior to the start of project activities. The habitat assessment would include a visual inspection of suitable nesting habitat features within 0.25 miles of the project area that occur within old growth conifer forested areas. Suitable habitat characteristics are described in Methods for Surveying Marbled Murrelets in Forests: A Revised Protocol for Land Management and Research (Mack et al. 2003). Habitat features found during the assessment will be identified, flagged, mapped, or marked for avoidance and retention as a sensitive area.. If suitable nesting habitat is discovered, a qualified biologist will develop an appropriate no-disturbance buffer around suitable nesting habitat identified within 0.25 miles of the project area during the murrelet nesting season (March 24 to September 15). Project-generated sound must not exceed ambient levels (< 50 decibels) by 20–25 decibels and must not exceed 90 decibels when combined with ambient sound conditions, and human activities must not occur within 330 feet or less line-of sight distance to an active marbled murrelet nest (USFWS 2020). To avoid impacts to marbled murrelets, treatment activities must be conducted during daylight hours only, between the period of 1.5 hours after official sunrise and 1.5 hours before official sunset, avoiding work during dawn and dusk hours during the breeding season (March 24 to September 15).
- *American peregrine falcon surveys and avoidance:* Pre-activity surveys for American peregrine falcon would be conducted by a qualified biologist no more than 72 hours prior to the commencement of vegetation treatment activities to identify and map any active nests. If an active American peregrine

falcon nest is found during pre-activity surveys, a no-disturbance buffer of 500 feet would be implemented around the nest during the breeding season (March through June), within which no treatment activities shall occur until a qualified biologist has determined that the chicks have fledged.

- **Least Bell's vireo surveys and avoidance:** If treatment activities will occur within 250 feet of riparian habitat, a qualified biologist will consult the CNDDDB to determine if there has been nesting at the site in the past three years. If there are records of nesting at the site within the past three years, the project proponent is required to avoid the nest sites. If no nesting has been recorded in the past three years, a qualified biologist will conduct a pre-activity survey to identify and map suitable nesting habitat (early successional riparian vegetation dominated by willows with a thick, shrubby understory). If suitable nesting habitat is found during this survey, the project may avoid all areas within a 250-foot buffer of the potential nesting habitat. If the Project chooses not to avoid the potential nesting habitat, a qualified biologist would conduct a pre-activity survey during the breeding season (March 15 to July 31) to document the presence or absence of nesting least Bell's vireos following the USFWS's 2001 Least Bell's Vireo Survey Guidelines or latest protocol. Surveys would be conducted between dawn and 11:00 am (SCVHA 2017). If project activities will occur during the breeding season, surveys will be completed no more than two calendar days prior to commencement of treatment activities. If an active least Bell's vireo nest is found during pre-activity surveys, a no-disturbance buffer of 250 feet would be implemented around the nest, within which no treatment activities shall occur during the breeding season (March 15 to July 31) until a qualified biologist has determined that the chicks have fledged. The locations of these nests would be submitted to the CNDDDB, USFWS, and CDFW.
- **Mitigation Measure BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants (All Treatment Activities):** If federally listed butterflies are identified as occurring or having potential to occur during review and surveys for SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, then the following measures will be implemented:
 - Treatment areas within the range of these species will be surveyed for the host plant for each species (Table 3.6-34).
 - Host plants for federally listed butterflies within the occupied habitat will be marked with high-visibility flagging, fencing, or stakes, and no treatment activities will occur within 10 feet of these plants.
 - Because prescribed herbivory could result in the indiscriminate removal of the host plants for federally listed butterflies, this treatment type will not be used within occupied habitat of any federally listed butterfly species, unless it is known that the host plant is unpalatable to the herbivore.
 - Treatment areas that are not occupied but are within the range of the federally listed butterfly will be divided into as many treatment units as feasible such that the entirety of the habitat is not treated within the same year.
 - Treatments will be conducted in a patchy pattern to the extent feasible in areas that are not occupied but are within the range of the federally listed butterfly, such that the entirety of the habitat is not burned or removed and untreated portions of suitable habitat are retained.
 - If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of federally listed butterflies or degradation of occupied habitat (host plants) such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.
- **Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities)** If special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, or if suitable habitat for special-status bumble bees is identified

during review and surveys under SPR BIO-1 (e.g., wet meadow, forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species), then the project proponent will implement the following measures, as feasible:

- Prescribed burning within occupied or suitable habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season.
- Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area.
- Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area).
- Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September).

Additional surveys for non-listed special-status wildlife species. Pre-activity surveys would be conducted for western pond turtle, ringtail, and puma. If any of these species are identified, the locations would be marked in the field, and avoidance would be implemented in accordance with MM BIO-2b. Specifically:

- For all treatment activities except prescribed burning, a no-disturbance buffer of a minimum of 100 feet will be established around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries), unless a smaller buffer would be sufficient for protection, or a larger buffer would be needed.
- No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified biologist may be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment if the treatment activity has the potential to result in mortality, injury, or disturbance. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified biologist will have the authority to stop any treatment activities that could result in mortality, injury, or disturbance to special-status species.
- For prescribed burning, the treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified biologist will determine the period within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species.

For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following:

- While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified biologist will identify any habitat features that are necessary for survival of the affected wildlife species. These habitat features will be marked, and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science.
- A qualified biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment.

A qualified biologist with knowledge of the special-status wildlife species habitat and life history will review the treatment design and applicable impact minimization measures to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status wildlife species' habitat or because the loss of special-status wildlife would substantially reduce the number or restrict the range of a special-status wildlife species. If the project proponent determines the impact on special-status wildlife would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status wildlife or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented.

The only exception to this mitigation approach is in cases where it is determined by a qualified biologist that the non-listed special-status wildlife would benefit from treatment in the occupied habitat area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status wildlife, no compensatory mitigation will be required.

If SPR BIO-1 determines that suitable habitat for special-status wildlife species or nurseries of any wildlife species is present and cannot be avoided, the project proponent will require a qualified biologist to conduct focused or protocol-level surveys for special-status wildlife species or nursery sites (e.g., bat maternity roosts) with potential to be directly or indirectly affected by a treatment activity. The survey area will be determined by a qualified biologist based on the species and habitats and any recommended buffer distances in agency protocols.

Unless otherwise specified in a protocol, the survey will be conducted no more than 14 days prior to the beginning of treatment activities. Focused or protocol surveys for a special-status species with potential to occur in the treatment area may not be required if presence of the species is assumed.

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

Project-Specific Requirements

- Either surveys for monarch butterfly host plants will be performed prior to implementing treatment activities, or presence of host plants in suitable habitat will be assumed and Mitigation Measure BIO-2e will apply.
- Prior to implementing treatment activities, a qualified biologist will conduct reconnaissance surveys within the treatment areas for suitable Crotch bumble bee and western bumble bee habitat that contains associated floral resources. If suitable habitat is present, Mitigation Measure BIO-2g will apply, and all treatment activities will avoid those areas. If special-status bumble bee nesting sites are found during project activities, no-disturbance buffers will be placed around the nesting sites, and treatment activities will avoid these areas until the end of the bumble bee nesting season.
- To avoid impacts on special-status amphibians and reptiles (i.e., California giant salamander, red-bellied newt, and Santa Cruz black salamander), focused surveys will be conducted by a qualified biologist, within habitat suitable for the species prior to mechanical and manual treatments.
- Either protocol level surveys following the *Revised Guidance on Site Assessments and Filed Surveys for California red-legged frog* (USFWS 2005) will be conducted within the project area, or presence of California red-legged frog will be assumed in potentially suitable habitat and Mitigation Measure BIO-2a will apply.
- For all treatment activities that occur during the nesting bird season (February 1–August 31) and to avoid impacts on golden eagle, long-eared owl, purple martin, and white-tailed kite, focused surveys for nests of these species will be conducted prior to implementing treatment activities during the nesting bird season.
- Either focused surveys for ringtail will be conducted within the project area, or presence of ringtail will be assumed in potentially suitable habitat and Mitigation Measure BIO-2 will apply.
- To avoid impacts on San Francisco dusky-footed woodrats, focused surveys for the species would be conducted within habitat suitable for the species prior to implementation of mechanical and manual treatments using power equipment.
- For all treatment activities that cannot be avoided during the bat maternity season and to avoid impacts on pallid bat and Townsend’s big-eared bat, focused surveys for maternity roosts will be conducted prior to implementing treatment activities in suitable habitat during the bat maternity season (April 1–August 31).
- For all treatment activities that occur within the mule deer fawning season (May 1 – August 31), focused surveys for fawning sites will be conducted prior to implementing treatment activities.

SPR BIO-12: Protect Common Nesting Birds, including Raptors. If treatment is initiated in any treatment area between January 15 and September 1, and active nesting season avoidance is not feasible, a qualified RPF or biologist will conduct a survey for common nesting birds, including raptors. Existing records (e.g., CNDDDB, eBird database, State Wildlife Action Plan) will be reviewed in advance of the survey to identify the common nesting birds, including raptors, that are known to occur in the vicinity of the treatment site. The survey area will encompass reasonably accessible areas of the treatment sites and the immediately surrounding vicinity viewable from the treatment sites. The survey areas will be determined by a qualified RPF or biologist, based on the potential species in the area, location of suitable nesting habitat, and type of treatment. For vegetation removal or project activities that would occur during the nesting season, the survey will be conducted at a time that balances the effectiveness of detecting nests and the reasonable consideration of potential avoidance strategies. Typically, this timeframe would be up to 3 weeks before treatment. The survey will occur in a single survey period of sufficient duration to reasonably detect nesting birds, including raptors, typically one day for most treatment projects (depending on the size, configuration, and vegetation density in the treatment site), and conducted during the active time of day for

target species, typically close to dawn and/or dusk. The survey may be conducted concurrently with other biological surveys, as required by other SPRs. Survey methods will be tailored by the qualified RPF or biologist to site and habitat conditions, typically involving walking throughout the survey area, visually searching for nests and birds exhibiting behavior that is typical of breeding (e.g., delivering food).

If active nests are located or determined to likely be present (i.e., presence of eggs and/or chicks), buffers, avoidance, treatment modifications, and/or treatment deferral would be implemented in accordance with SPR BIO-1, which may include, but is not limited to, one or more of the following measures:

- **Establish Buffer.** The project proponent will establish a temporary, species-appropriate buffer around the nest sufficient to reasonably expect that breeding would not be disrupted. Treatment activities will be implemented outside of the buffer. The buffer location will be determined by a qualified RPF or biologist. Factors to be considered for determining buffer location will include: presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and expected treatment activities. Nests of common birds within the buffer need not be monitored during treatment. However, buffers will be maintained until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician.
- **Modify Treatment.** The project proponent will modify the treatment in the vicinity of an active nest to avoid disturbance of active nests (e.g., by implementing manual treatment methods, rather than mechanical treatment methods). Treatment modifications will be determined by the project proponent in coordination with the qualified RPF or biologist.
- **Defer Treatment.** The project proponent will defer the timing of treatment in the portion(s) of the treatment site that could disturb the active nest. If this avoidance strategy is implemented, treatment activity will not commence until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician.

Feasible actions will be taken by the project proponent to avoid loss of common native bird nests. The feasibility of implementing the avoidance strategies will be determined by the project proponent based on whether implementation of this SPR will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. Considerations may include limitations on the presence of environmental and atmospheric conditions necessary to execute treatment prescriptions (e.g., the limited seasonal windows during which prescribed burning can occur when vegetation moisture, weather, wind, and other physical conditions are suitable). If it is infeasible to avoid loss of common bird nests (not including raptor nests), the project proponent will document the reasons implementation of the avoidance strategies is infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report).

The following avoidance strategies may also be considered together with or in lieu of other actions for implementation by a project proponent to avoid disturbance to raptor nests:

- **Monitor Active Raptor Nest During Treatment.** A qualified RPF, biologist, or biological technician will monitor an active raptor nest during treatment activities to identify signs of agitation, nest defense, or other behaviors that signal disturbance of the active nest is likely (e.g., standing up from a brooding position,

flying off the nest). If breeding raptors are showing signs of nest disturbance, one of the other avoidance strategies (establish buffer, modify treatment or defer treatment) will be implemented or a pause in the treatment activity will occur until the disturbance behavior ceases.

- **Retention of Raptor Nest Trees.** Trees with visible raptor nests, whether occupied or not, will be retained.

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

SPR HYD-4: Identify and Protect Watercourse and Lake Protection Zones. The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) on either side of watercourses as defined in the table below which is based on 14 CCR Section 916.5 of the California Forest Practice Rules (February 2019 version). WLPZs are classified based on the uses of the stream and the presence of aquatic life. Wider WLPZs are required for steep slopes.

Procedures for Determining Watercourse and Lake Protection Zone (WLPZ) Widths¹

Water Class	Class I	Class II	Class III	Class IV
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.	1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.	No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high-water flow conditions after completion of timber operations.	Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.
< 30 % Slope	75	50	See table note 2.	See table note 2.
30-50 % Slope	100	75	See table note 2.	See table note 2.
>50 % Slope	150	100	See table note 2.	See table note 2.

Notes:

¹ WLPZ width (ft) – distance from top of bank to the edge of the protection zone.

² Sufficient to prevent the degradation of downstream beneficial uses of water. Determined on a site-specific basis.

Source: 14 CCR Section 916.5 [936.5, 956.5] (February 2019 version).

The following WLPZ protections will be applied for all treatments:

- Treatment activities with WLPZs will retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced, a qualified RPF will provide the project proponent with a site- and/or treatment activity-specific explanation for the percent surface cover reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced percent as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). This requirement is based on 14 CCR Section 916.4 [936.4, 956.4] Subsection (b)(6) (February 2019 version) and 14 CCR Section 916.5 (February 2019 version).

- Equipment, including tractors and vehicles, must not be driven in wet areas or WLPZs, except over existing roads or watercourse crossings where vehicle tires or tracks remain dry.
- Equipment used in vegetation removal operations will not be serviced in WLPZs, within wet meadows or other wet areas, or in locations that would allow grease, oil, or fuel to pass into lakes, watercourses, or wet areas.
- WLPZs will be kept free of slash, debris, and other material that harm the beneficial uses of water. Accidental deposits will be removed immediately.
- Burn piles will be located outside of WLPZs.
- No fire ignition (nor use of associated accelerants) will occur within WLPZs however low intensity backing fires may be allowed to enter or spread into WLPZs.
- Within Class I and Class II WLPZs, locations where project operations expose a continuous area of mineral soil 800 square feet or larger shall be treated for reduction of soil loss. Treatment shall occur prior to October 15 and disturbances that are created after October 15 shall be treated within 10 days. Stabilization measures shall be selected that will prevent significant movement of soil into water bodies and may include but are not limited to mulching, riprap, grass seeding, or chemical soil stabilizers.
- Where mineral soil has been exposed by project operations on approaches to watercourse crossings of Class I, II, or III within a WLPZ, the disturbed area shall be stabilized to the extent necessary to prevent the discharge of soil into watercourses or lakes in amounts that would adversely affect the quality and beneficial uses of the watercourse.
- Where necessary to protect beneficial uses of water from project operations, protection measures such as seeding, mulching, or replanting shall be used to retain and improve the natural ability of the ground cover within the WLPZ to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes.
- Equipment limitation zones (ELZs) will be designated adjacent to Class III and Class IV watercourses with minimum widths of 25 feet where side-slope is less than 30 percent and 50 feet where side-slope is 30 percent or greater. An RPF will describe the limitations of heavy equipment within the ELZ and, where appropriate, will include additional measures to protect the beneficial uses of water.

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

Other Recommendations

- Marbled murrelet: If any marbled murrelets are encountered during treatment, work in the vicinity of the observation would be stopped, CDFW and USFWS would be immediately notified of the occurrence, and these agencies would be consulted on the course of action. No take of these species can occur without obtaining incidental take authorizations under the federal Endangered Species Act and California Endangered Species Act.
- Monarch Butterfly: Physically avoid the area occupied by monarch butterfly hostplants, milkweed (*Asclepias* spp.) by establishing a no-disturbance buffer around the area occupied by species and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The no-disturbance buffers will generally be a minimum of 10 feet from milkweed plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid loss of or damaging to milkweed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate size and shape of the

buffer zone will be determined by a qualified RPF or botanist and will depend on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the milkweed's vulnerability to the treatment method being used, and environmental conditions and terrain. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform an appropriate buffer size and shape. Design treatments to maintain habitat function for milkweed, thereby maintaining habitat function for monarch butterflies.

- California red-legged frog: If presence of California red-legged frog within suitable habitat in the treatment area is assumed or detected during surveys, pre-treatment visual surveys will be performed daily by a qualified biologist prior to implementation of any treatment activities within 300 feet of Class I or Class II WLPZ streams and within or adjacent to other sensitive habitat areas during the dispersal season (October 1 through April 1) or within 24 hours following a rain event greater than one quarter inch. Surveys and monitoring will be performed year-round prior to any activities within 30 feet of Class I or Class II WLPZ streams and within or adjacent to other sensitive habitat areas. If a California red-legged frog is found during pre-treatment surveys or enters the project site during treatment activities, all work will stop within a non-disturbance buffer of 100 feet around the individual unless it is determined that a different sized buffer is appropriate to avoid disturbance, injury, or mortality. Treatment activities will cease within the buffer until the animal leaves on its own and the occurrence will be reported to the qualified biologist and USFWS. The specific habitat features used by the frog when detected will be evaluated for habitat retention if habitat retention will meet the project goals. Pieces of large woody debris greater than 12 inches in diameter that need to be moved or treated will be evaluated for CRLF by a qualified biologist. All mechanized equipment will shut down for 24 hours following any precipitation event of 0.20 inch to less than 1 inch, 48 hours following any precipitation event 1 inch to less than 2 inches, and 72 hours following any precipitation event greater or equal to 2 inches. No mechanized operations may occur in a Class I or Class II watercourse in which WLPZ protections have been implemented in accordance with SPR HYD-4, or within 30 feet of a Class III WLPZ or adjacent to wet seeps. Handwork may continue in these areas if the area has been surveyed by a qualified biologist no more than 7 days prior to operations. No heavy equipment may be fueled within 65 feet of any watercourse. If CRLF are encountered during treatment, work in the vicinity of the observation would be stopped, USFWS would be immediately notified of the occurrence, and USFWS would be consulted on the appropriate course of action. No take of this species can occur without obtaining incidental take authorization under the federal Endangered Species Act.
- Foothill yellow-legged frog (FYLF): If suitable habitat for foothill yellow-legged frog is present within the treatment area, daily inspection of the treatment area will be performed. Prior to beginning daily inspections, the qualified biologist will conduct a training for project staff covering the identification of FYLF, procedures to follow for daily inspection of habitat features before treatment occurs, and procedures to implement if a frog is present. If a FYLF is present in the treatment area, activities will halt, and a no-disturbance buffer will be established around the frog in which treatment will not occur until the frog has left the area on its own accord. CDFW will be notified if foothill yellow-legged frogs are observed.
- San Francisco garter snake: Any San Francisco garter snake encountered in the treatment areas should not be handled; a no disturbance buffer should be implemented; and the species should be left alone until it leaves the area on its own. All vehicles and equipment staged near suitable garter snake habitat should be checked for the species prior to moving.

- White-tailed kite: If active white-tailed kite nests are found during SPR BIO-10 surveys, a no-disturbance buffer of 0.25 mile will be placed around the nests, and no treatment activities may occur within this buffer until the biologist has determined the chicks have fledged.
- Golden eagle: If active golden eagle nests are found during SPR BIO-10 surveys, a no-disturbance buffer of 1.0 mile will be placed around the nests, and no treatment activities may occur within this buffer until a biologist has determined the chicks have fledged.
- Ringtail: To avoid mortality or injury to ringtail during the maternity season (April 15-June 30), a qualified biologist will conduct a den search in the treatment area within 7 days prior to the start of mechanical and manual treatments. Den structures include hollow logs, rock piles, and large trees greater than 12 inches dbh with appropriate cavities (i.e., holes larger than 3 inches in diameter, cavities 12 inches deep). If cavities are found, the qualified biologist will inspect them, if safely accessible, using a cell phone with a flash or a borescope to determine whether a ringtail is present. Large trees with appropriate cavities will be marked with flagging or spray paint for inspection during further surveys and for potential avoidance during the maternity season. The qualified biologist will also search for dens in dense brush and will note any sightings of fleeing adult ringtails. If no active ringtail dens are found during the den survey, daily surveys will be implemented to avoid destruction of active dens and injury or mortality to ringtails that were not detected previously. On the morning of treatment, a qualified biologist will conduct a survey of the area to be treated that week and will search all suitable habitat for ringtails where mastication or tree removal will occur that day (i.e., larger trees, heavy brush, rock piles) for active dens or adults, including trees with cavities previously marked by the qualified biologist. On following days, a trained contractor will search all areas previously marked by the qualified biologist for active dens. If an active den is discovered during a daily survey, the qualified biologist will be notified, all work will stop, a no-disturbance buffer of at least 0.25 mile will be implemented around the den, and treatment activities will not proceed within the buffer until at least the end of the ringtail maternity season (June 30). The qualified biologist will confirm that the den is unoccupied before treatment activities resume. If an active den is discovered, CDFW will be notified of the den and buffer location. CDFW will be provided the opportunity to visit the site and provide technical information on the size and shape of the den buffer. Any potential den structures where the biologist is not able to determine occupancy will be retained until the end of the ringtail maternity season (June 30).
- Puma: To avoid mortality or injury to puma, a qualified biologist will conduct a survey of the treatment area for appropriate nursery habitat, which includes caves, large natural cavities in rocky areas, or thickets. The biologist will survey for signs of activity (tracks, scat, prey items) and publicly reported puma sightings near potential nursery habitat to determine whether the area may contain a puma nursery. If nursery habitat is confirmed within the treatment area, a qualified biologist will inspect the suitable nursery habitat in the part of the treatment area scheduled to be treated within 7 days prior to the start of mechanical and manual treatments. If no puma or sign of a nursery is observed, treatment may begin. If signs of a puma nursery are observed, the biologist will use trail cameras, track plates, hair snares, and/or other noninvasive methods for three days and three nights to determine whether the nursery is active. If these methods determine that the nursery is active, a no-disturbance buffer of at least 2,000 feet will be established for a minimum of 10 weeks. Treatment will not occur within this buffer during this time to avoid disturbance, injury, or mortality of pumas.
- Any additional recommendations provided by CDFW or USFWS prior to the implementation of treatment activities would be incorporated into the treatment plan.

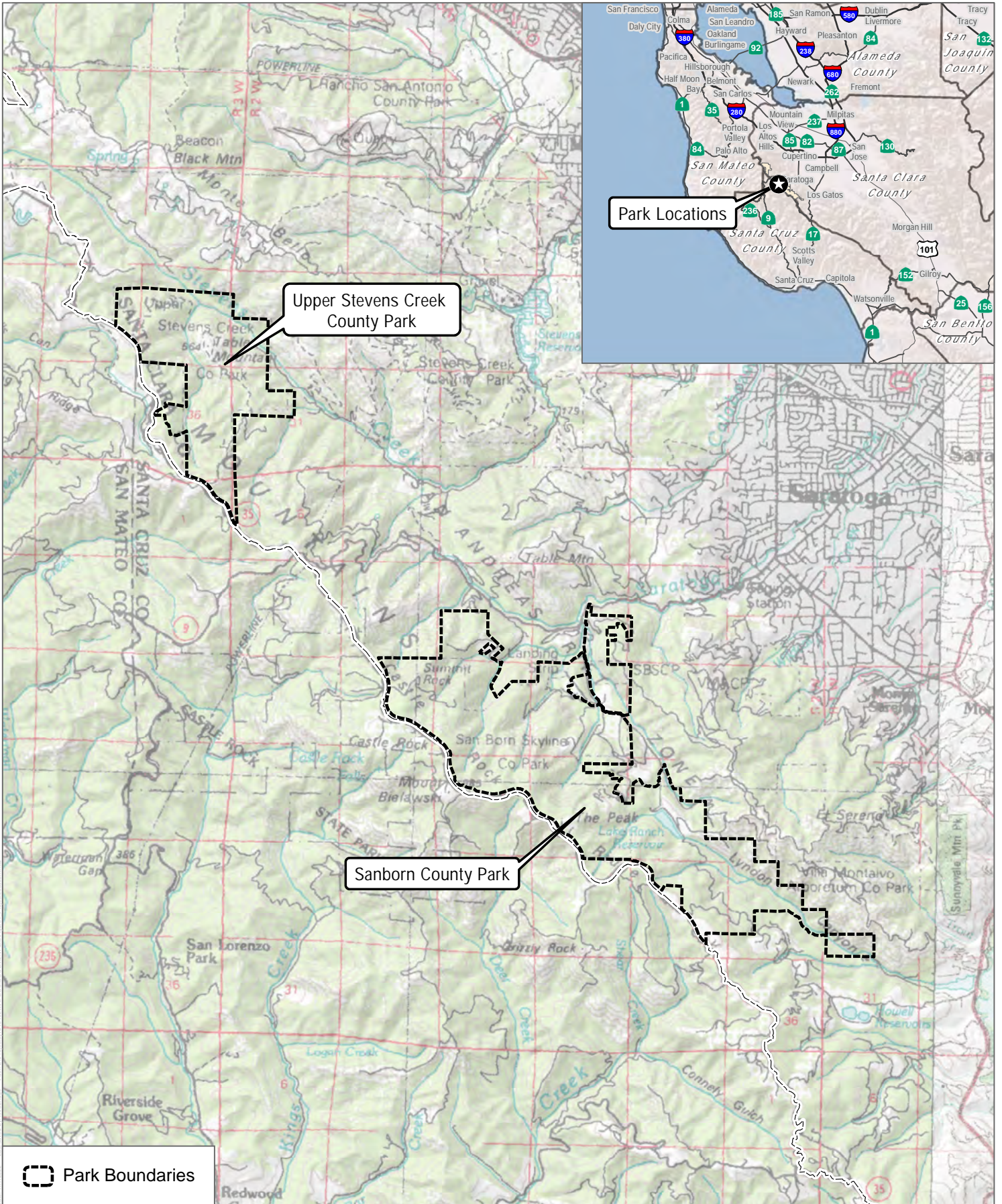
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MEMORANDUM

SUBJECT: BIOLOGICAL TECHNICAL MEMORANDUM, SANBORN AND UPPER STEVENS CREEK COUNTY PARKS FOREST HEALTH PLAN PROJECT

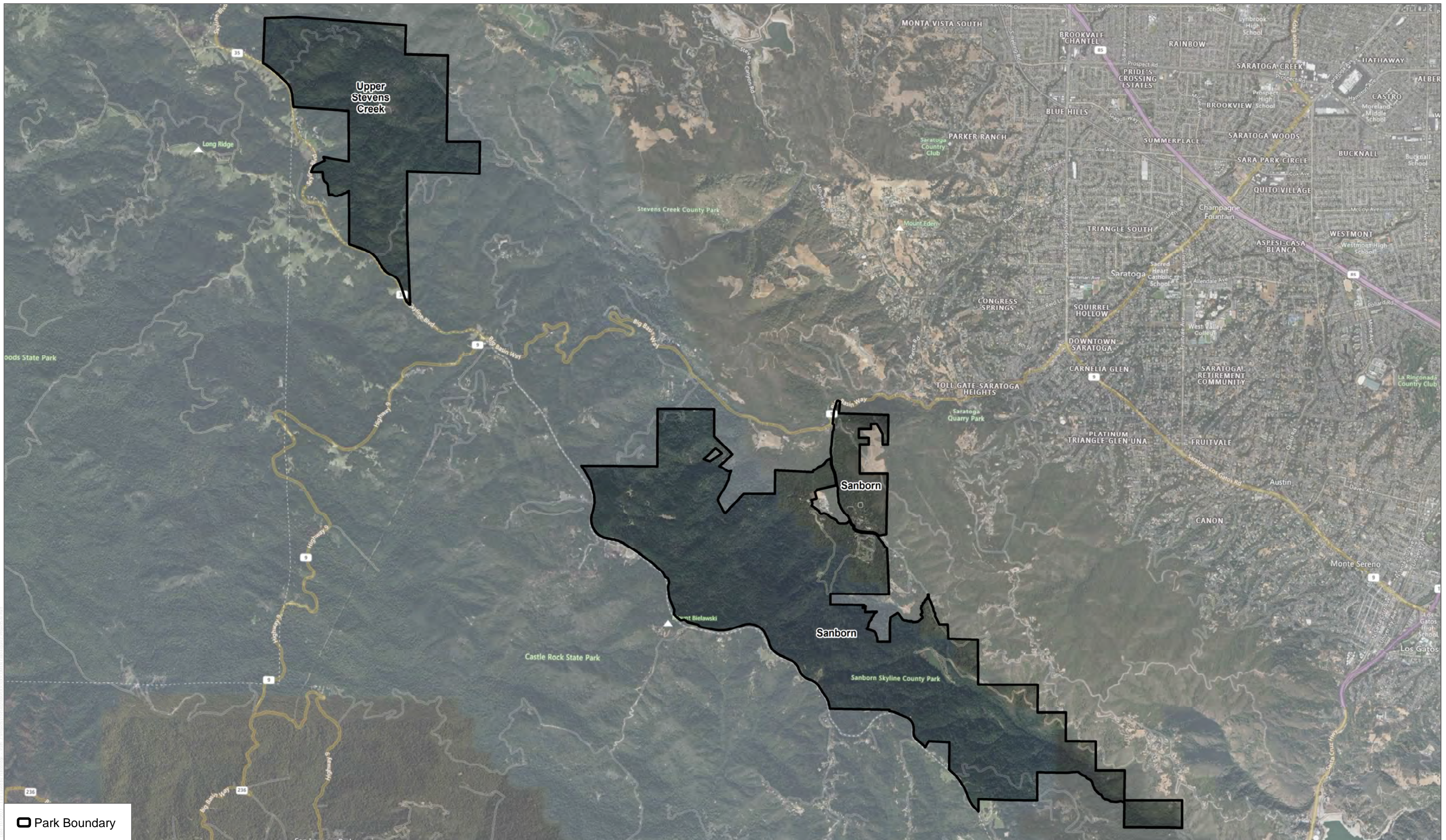
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SOURCE: USGS 2020

FIGURE 1

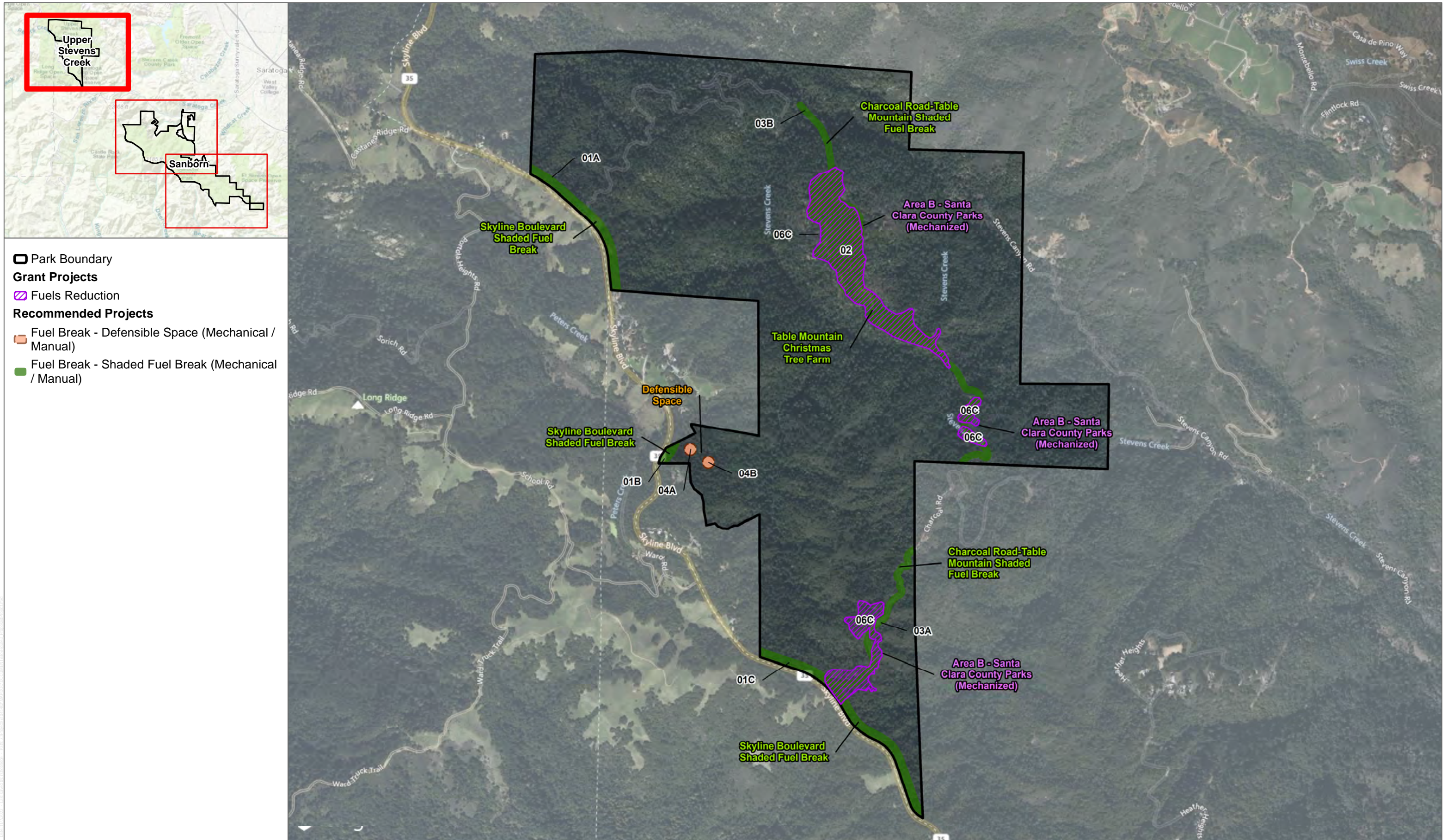
Project Location



SOURCE: Bing Maps 2021, Santa Clara County 2022



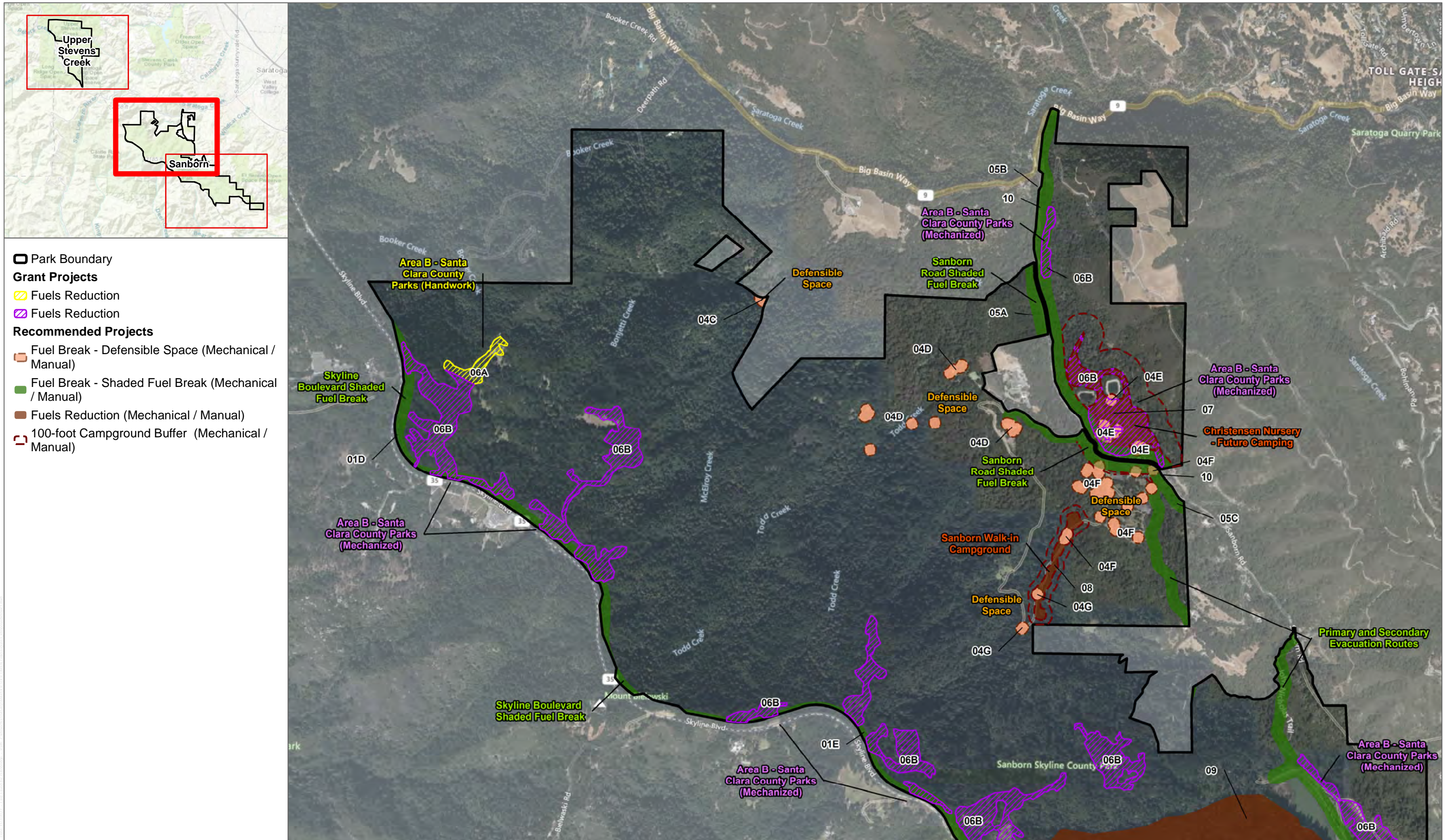
FIGURE 2
Project Site



SOURCE: Bing Maps 2021, Santa Clara County 2022



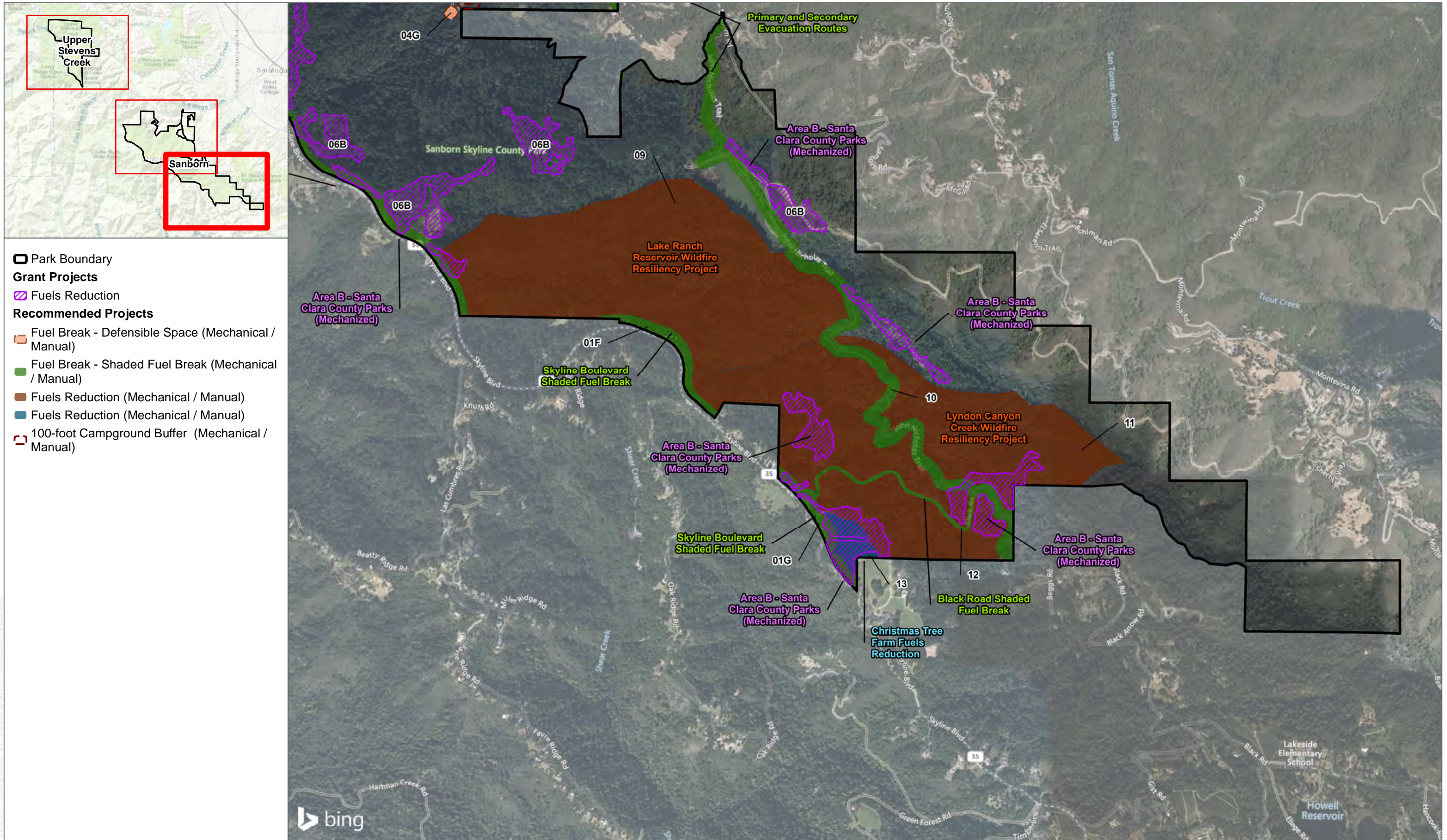
FIGURE 3-1
Proposed Project



SOURCE: Bing Maps 2021, Santa Clara County 2022



FIGURE 3-2
Proposed Project

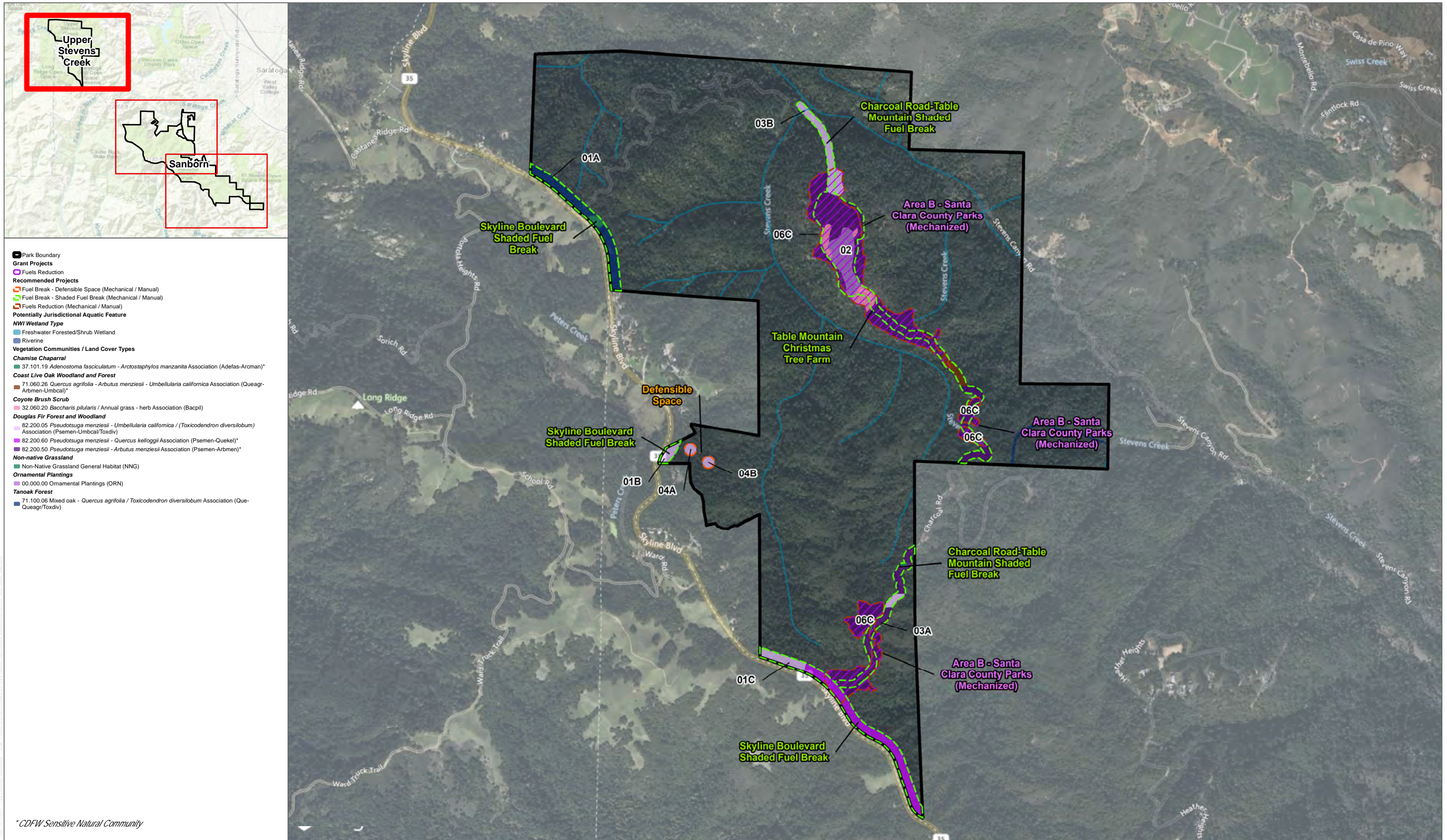


SOURCE: Bing Maps 2021, Santa Clara County 2022



FIGURE 3-3

Proposed Project

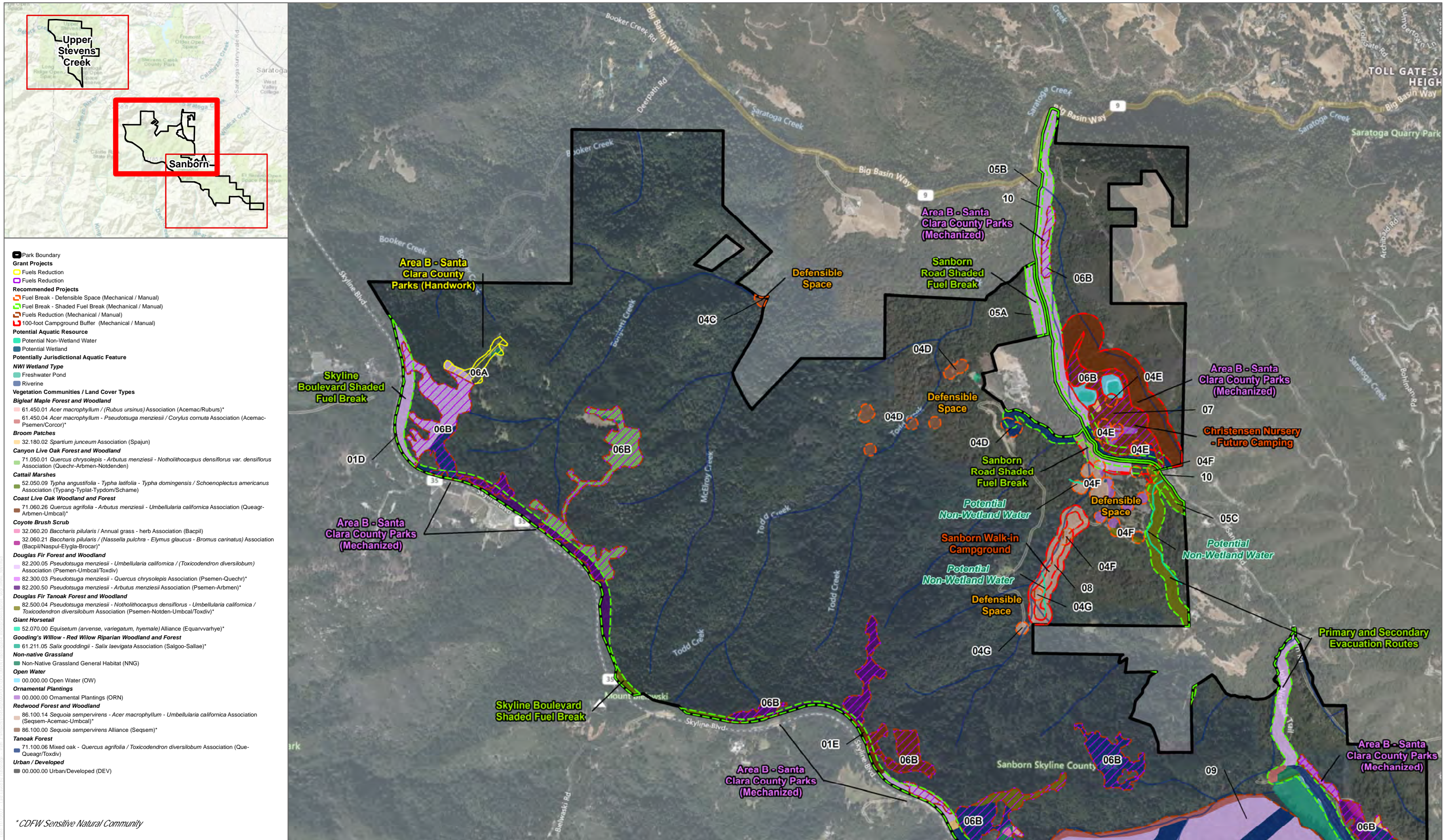


SOURCE: Bing Maps 2021, Santa Clara County 2022



FIGURE 4-1

Vegetation Communities and Potentially Jurisdictional Aquatic Resources
 Biological Technical Memorandum, Sanborn and Upper Stevens Creek County Parks Forest Health Plan Project

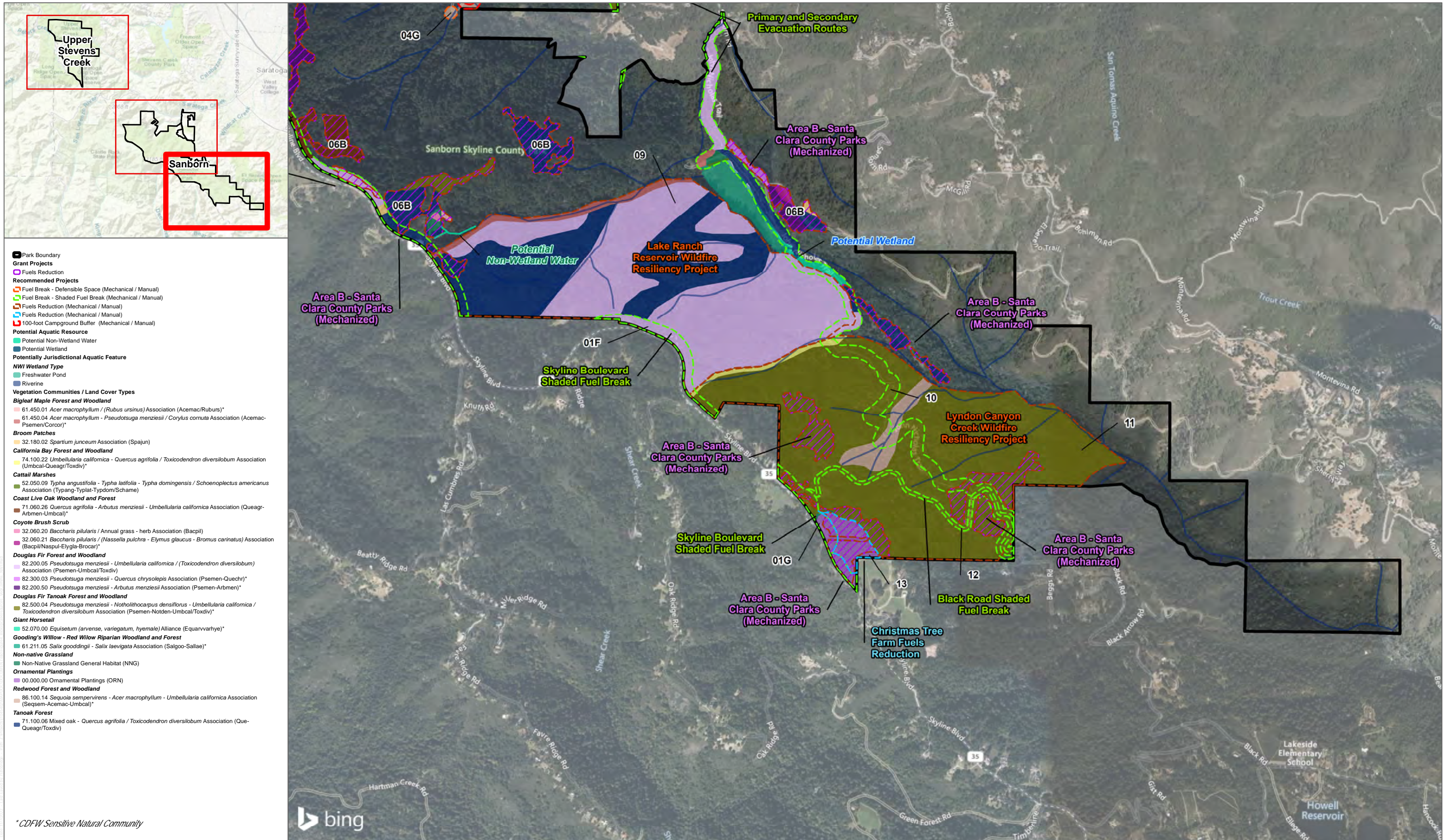


SOURCE: Bing Maps 2021, Santa Clara County 2022



FIGURE 4-2

Vegetation Communities and Potentially Jurisdictional Aquatic Resources
 Biological Technical Memorandum, Sanborn and Upper Stevens Creek County Parks Forest Health Plan Project

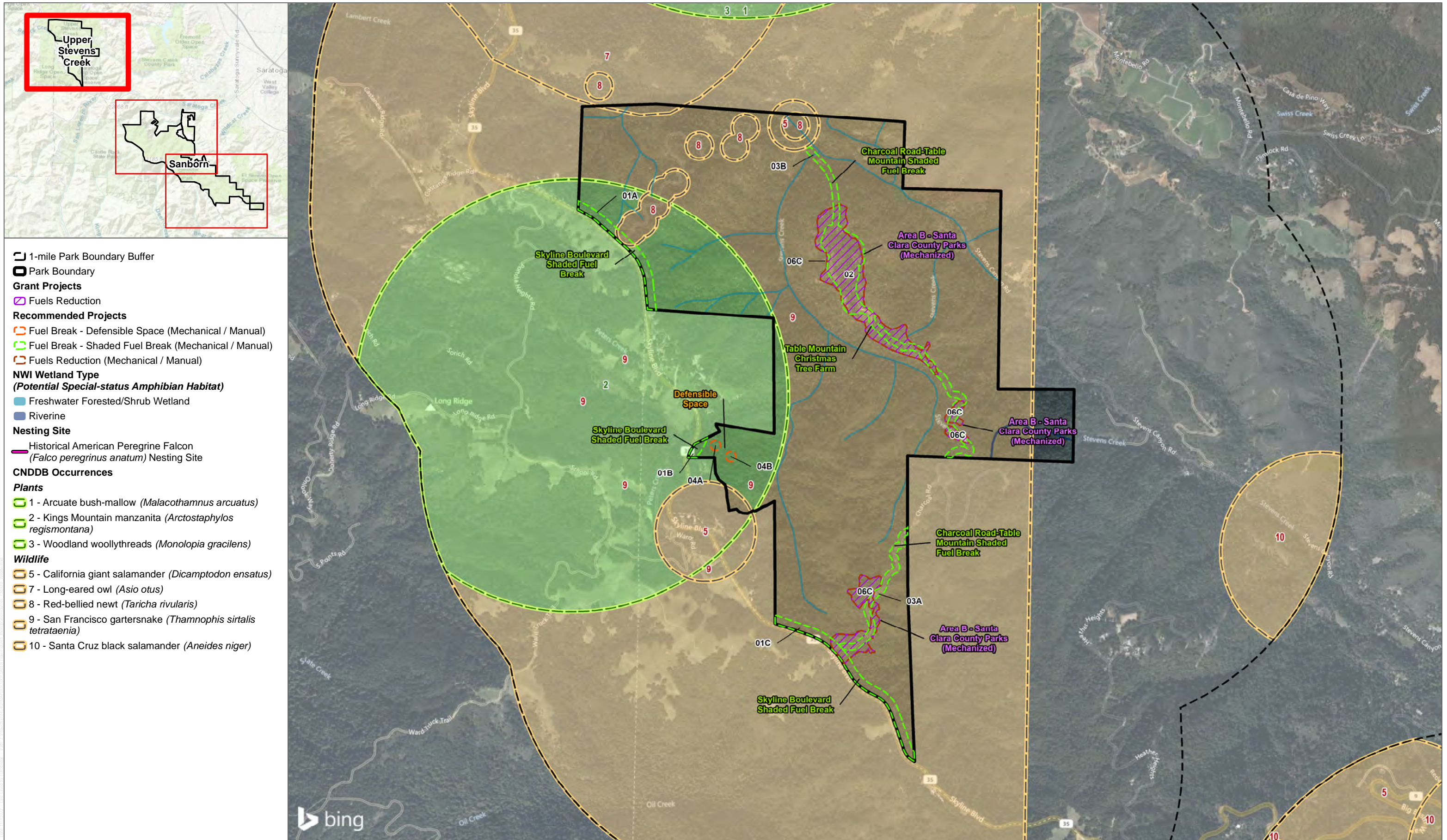


SOURCE: Bing Maps 2021, Santa Clara County 2022



FIGURE 4-3

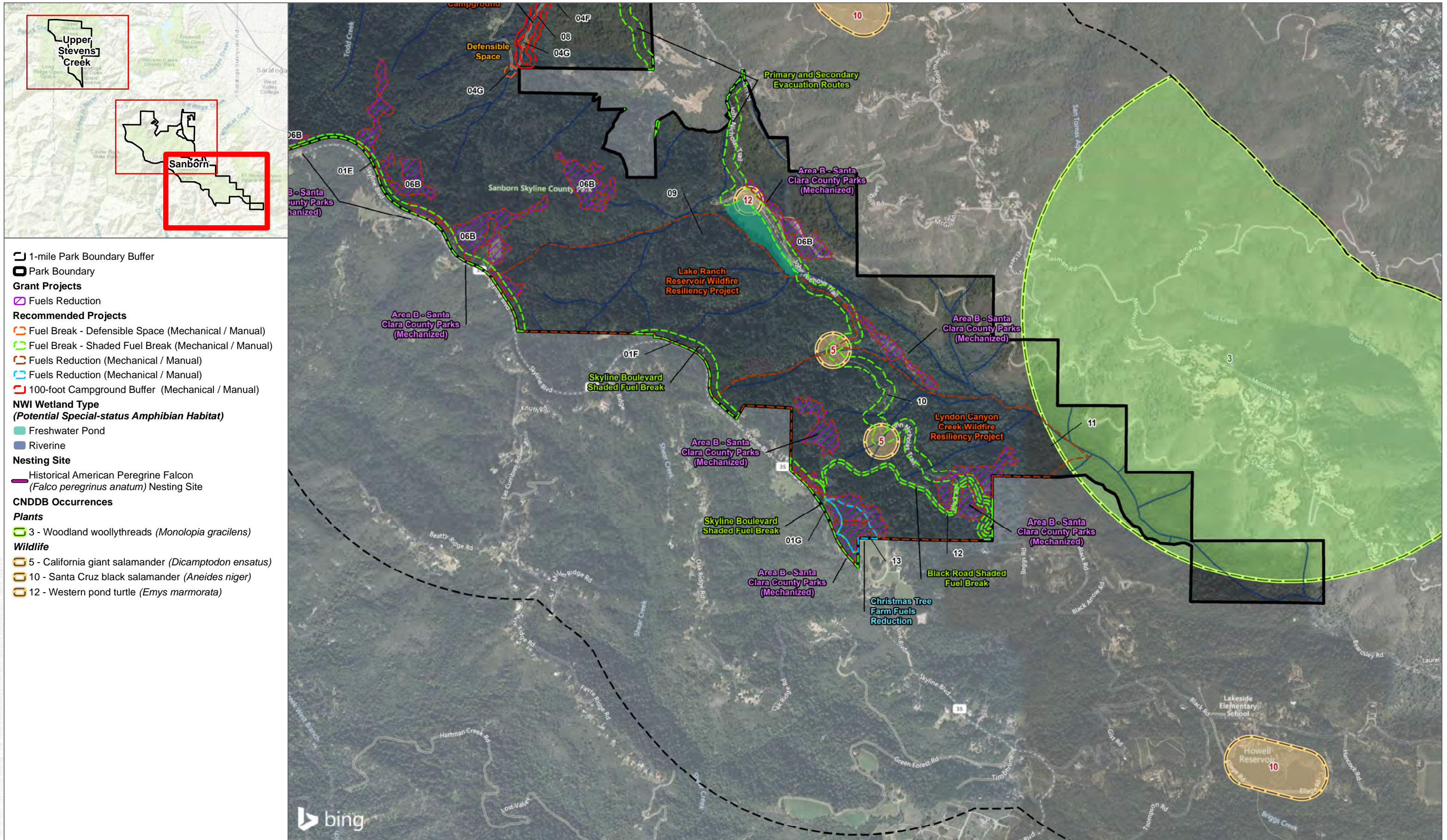
Vegetation Communities and Potentially Jurisdictional Aquatic Resources
 Biological Technical Memorandum, Sanborn and Upper Stevens Creek County Parks Forest Health Plan Project



SOURCE: Bing Maps 2021, Santa Clara County 2022



FIGURE 5-1



SOURCE: Bing Maps 2021, Santa Clara County 2022



FIGURE 5-3

Attachment A

Database Searches



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Castle Rock Ridge (3712221) OR Mindego Hill (3712232) OR Cupertino (3712231) OR Big Basin (3712222) OR Los Gatos (3712128)) AND Taxonomic Group (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Ambystoma californiense pop. 1</i> California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
<i>Aneides niger</i> Santa Cruz black salamander	AAAAD01070	None	None	G3	S3	SSC
<i>Anomobryum julaceum</i> slender silver moss	NBMUS80010	None	None	G5?	S2	4.2
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G4	S3	SSC
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Arctostaphylos andersonii</i> Anderson's manzanita	PDERI04030	None	None	G2	S2	1B.2
<i>Arctostaphylos glutinosa</i> Schreiber's manzanita	PDERI040G0	None	None	G1	S1	1B.2
<i>Arctostaphylos ohloneana</i> Ohlone manzanita	PDERI042Y0	None	None	G1	S1	1B.1
<i>Arctostaphylos regismontana</i> Kings Mountain manzanita	PDERI041C0	None	None	G2	S2	1B.2
<i>Arctostaphylos silvicola</i> Bonny Doon manzanita	PDERI041F0	None	None	G1	S1	1B.2
<i>Asio otus</i> long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	None	G2	S1S2	



Selected Elements by Scientific Name
 California Department of Fish and Wildlife
 California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Brachyramphus marmoratus</i> marbled murrelet	ABNNN06010	Threatened	Endangered	G3	S2	
<i>Calasellus californicus</i> An isopod	ICMAL34010	None	None	G2	S2	
<i>Calyptridium parryi</i> var. <i>hesseae</i> Santa Cruz Mountains pussypaws	PDPOR09052	None	None	G3G4T2	S2	1B.1
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i> Ben Lomond spineflower	PDPGN040M1	Endangered	None	G2T1	S1	1B.1
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
<i>Cirsium fontinale</i> var. <i>campylon</i> Mt. Hamilton thistle	PDAST2E163	None	None	G2T2	S2	1B.2
<i>Clarkia concinna</i> ssp. <i>automixa</i> Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
<i>Collinsia multicolor</i> San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
<i>Dicamptodon ensatus</i> California giant salamander	AAAAH01020	None	None	G2G3	S2S3	SSC
<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
<i>Dirca occidentalis</i> western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
<i>Dudleya abramsii</i> ssp. <i>setchellii</i> Santa Clara Valley dudleya	PDCRA040Z0	Endangered	None	G4T2	S2	1B.1
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Eriophyllum latilobum</i> San Mateo woolly sunflower	PDAST3N060	Endangered	Endangered	G1	S1	1B.1
<i>Falco peregrinus anatum</i> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<i>Fissidens pauperculus</i> minute pocket moss	NBMUS2W0U0	None	None	G3?	S2	1B.2



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Fritillaria liliacea</i> fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
<i>Grimmia torenii</i> Toren's grimmia	NBMUS32330	None	None	G2	S2	1B.3
<i>Grimmia vaginulata</i> vaginulate grimmia	NBMUS32340	None	None	G3	S1	1B.1
<i>Hesperovax sparsiflora var. brevifolia</i> short-leaved evax	PDASTE5011	None	None	G4T3	S3	1B.2
<i>Hesperocyparis abramsiana var. abramsiana</i> Santa Cruz cypress	PGCUP04081	Threatened	Endangered	G1T1	S1	1B.2
<i>Hesperocyparis abramsiana var. butanoensis</i> Butano Ridge cypress	PGCUP04082	Threatened	Endangered	G1T1	S1	1B.2
<i>Hoita strobilina</i> Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G3G4	S4	
<i>Legenere limosa</i> legenere	PDCAM0C010	None	None	G2	S2	1B.1
<i>Lessingia micradenia var. glabrata</i> smooth lessingia	PDAST5S062	None	None	G2T2	S2	1B.2
<i>Malacothamnus arcuatus</i> arcuate bush-mallow	PDMAL0Q0E0	None	None	G2Q	S2	1B.2
<i>Monolopia gracilens</i> woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
<i>Myotis yumanensis</i> Yuma myotis	AMACC01020	None	None	G5	S4	
<i>N. Central Coast Calif. Roach/Stickleback/Steelhead Stream</i> N. Central Coast Calif. Roach/Stickleback/Steelhead Stream	CARA2633CA	None	None	GNR	SNR	
<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
<i>North Central Coast Drainage Sacramento Sucker/Roach River</i> North Central Coast Drainage Sacramento Sucker/Roach River	CARA2623CA	None	None	GNR	SNR	
<i>North Central Coast Steelhead/Sculpin Stream</i> North Central Coast Steelhead/Sculpin Stream	CARA2637CA	None	None	GNR	SNR	
<i>Northern Interior Cypress Forest</i> Northern Interior Cypress Forest	CTT83220CA	None	None	G2	S2.2	
<i>Oncorhynchus kisutch pop. 4</i> coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G5T2Q	S2	
<i>Oncorhynchus mykiss irideus pop. 8</i> steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Orthotrichum kellmanii</i> Kellman's bristle moss	NBMUS56190	None	None	G1	S1	1B.2
<i>Pandion haliaetus</i> osprey	ABNKC01010	None	None	G5	S4	WL
<i>Pedicularis dudleyi</i> Dudley's lousewort	PDSCR1K180	None	Rare	G2	S2	1B.2
<i>Penstemon rattanii</i> var. <i>kleei</i> Santa Cruz Mountains beardtongue	PDSCR1L5B1	None	None	G4T2	S2	1B.2
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
<i>Piperia candida</i> white-flowered rein orchid	PMORC1X050	None	None	G3	S3	1B.2
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
<i>Plagiobothrys glaber</i> hairless popcornflower	PDBOR0V0B0	None	None	GX	SX	1A
<i>Progne subis</i> purple martin	ABPAU01010	None	None	G5	S3	SSC
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<i>Sanicula saxatilis</i> rock sanicle	PDAP11Z0H0	None	Rare	G2	S2	1B.2
<i>Senecio aphanactis</i> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<i>Speyeria adiate adiate</i> unsilvered fritillary	IILEPJ6143	None	None	G1G2T1	S1	
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	PDAST6E050	None	None	G2	S2	1B.2
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
<i>Taricha rivularis</i> red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Thamnophis sirtalis tetrataenia</i> San Francisco gartersnake	ARADB3613B	Endangered	Endangered	G5T2Q	S2	FP
<i>Trifolium buckwestiorum</i> Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Trifolium polyodon</i> Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
<i>Trimerotropis infantilis</i> Zayante band-winged grasshopper	IIORT36030	Endangered	None	G1	S1	
<i>Usnea longissima</i> Methuselah's beard lichen	NLLEC5P420	None	None	G4	S4	4.2

Record Count: 81

CNPS Rare Plant Inventory



Search Results

60 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3712221:3712232:3712231:3712222:3712128]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	GENERAL HABITATS	MICRO HABITATS	LOWEST ELEVATION (M)	HIGHEST ELEVATION (M)	LOWEST ELEVATION (FT)	HIGHEST ELEVATION (FT)	CA ENDEMIC	DATE ADDED
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	Cismontane woodland, Coastal bluff scrub, Valley and foothill grassland		3	500	10	1640	Yes	1974-01-01
Anomobryum julaceum	slender silver moss	Bryaceae	moss		None	None	G5?	S2	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	Roadsides (usually)	100	1000	330	3280		2001-01-01
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	None	None	G4	S4	4.3	Broadleafed upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub	Rocky	3	1100	10	3610	Yes	1974-01-01
Arctostaphylos andersonii	Anderson's manzanita	Ericaceae	perennial evergreen shrub	Nov-May	None	None	G2	S2	1B.2	Broadleafed upland forest, Chaparral, North Coast coniferous forest	Edges, Openings	60	760	195	2495	Yes	1974-01-01
Arctostaphylos glutinosa	Schreiber's manzanita	Ericaceae	perennial evergreen shrub	Mar-Apr(Nov)	None	None	G1	S1	1B.2	Chaparral, Closed-cone coniferous forest		170	685	560	2245	Yes	1974-01-01
Arctostaphylos ohloneana	Ohlone manzanita	Ericaceae	evergreen shrub	Feb-Mar	None	None	G1	S1	1B.1	Closed-cone coniferous forest, Coastal scrub		450	530	1475	1740	Yes	2009-04-02
Arctostaphylos regismontana	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	None	None	G2	S2	1B.2	Broadleafed upland forest, Chaparral, North Coast coniferous forest	Granitic, Sandstone	305	730	1000	2395	Yes	1994-01-01
Arctostaphylos silvicola	Bonny Doon manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	None	None	G1	S1	1B.2	Chaparral, Closed-cone coniferous forest, Lower montane coniferous forest		120	600	395	1970	Yes	1974-01-01

<u>Calandrinia breweri</u>	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	None	None	G4	S4	4.2	Chaparral, Coastal scrub	Burned areas, Disturbed areas, Loam (sometimes), Sandy (sometimes)	10	1220	35	4005		1994-01-01
<u>Calyptridium parryi var. hesseae</u>	Santa Cruz Mountains pussypaws	Montiaceae	annual herb	May-Aug	None	None	G3G4T2	S2	1B.1	Chaparral, Cismontane woodland	Gravelly (sometimes), Openings, Sandy (sometimes)	305	1530	1000	5020	Yes	1984-01-01
<u>Centromadia parryi ssp. congdonii</u>	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	None	None	G3T1T2	S1S2	1B.1	Valley and foothill grassland		0	230	0	755	Yes	1994-01-01
<u>Chorizanthe pungens var. hartwegiana</u>	Ben Lomond spineflower	Polygonaceae	annual herb	Apr-Jul	FE	None	G2T1	S1	1B.1	Lower montane coniferous forest		90	610	295	2000	Yes	1994-01-01
<u>Chorizanthe robusta var. robusta</u>	robust spineflower	Polygonaceae	annual herb	Apr-Sep	FE	None	G2T1	S1	1B.1	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub	Gravelly (sometimes), Sandy (sometimes)	3	300	10	985	Yes	1980-01-01
<u>Cirsium fontinale var. campylon</u>	Mt. Hamilton thistle	Asteraceae	perennial herb	(Feb)Apr-Oct	None	None	G2T2	S2	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland	Seeps, Serpentinite	100	890	330	2920	Yes	1974-01-01
<u>Clarkia breweri</u>	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	None	None	G4	S4	4.2	Chaparral, Cismontane woodland, Coastal scrub	Serpentinite (often)	215	1115	705	3660	Yes	1974-01-01
<u>Clarkia concinna ssp. automixa</u>	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May-Jun(Jul)	None	None	G5?T3	S3	4.3	Chaparral, Cismontane woodland		90	1500	295	4920	Yes	1994-01-01
<u>Clarkia lewisii</u>	Lewis' clarkia	Onagraceae	annual herb	May-Jul	None	None	G4	S4	4.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Closed-cone coniferous forest, Coastal scrub		30	1195	100	3920	Yes	1980-01-01
<u>Collinsia multicolor</u>	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	None	None	G2	S2	1B.2	Closed-cone coniferous forest, Coastal scrub	Serpentinite (sometimes)	30	275	100	900	Yes	1974-01-01
<u>Cypripedium fasciculatum</u>	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None	G4	S4	4.2	Lower montane coniferous forest, North Coast coniferous forest	Seeps (usually), Serpentinite (usually), Streambanks	100	2435	330	7990		1980-01-01

<i>Dirca occidentalis</i>	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	None	None	G2	S2	1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, Closed-cone coniferous forest, North Coast coniferous forest, Riparian forest, Riparian woodland	Mesic	25	425	80	1395	Yes	1974-01-01
<i>Dudleya abramsii ssp. setchellii</i>	Santa Clara Valley dudleya	Crassulaceae	perennial herb	Apr-Oct	FE	None	G4T2	S2	1B.1	Cismontane woodland, Valley and foothill grassland	Rocky, Serpentinite	60	535	195	1755	Yes	1988-01-01
<i>Eriophyllum latilobum</i>	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	FE	CE	G1	S1	1B.1	Cismontane woodland, Coastal scrub, Lower montane coniferous forest		45	330	150	1085	Yes	1974-01-01
<i>Erysimum franciscanum</i>	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	None	None	G3	S3	4.2	Chaparral, Coastal dunes, Coastal scrub, Valley and foothill grassland	Granitic (often), Roadsides (sometimes), Serpentinite (often)	0	550	0	1805	Yes	1974-01-01
<i>Fissidens pauperculus</i>	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2	North Coast coniferous forest		10	1024	35	3360		2001-01-01
<i>Fritillaria liliacea</i>	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	Cismontane woodland, Coastal prairie, Coastal scrub, Valley and foothill grassland	Serpentinite (often)	3	410	10	1345	Yes	1974-01-01
<i>Galium andrewsii ssp. gatense</i>	phlox-leaf serpentine bedstraw	Rubiaceae	perennial herb	Apr-Jul	None	None	G5T3	S3	4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	Rocky, Serpentinite	150	1450	490	4755	Yes	1994-01-01
<i>Grimmia torenii</i>	Toren's grimmia	Grimmiaceae	moss		None	None	G2	S2	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	Carbonate, Openings, Rocky, Volcanic	325	1160	1065	3805	Yes	2014-05-14
<i>Grimmia vaginulata</i>	vaginulate grimmia	Grimmiaceae	moss		None	None	G3	S1	1B.1	Chaparral	Carbonate, Rocky	685	685	2245	2245		2014-05-14
<i>Hesperevax sparsiflora var. brevifolia</i>	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie		0	215	0	705		1994-01-01

<u><i>Hesperocyparis abramsiana</i></u> var. <u><i>abramsiana</i></u>	Santa Cruz cypress	Cupressaceae	perennial evergreen tree		FT	CE	G1T1	S1	1B.2	Chaparral, Closed-cone coniferous forest, Lower montane coniferous forest	Granitic (sometimes), Sandstone (sometimes)	280	800	920	2625	Yes	1974-01-01
<u><i>Hesperocyparis abramsiana</i></u> var. <u><i>butanoensis</i></u>	Butano Ridge cypress	Cupressaceae	perennial evergreen tree	Oct	FT	CE	G1T1	S1	1B.2	Chaparral, Closed-cone coniferous forest, Lower montane coniferous forest	Sandstone	400	490	1310	1610	Yes	2011-12-19
<u><i>Hoita strobilina</i></u>	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-Oct)	None	None	G2?	S2?	1B.1	Chaparral, Cismontane woodland, Riparian woodland	Mesic, Serpentinite (usually)	30	860	100	2820	Yes	2001-01-01
<u><i>Hosackia gracilis</i></u>	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2	Broadleaved upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland	Roadsides	0	700	0	2295		2004-01-01
<u><i>Iris longipetala</i></u>	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2	Coastal prairie, Lower montane coniferous forest, Meadows and seeps	Mesic	0	600	0	1970	Yes	2006-10-12
<u><i>Legenere limosa</i></u>	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	Vernal pools		1	880	5	2885	Yes	1974-01-01
<u><i>Leptosiphon acicularis</i></u>	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland		55	1500	180	4920	Yes	1994-01-01

<i>Leptosiphon ambiguus</i>	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	Cismontane woodland, Coastal scrub, Valley and foothill grassland	Serpentinite (usually)	120	1130	395	3710	Yes	1994-01-01
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	None	None	G3G4	S3S4	4.2	Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland	Sandy (usually)	5	1220	15	4005	Yes	1994-01-01
<i>Lessingia hololeuca</i>	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3	Broadleafed upland forest, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland	Clay, Serpentinite	15	305	50	1000	Yes	1994-01-01
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	Asteraceae	annual herb	(Apr-Jun)Jul-Nov	None	None	G2T2	S2	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland	Roadsides (often), Serpentinite	120	420	395	1380	Yes	1994-01-01
<i>Lessingia tenuis</i>	spring lessingia	Asteraceae	annual herb	May-Jul	None	None	G4	S4	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	Openings	300	2150	985	7055	Yes	1974-01-01
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	Malvaceae	perennial deciduous shrub	Apr-Sep	None	None	G2Q	S2	1B.2	Chaparral, Cismontane woodland		15	355	50	1165	Yes	1974-01-01
<i>Monolopia gracilens</i>	woodland woollythreads	Asteraceae	annual herb	(Feb)Mar-Jul	None	None	G3	S3	1B.2	Broadleafed upland forest, Chaparral, Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland	Serpentinite	100	1200	330	3935	Yes	2010-04-06
<i>Orthotrichum kellmanii</i>	Kellman's bristle moss	Orthotrichaceae	moss	Jan-Feb	None	None	G1	S1	1B.2	Chaparral, Cismontane woodland	Carbonate Sandstone	343	685	1125	2245	Yes	2007-08-16

<u><i>Pedicularis dudleyi</i></u>	Dudley's lousewort	Orobanchaceae	perennial herb	Apr-Jun	None	CR	G2	S2	1B.2	Chaparral, Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland	60	900	195	2955	Yes	1974-01-01
<u><i>Penstemon rattanii</i></u> var. <u><i>kleei</i></u>	Santa Cruz Mountains beardtongue	Plantaginaceae	perennial herb	May-Jun	None	None	G4T2	S2	1B.2	Chaparral, Lower montane coniferous forest, North Coast coniferous forest	400	1100	1310	3610	Yes	1984-01-01
<u><i>Pentachaeta bellidiflora</i></u>	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	Cismontane woodland, Valley and foothill grassland	35	620	115	2035	Yes	1974-01-01
<u><i>Piperia candida</i></u>	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar)May-Sep	None	None	G3	S3	1B.2	Broadleaved upland forest, Lower montane coniferous forest, North Coast coniferous forest	30	1310	100	4300		1994-01-01
<u><i>Plagiobothrys chorisianus</i></u> var. <u><i>chorisianus</i></u>	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	None	None	G3T1Q	S1	1B.2	Chaparral, Coastal prairie, Coastal scrub	3	160	10	525	Yes	1984-01-01
<u><i>Plagiobothrys chorisianus</i></u> var. <u><i>hickmanii</i></u>	Hickman's popcornflower	Boraginaceae	annual herb	Apr-Jun	None	None	G3T3Q	S3	4.2	Chaparral, Closed-cone coniferous forest, Coastal scrub, Marshes and swamps, Vernal pools	15	390	50	1280	Yes	2001-01-01
<u><i>Plagiobothrys glaber</i></u>	hairless popcornflower	Boraginaceae	annual herb	Mar-May	None	None	GX	SX	1A	Marshes and swamps, Meadows and seeps	15	180	50	590	Yes	1974-01-01
<u><i>Ranunculus lobbii</i></u>	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2	Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland, Vernal pools	15	470	50	1540		1974-01-01
<u><i>Sagittaria sanfordii</i></u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	Marshes and swamps	0	650	0	2135	Yes	1984-01-01

<u><i>Sanicula saxatilis</i></u>	rock sanicle	Apiaceae	perennial herb	Apr-May	None	CR	G2	S2	1B.2	Broadleafed upland forest, Chaparral, Valley and foothill grassland	Rocky, Scree, Talus	620	1175	2035	3855	Yes	1974-01-01
<u><i>Senecio aphanactis</i></u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2	Chaparral, Cismontane woodland, Coastal scrub	Alkaline (sometimes)	15	800	50	2625		1994-01-01
<u><i>Stebbinsoseris decipiens</i></u>	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.2	Broadleafed upland forest, Chaparral, Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Valley and foothill grassland	Openings, Serpentinite (sometimes)	10	500	35	1640	Yes	1974-01-01
<u><i>Streptanthus albidus ssp. peramoenus</i></u>	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)	None	None	G2T2	S2	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland	Serpentinite	95	1000	310	3280	Yes	1988-01-01
<u><i>Trifolium buckwestiorum</i></u>	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.1	Broadleafed upland forest, Cismontane woodland, Coastal prairie	Gravelly	105	610	345	2000	Yes	1994-01-01
<u><i>Trifolium polyodon</i></u>	Pacific Grove clover	Fabaceae	annual herb	Apr-Jun(Jul)	None	CR	G1	S1	1B.1	Closed-cone coniferous forest, Coastal prairie, Meadows and seeps, Valley and foothill grassland	Granitic (sometimes), Mesic	5	425	15	1395	Yes	1974-01-01
<u><i>Usnea longissima</i></u>	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G4	S4	4.2	Broadleafed upland forest, North Coast coniferous forest		50	1460	165	4790		2014-03-01

Showing 1 to 60 of 60 entries

Suggested Citation:California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website <https://www.rareplants.cnps.org> [accessed 1 June 2022].**CONTACT US**Send questions and comments to rareplants@cnps.org.**ABOUT THIS WEBSITE**

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CONTRIBUTORS

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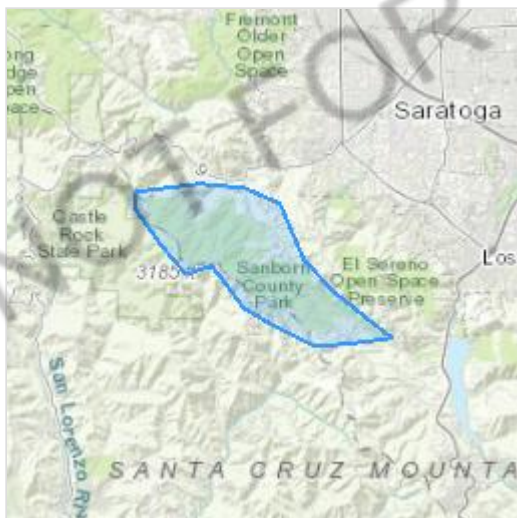
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Santa Clara and Santa Cruz counties, California



Local offices

Ventura Fish And Wildlife Office

☎ (805) 644-1766

📅 (805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

<https://www.fws.gov/verobeach/>

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
<p>California Least Tern <i>Sterna antillarum browni</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104</p>	Endangered
<p>Least Bell's Vireo <i>Vireo bellii pusillus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5945</p>	Endangered
<p>Marbled Murrelet <i>Brachyramphus marmoratus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/4467</p>	Threatened
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6749</p>	Endangered

Reptiles

NAME	STATUS
<p>San Francisco Garter Snake <i>Thamnophis sirtalis tetrataenia</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5956</p>	Endangered

Amphibians

NAME	STATUS
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California Red-legged Frog *Rana draytonii* Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/2891>

California Tiger Salamander *Ambystoma californiense* Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/2076>

Foothill Yellow-legged Frog *Rana boylei* Proposed Threatened

No critical habitat has been designated for this species.

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus* Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/321>

Tidewater Goby *Eucyclogobius newberryi* Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/57>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus* Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Zayante Band-winged Grasshopper *Trimerotropis infantilis* Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/1036>

Flowering Plants

NAME	STATUS
<p>Ben Lomond Spineflower <i>Chorizanthe pungens</i> var. hartwegiana Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7498</p>	Endangered
<p>Ben Lomond Wallflower <i>Erysimum teretifolium</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7429</p>	Endangered
<p>Marsh Sandwort <i>Arenaria paludicola</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229</p>	Endangered
<p>Scotts Valley Polygonum <i>Polygonum hickmanii</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3222</p>	Endangered
<p>Scotts Valley Spineflower <i>Chorizanthe robusta</i> var. hartwegii Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7108</p>	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
<p>Marbled Murrelet <i>Brachyramphus marmoratus</i> https://ecos.fws.gov/ecp/species/4467#crithab</p>	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A
BREEDING SEASON IS
INDICATED FOR A BIRD ON
YOUR LIST, THE BIRD MAY

BREED IN YOUR PROJECT AREA
SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH
IS A VERY LIBERAL ESTIMATE
OF THE DATES INSIDE WHICH
THE BIRD BREEDS ACROSS ITS
ENTIRE RANGE. "BREEDS
ELSEWHERE" INDICATES THAT
THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT
AREA.)

Allen's Hummingbird *Selasphorus sasin*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9637>

Breeds Feb 1 to Jul 15

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

Black Swift *Cypseloides niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8878>

Breeds Jun 15 to Sep 10

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Clark's Grebe *Aechmophorus clarkii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jun 1 to Aug 31

Common Yellowthroat *Geothlypis trichas sinuosa*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Breeds May 20 to Jul 31

Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Long-eared Owl <i>asio otus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Wrentit <i>Chamaea fasciata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Yellow-billed Magpie *Pica nuttalli*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

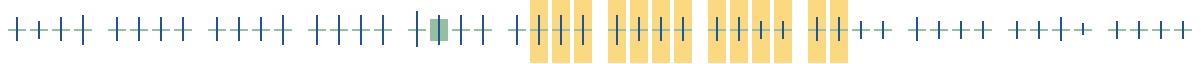
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



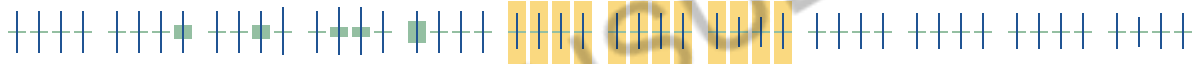
Black Swift
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)



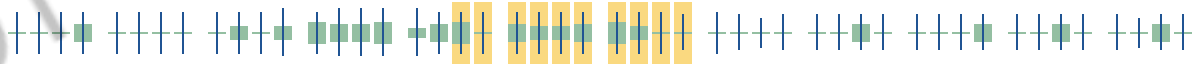
California
 Thrasher
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)



Clark's Grebe
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)

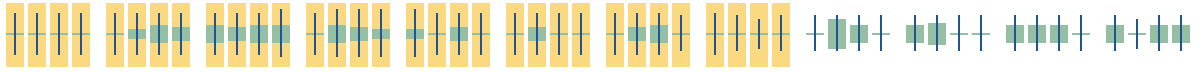


Common
 Yellowthroat
 BCC - BCR (This
 is a Bird of
 Conservation
 Concern (BCC)
 only in
 particular Bird
 Conservation
 Regions (BCRs)
 in the
 continental
 USA)



NOT FOR CONSULTATION

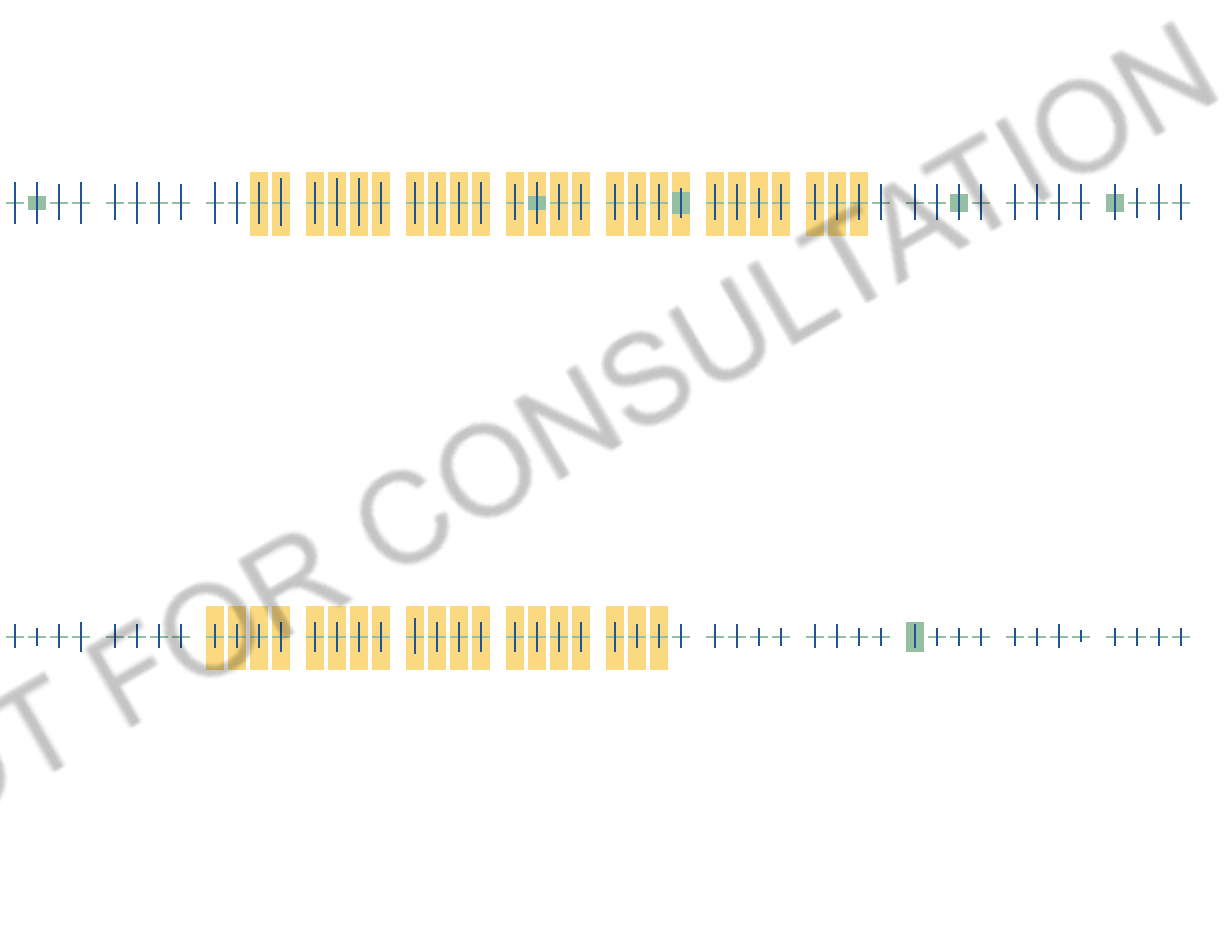
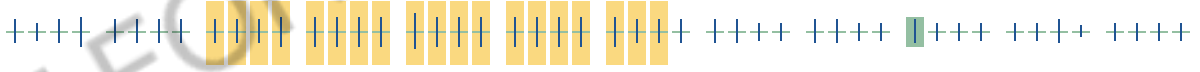
Golden Eagle
 Non-BCC
 Vulnerable
 (This is not a
 Bird of
 Conservation
 Concern (BCC)
 in this area, but
 warrants
 attention
 because of the
 Eagle Act or for
 potential
 susceptibilities
 in offshore
 areas from
 certain types of
 development
 or activities.)



Lawrence's
 Goldfinch
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)



Long-eared
 Owl
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)



Marbled Godwit ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++

BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

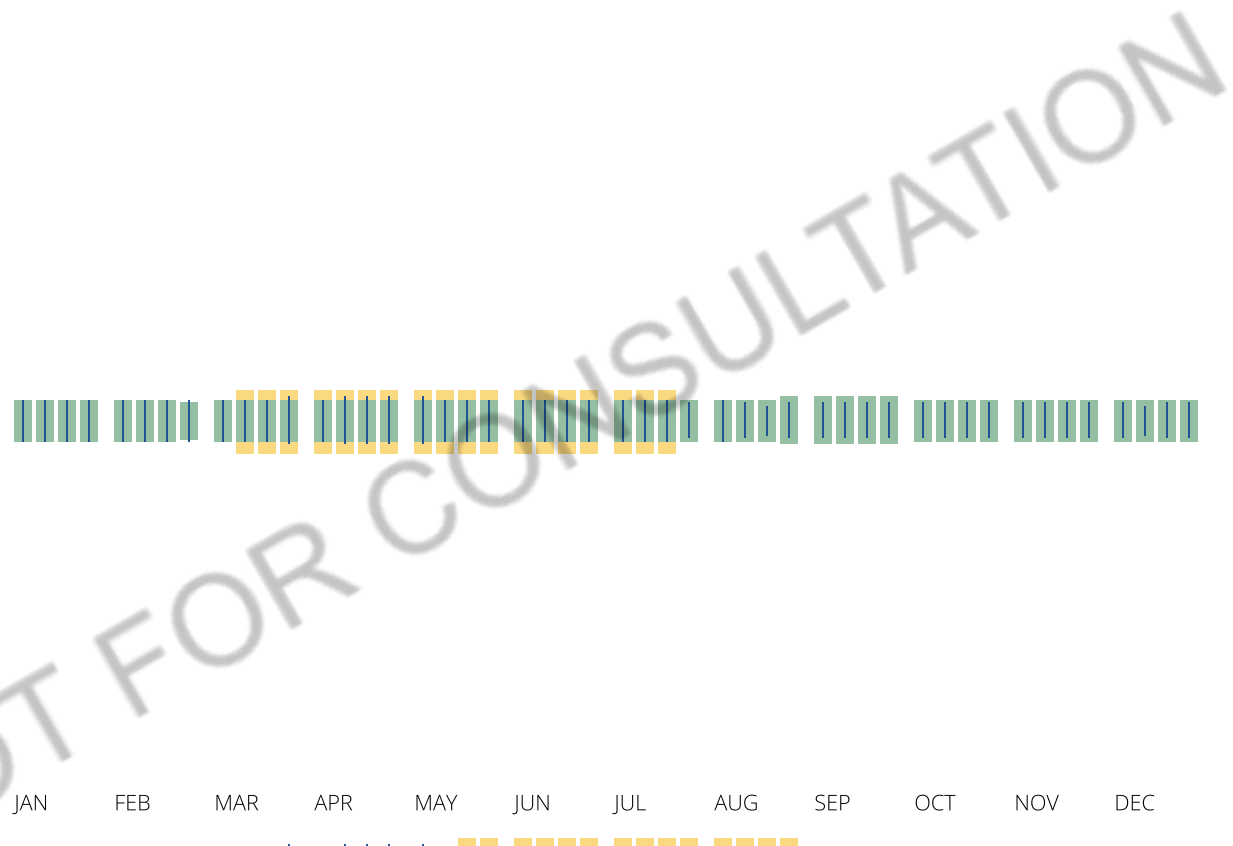
Oak Titmouse ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++

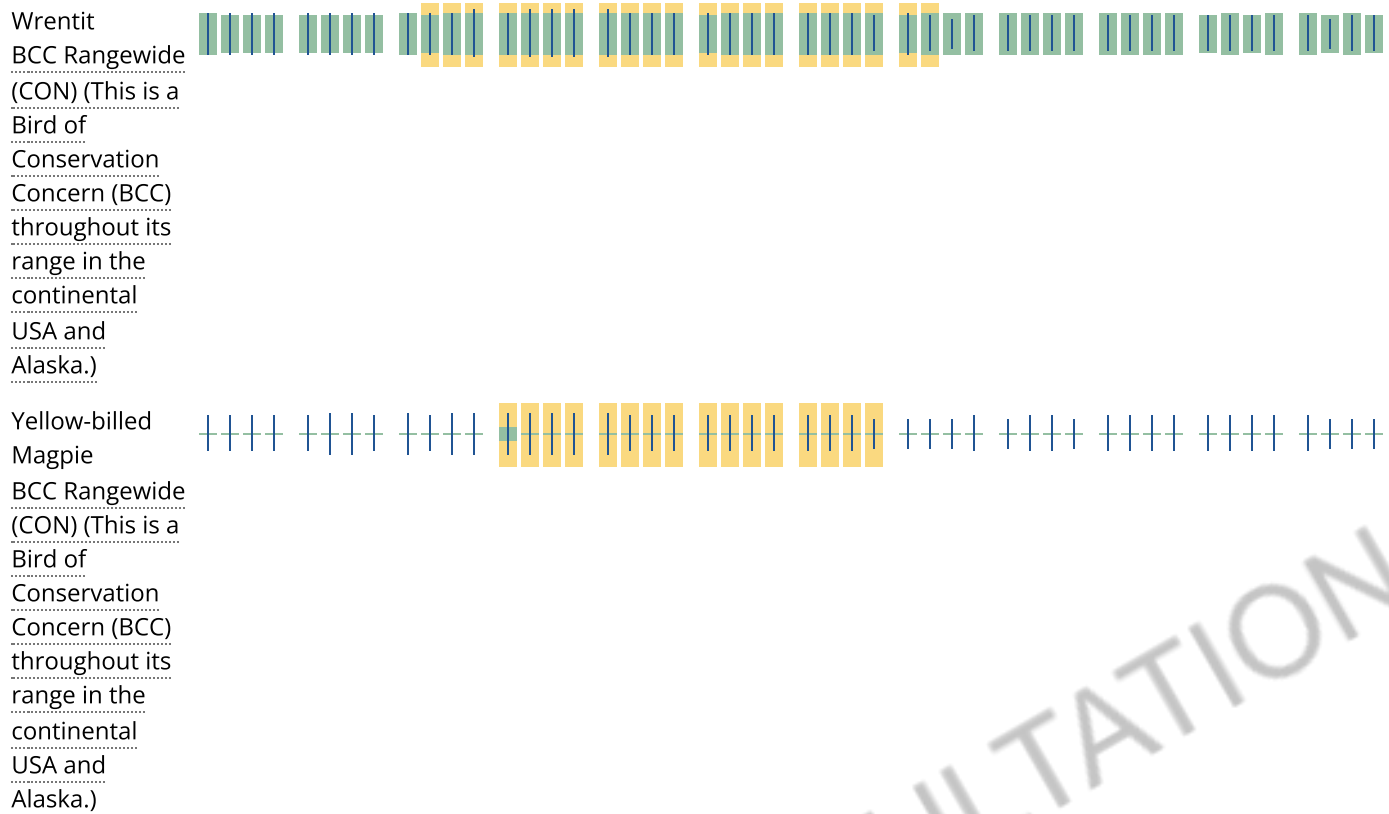
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Olive-sided Flycatcher ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++ ++++++

BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[Palustrine](#)

RIVERINE

[Riverine](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should

seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

2493 Portola Road, Suite B
Ventura, CA 93003-7726

<https://www.fws.gov/verobeach/>

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
<p>California Clapper Rail <i>Rallus longirostris obsoletus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240</p>	Endangered
<p>California Least Tern <i>Sterna antillarum browni</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104</p>	Endangered
<p>Least Bell's Vireo <i>Vireo bellii pusillus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5945</p>	Endangered
<p>Marbled Murrelet <i>Brachyramphus marmoratus</i> There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/4467</p>	Threatened
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6749</p>	Endangered

Reptiles

NAME	STATUS
<p>Green Sea Turtle <i>Chelonia mydas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199</p>	Threatened

San Francisco Garter Snake *Thamnophis sirtalis tetrataenia* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/5956>

Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

California Tiger Salamander *Ambystoma californiense*

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/2076>

Foothill Yellow-legged Frog *Rana boylei*

Proposed Threatened

No critical habitat has been designated for this species.

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/321>

Tidewater Goby *Eucyclogobius newberryi*

Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/57>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus* **Candidate**
 Wherever found
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/9743>

Zayante Band-winged Grasshopper *Trimerotropis infantilis* **Endangered**
 Wherever found
 There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/1036>

Flowering Plants

NAME	STATUS
<p>Ben Lomond Spineflower <i>Chorizanthe pungens</i> var. <i>hartwegiana</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7498</p>	Endangered
<p>Ben Lomond Wallflower <i>Erysimum teretifolium</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7429</p>	Endangered
<p>Marsh Sandwort <i>Arenaria paludicola</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229</p>	Endangered
<p>San Mateo Woolly Sunflower <i>Eriophyllum latilobum</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7791</p>	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
------	------

California Red-legged Frog *Rana draytonii*
<https://ecos.fws.gov/ecp/species/2891#crithab>

Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird *Selasphorus sasin*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9637>

Breeds Feb 1 to Jul 15

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

Black Swift *Cypseloides niger*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8878>

Breeds Jun 15 to Sep 10

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Common Yellowthroat *Geothlypis trichas sinuosa*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Breeds May 20 to Jul 31

<p>Golden Eagle <i>Aquila chrysaetos</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p>https://ecos.fws.gov/ecp/species/1680</p>	Breeds Jan 1 to Aug 31
<p>Lawrence's Goldfinch <i>Carduelis lawrencei</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9464</p>	Breeds Mar 20 to Sep 20
<p>Long-eared Owl <i>asio otus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/3631</p>	Breeds Mar 1 to Jul 15
<p>Nuttall's Woodpecker <i>Picoides nuttallii</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> <p>https://ecos.fws.gov/ecp/species/9410</p>	Breeds Apr 1 to Jul 20
<p>Oak Titmouse <i>Baeolophus inornatus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9656</p>	Breeds Mar 15 to Jul 15
<p>Olive-sided Flycatcher <i>Contopus cooperi</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/3914</p>	Breeds May 20 to Aug 31
<p>Wrentit <i>Chamaea fasciata</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

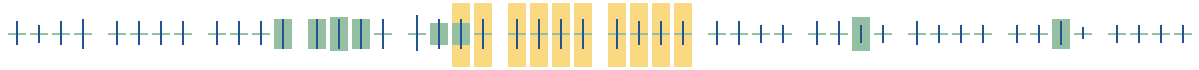


NOT FOR CONSULTATION

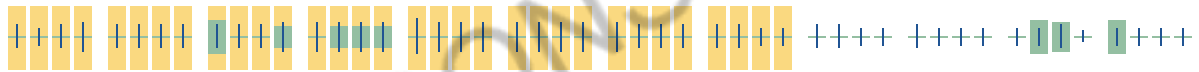
California Thrasher
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Common Yellowthroat
 BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Golden Eagle
 Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



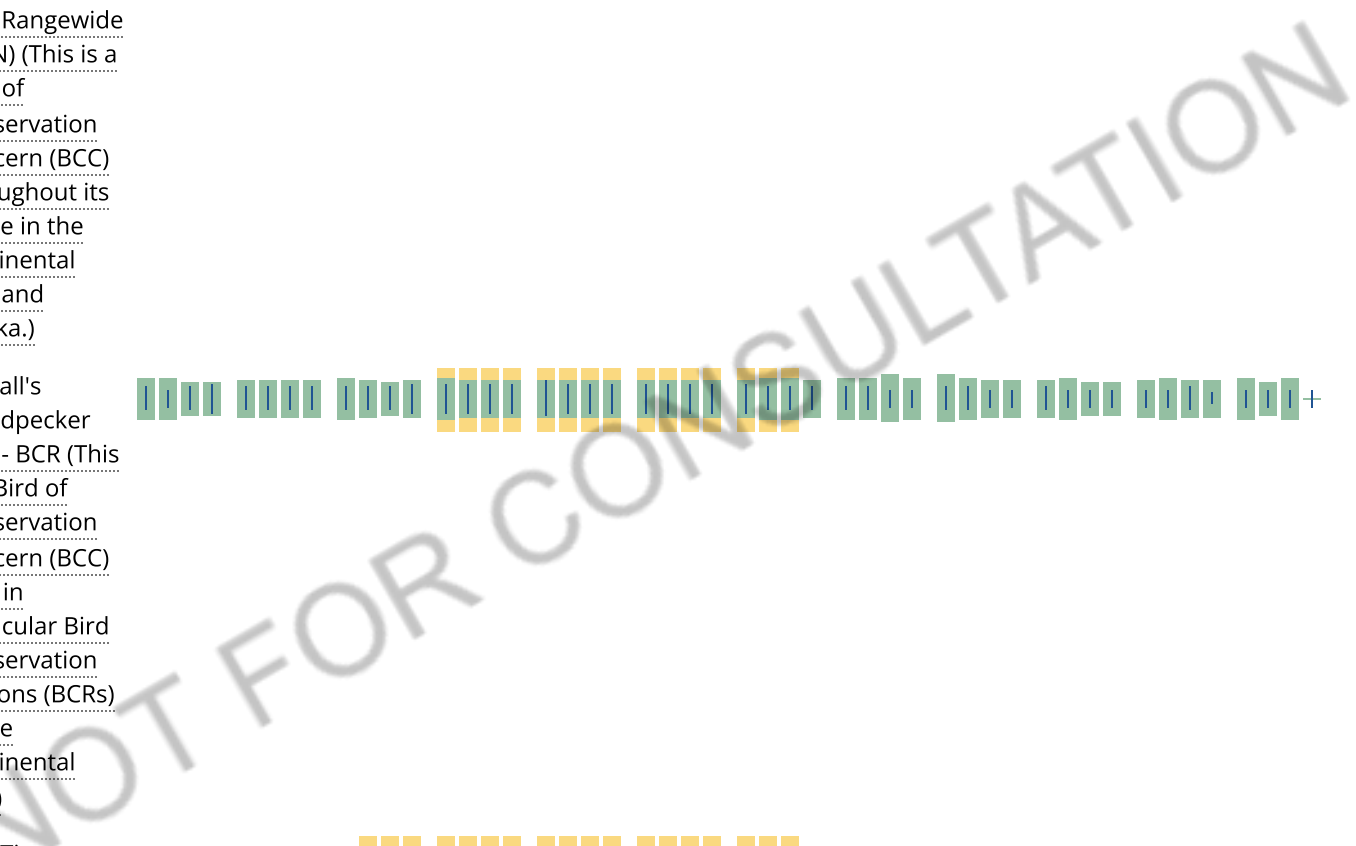
NOT FOR CONSULTATION

Lawrence's Goldfinch
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-eared Owl
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
 BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Olive-sided
Flycatcher
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



Wrentit
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[Palustrine](#)

RIVERINE

[Riverine](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should

seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Attachment B

Special-Status Plant Species Potential to Occur

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	None/None/1B.2	Cismontane woodland, coastal bluff scrub, valley and foothill grassland/annual herb/Mar-June/10-1,640	Low potential to occur. The woodland on site provides potentially suitable habitat for this species. There is one previously documented occurrence located northeast of Lexington Reservoir approximately 2 miles east of Sanborn County Park (CDFW 2022).
<i>Arctostaphylos andersonii</i>	Anderson's manzanita	None/None/1B.2	Broadleafed upland forest, chaparral, North Coast coniferous forest; edges, openings/perennial evergreen shrub/Nov-May/195-2,490	Moderate potential to occur. Forest and chaparral on site provide suitable habitat for this species. There are numerous documented occurrences within the Big Basin U.S. Geological Survey 7.5-minute quad, the closest of which is a historical occurrence along Highway 9 approximately 1.5 miles east of Upper Stevens Creek County Park (CDFW 2022).
<i>Arctostaphylos glutinosa</i>	Schreiber's manzanita	None/None/1B.2	Chaparral, closed-cone coniferous forest/perennial evergreen shrub/Mar-Apr(Nov)/560-2,245	Not expected to occur. Although the chaparral and forest provide potentially suitable habitat, there are no suitable soils on site. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Arctostaphylos ohloneana</i>	Ohlone manzanita	None/None/1B.1	Closed-cone coniferous forest, coastal scrub/evergreen shrub/ Feb-Mar/1,475-1,735	Not expected to occur. Although the forest provides potentially suitable habitat, there are no suitable soils on site. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Arctostaphylos regismontana</i>	Kings Mountain manzanita	None/None/1B.2	Broadleafed upland forest, chaparral, North Coast coniferous forest; granitic, sandstone/perennial evergreen shrub/Dec-Apr/ 1,000-2,395	High potential to occur. The forest and chaparral on site provide suitable habitat for this species. This species has been previously documented in Upper Stevens Creek County Park, but the occurrence was observed in the 1920s (CDFW 2022).
<i>Arctostaphylos silvicola</i>	Bonny Doon manzanita	None/None/1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest/perennial evergreen shrub/Jan-Mar/395-1,965	Not expected to occur. The site does not contain any suitable sandy inland marine soils.
<i>Arenaria paludicola</i>	marsh sandwort	FE/SE/1B.1	Marshes and swamps; openings, sandy/perennial stoloniferous herb/May-Aug/10-560	Not expected to occur. The site is outside of the species' known elevation range.
<i>Calyptidium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws	None/None/1B.1	Chaparral, cismontane woodland; gravelly (sometimes), openings, sandy (sometimes)/annual herb/May-Aug/1,000-5,015	Not expected to occur. Although the chaparral and woodland on site provide potentially suitable habitat for this species, sandy or gravelly soils are limited. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	None/None/1B.1	Valley and foothill grassland/annual herb/May-Oct(Nov)/0-755	Not expected to occur. The site is outside of the species' known elevation range.
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	Ben Lomond spineflower	FE/None/1B.1	Lower montane coniferous forest/annual herb/Apr-July/ 295-2,000	Not expected to occur. There are no suitable sandhill soils on site. The site is outside the known geographic range of this species.
<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	Scotts Valley spineflower	FE/None/1B.1	Meadows and seeps, valley and foothill grassland/annual herb/ Apr-July/755-805	Not expected to occur. The site is outside of the species' known elevation range.
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	FE/None/1B.1	Chaparral, cismontane woodland, coastal dunes, coastal scrub; gravelly (sometimes), sandy (sometimes)/annual herb/ Apr-Sep/10-985	Not expected to occur. Although the chaparral and woodland on site provide potentially suitable habitat for this species, serpentine soils are absent. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton thistle	None/None/1B.2	Chaparral, cismontane woodland, valley and foothill grassland; seeps, serpentinite/perennial herb/(Feb)Apr-Oct/330-2,915	Not expected to occur. The site is outside of the species' known geographic range and there are no serpentine soils present.
<i>Collinsia multicolor</i>	San Francisco collinsia	None/None/1B.2	Closed-cone coniferous forest, coastal scrub; serpentinite (sometimes)/annual herb/(Feb)Mar-May/100-900	Not expected to occur. Suitable habitat and soils for this species are absent.
<i>Dirca occidentalis</i>	western leatherwood	None/None/1B.2	Broadleafed upland forest, chaparral, cismontane woodland, closed-cone coniferous forest, North Coast coniferous forest, riparian forest, riparian woodland; mesic/perennial deciduous shrub/Jan-Mar(Apr)/80-1,390	High potential to occur. The forest, chaparral, and woodland habitat on site provide suitable habitat for this species. There are numerous documented occurrences of this species within Santa Clara County, the closest of which is along Stevens Creek Reservoir, approximately 2 miles east of Upper Stevens Creek County Park (CDFW 2022).
<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	Santa Clara Valley dudleya	FE/None/1B.1	Cismontane woodland, valley and foothill grassland; rocky, serpentinite/perennial herb/Apr-Oct/195-1,755	Not expected to occur. Although the woodland and grassland on site provide potentially suitable habitat for this species, there are no serpentine soils present. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Eriophyllum latilobum</i>	San Mateo woolly sunflower	FE/SE/1B.1	Cismontane woodland, coastal scrub, lower montane coniferous forest/perennial herb/May-June/150-1,080	Moderate potential to occur. The woodland and forest on site provide suitable habitat for this species. There is one previously documented occurrence along Skyline Boulevard, approximately 4 miles north of Upper Stevens Creek County Park (CDFW 2022).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Erysimum teretifolium</i>	Santa Cruz wallflower	FE/SE/1B.1	Chaparral, lower montane coniferous forest/perennial herb/ Mar-July/395-2,000	Not expected to occur. The site is outside of the species' known geographic range.
<i>Fissidens pauperculus</i>	minute pocket moss	None/None/1B.2	North Coast coniferous forest/moss//35-3,355	Moderate potential to occur. The forest on site provides potentially suitable habitat for this species. There is one previously documented occurrence approximately 1 mile west of Upper Steven's Creek County Park (CDFW 2022).
<i>Fritillaria liliacea</i>	fragrant fritillary	None/None/1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland; serpentinite (often)/perennial bulbiferous herb/ Feb-Apr/10-1,345	Not expected to occur. Although the woodland and grassland on site may provide potentially suitable habitat for this species, serpentine soils are not present. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Grimmia torenii</i>	Toren's grimmia	None/None/1B.3	Chaparral, cismontane woodland, lower montane coniferous forest; carbonate, openings, rocky, volcanic/moss//1,065-3,805	Not expected to occur. Although the chaparral, woodland, and forest on site provides potentially suitable habitat for this species, there are no serpentine soils present. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Grimmia vaginulata</i>	vaginulate grimmia	None/None/1B.1	Chaparral; carbonate, rocky/moss/2,245-2,245	Not expected to occur. Although rocky boulder and rock wall habitat is present within Sanborn County Park, this species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Hesperovax sparsiflora</i> var. <i>brevifolia</i>	short-leaved evax	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal prairie/annual herb/ Mar-June/0-705	Not expected to occur. The site is outside of the species' known elevation range.
<i>Hesperocyparis abramsiana</i> var. <i>abramsiana</i>	Santa Cruz cypress	FT/SE/1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest; granitic (sometimes), sandstone (sometimes)/perennial evergreen tree//920-2,620	Not expected to occur. Although the chaparral and forest on site may provide potentially suitable habitat for this species, it has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Hesperocyparis abramsiana</i> var. <i>butanoensis</i>	Butano Ridge cypress	FT/SE/1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest; sandstone/perennial evergreen tree/Oct/1,310-1,605	Not expected to occur. Although the chaparral and forest on site may provide potentially suitable habitat for this species, it has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Hoita strobilina</i>	Loma Prieta hoita	None/None/1B.1	Chaparral, cismontane woodland, riparian woodland; mesic, serpentinite (usually)/perennial herb/May-July(Aug-Oct)/ 100-2,820	Moderate potential to occur. The chaparral and woodland on site provide potentially suitable habitat, but serpentine soils are not present. There are numerous documented occurrences of this species within Santa Clara County, the closest of which is approximately 2 miles east of Sanborn County Park (CDFW 2022).
<i>Legenere limosa</i>	legenere	None/None/1B.1	Vernal pools/annual herb/Apr-June/5-2,885	Not expected to occur. No suitable vernal pool habitat present.
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	None/None/1B.2	Chaparral, cismontane woodland, valley and foothill grassland; roadsides (often), serpentinite/annual herb/(Apr-June)July-Nov/ 395-1,375	Not expected to occur. Although the chaparral, woodland, and grassland on site provide potentially suitable habitat for this species, there are no serpentine soils present. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	None/None/1B.2	Chaparral, cismontane woodland/perennial deciduous shrub/ Apr-Sep/50-1,160	High potential to occur. The chaparral and woodland on site provide suitable habitat for this species. There are numerous documented occurrences of this species within Santa Clara County, the closest of which is within 1 mile of Upper Stevens Creek County Park (CDFW 2022).
<i>Monolopia gracilens</i>	woodland woollythreads	None/None/1B.2	Broadleafed upland forest, chaparral, cismontane woodland, North Coast coniferous forest, valley and foothill grassland; serpentinite/ annual herb/ (Feb)Mar-July/330-3,935	High potential to occur. The forest, chaparral, woodland, and grassland on site provide suitable habitat for this species, although serpentine soils are not present. A historic (1904) documented occurrence of this species overlaps with the southeastern corner of Sanborn County Park (CDFW 2022).
<i>Orthotrichum kellmanii</i>	Kellman's bristle moss	None/None/1B.2	Chaparral, cismontane woodland; carbonate, sandstone/moss/ Jan-Feb/1,125-2,245	Not expected to occur. Although chaparral and woodland on site may provide potentially suitable habitat for this species, suitable soils are limited. This species has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Pedicularis dudleyi</i>	Dudley's lousewort	None/SR/1B.2	Chaparral, cismontane woodland, North Coast coniferous forest, valley and foothill grassland/perennial herb/Apr-June/195-2,950	Moderate potential to occur. The woodland and forest on site provides potentially suitable habitat for this species. There is one previously documented occurrence along Bear Creek, approximately 3 miles west of Upper Steven's Creek County Park (CDFW 2022).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Penstemon rattanii</i> var. <i>kleei</i>	Santa Cruz Mountains beardtongue	None/None/1B.2	Chaparral, lower montane coniferous forest, North Coast coniferous forest/perennial herb/May–June/1,310–3,605	Not expected to occur. Although the chaparral and forest on site may provide potentially suitable habitat for this species, it has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	FE/SE/1B.1	Cismontane woodland, valley and foothill grassland/annual herb/Mar–May/115–2,030	Not expected to occur. Although the woodland and grassland on site may provide potentially suitable habitat for this species, it has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Piperia candida</i>	white-flowered rein orchid	None/None/1B.2	Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest; serpentinite (sometimes)/perennial herb/(Mar)May–Sep/100–4,295	Moderate potential to occur. The forest on site provides suitable habitat for this species, but serpentine soils are not present. There is one previously documented occurrence approximately 2.5 miles north of Upper Stevens Creek County Park (CDFW 2022).
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower	None/None/1B.2	Chaparral, coastal prairie, coastal scrub; mesic/annual herb/Mar–June/10–525	Not expected to occur. The site is outside of the species' known elevation range.
<i>Plagiobothrys glaber</i>	hairless popcornflower	None/None/1A	Marshes and swamps, meadows and seeps/annual herb/Mar–May/50–590	Not expected to occur. The site is outside of the species' known elevation range.
<i>Polygonum hickmanii</i>	Scotts Valley polygonum	FE/SE/1B.1	Valley and foothill grassland/annual herb/May–Aug/690–820	Not expected to occur. The site is outside of the species' known elevation range.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	None/None/1B.2	Marshes and swamps/perennial rhizomatous herb (emergent)/May–Oct(Nov)/0–2,130	Moderate potential to occur. There is suitable freshwater pond and emergent wetland habitat on site. There is one previously documented occurrence along Aldercroft Creek, approximately 2.5 miles east of Sanborn County Park (CDFW 2022).
<i>Sanicula saxatilis</i>	rock sanicle	None/SR/1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland; rocky, scree, talus/perennial herb/Apr–May/2,030–3,850	Not expected to occur. Although the forest, chaparral, and grassland on site may provide potentially suitable habitat for this species, it has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Senecio aphanactis</i>	chaparral ragwort	None/None/2B.2	Chaparral, cismontane woodland, coastal scrub; alkaline (sometimes)/annual herb/Jan–Apr(May)/50–2,620	Low potential to occur. There is suitable chaparral and woodland habitat on site. There is one previously documented occurrence in Foothills Park, approximately 3.5 miles north of Upper Stevens Creek County Park (CDFW 2022).
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	None/None/1B.2	Broadleafed upland forest, chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland; openings, serpentinite (sometimes)/annual herb/Apr–May/35–1,640	Not expected to occur. Although the forest, chaparral, and grassland on site may provide potentially suitable habitat for this species, it has not been previously documented within 5 miles of the Project site (CDFW 2022).
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower	None/None/1B.2	Chaparral, cismontane woodland, valley and foothill grassland; serpentinite/annual herb/(Mar)Apr–Sep(Oct)/310–3,280	Low potential to occur. Although the chaparral, woodland, and grassland on site may provide potentially suitable habitat for this species, serpentine soils are not present. There is one previously documented occurrence northeast of Lexington Reservoir, approximately 2 miles east of Sanborn County Park (CDFW 2022).
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	None/None/1B.1	Broadleafed upland forest, cismontane woodland, coastal prairie; gravelly/annual herb/Apr–Oct/345–2,000	Moderate potential to occur. There is suitable forest and woodland habitat on site. There is one previously documented occurrence along Aldercroft Creek, approximately 3.5 miles west of Sanborn County Park (CDFW 2022).
<i>Trifolium polyodon</i>	Pacific Grove clover	None/SR/1B.1	Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland; granitic (sometimes), mesic/annual herb/Apr–June(July)/15–1,390	Not expected to occur. Suitable habitat for this species on site is limited, and it has not been previously documented within 5 miles of the Project site (CDFW 2022).

Status Legend**Federal**

FE: Federally listed as endangered

FT: Federally listed as threatened

State

SE: State listed as endangered

SR: State listed as rare

CRPR: California Rare Plant Rank

1A: Plants presumed extirpated in California and either rare or extinct elsewhere

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

2B: Plants rare, threatened, or endangered in California, but more common elsewhere

Threat Rank

0.1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)

0.2 – Moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)

0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Reference

CDFW (California Department of Fish and Wildlife). 2022. California Natural Diversity Database (CNDDDB). RareFind 5, Version 5.2.14. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed June 2022. <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx>.

Attachment C

Special-Status Wildlife Species Potential to Occur

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
<i>Ambystoma californiense</i> pop. 1	California tiger salamander - central California DPS	FT/ST, WL	Annual grassland, valley-foothill hardwood, and valley-foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and human-made pools if predatory fishes are absent.	Not expected to occur. The Sanborn and Upper Stevens Creek Project (Project) site does not contain suitable vernal pool or ephemeral pool breeding habitat for this species. The nearest documented occurrence is approximately 3.3 miles northeast of the proposed Charcoal Road-Table Mountain Shaded Fuel Break Area (Area 03B), a historic 1893 record from within Permanente Creek (Occ. No. 337) (CDFW 2022).
<i>Aneides flavipunctatus niger</i>	Santa Cruz black salamander	None/SSC	Restricted to mesic forests in the fog belt of the outer Coast Range of San Mateo, Santa Cruz, and Santa Clara Counties. Mixed deciduous and coniferous woodlands and coastal grasslands. Occurs in moist streamside microhabitats and is found under rocks, talus, and damp woody debris.	High potential to occur. The Project site contains suitable mixed deciduous and coniferous woodlands with moist streamside habitats for this species. The species has been documented on numerous occasions in proximity to both Project site, along Highway 9, within Saratoga Creek, and adjacent to Stevens Canyon Road (CDFW 2022).
<i>Dicamptodon ensatus</i>	California giant salamander	None/SSC	Known from wet coastal forests and chaparral near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	High potential to occur. The Project site contains suitable wet coastal forests with numerous streams and seeps for breeding and refugia. There are several documented occurrences of this species within the Lyndon Canyon area of Sanborn County Park (CDFW 2022).
<i>Rana boylei</i> pop. 4	foothill yellow-legged frog - central coast DPS	FPT/SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland.	Low potential to occur. Rocky streams habitat is present for this species within forest and woodland habitats of the Project site, but open banks with minimal shade and cobble substrate is limited for this species. This species has been historically (prior to 1960) documented in the vicinity of Saratoga and Stevens Creeks (Occ. Nos. 2081 and 2081), but it is now believed that the species is extirpated from these areas (CDFW 2022).
<i>Rana draytonii</i>	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands.	Moderate potential to occur. Lowland streams within riparian woodlands is present throughout the Project site, but the grade is steep, and deep pooling was not observed within the streams. Additionally, the streams are heavily shaded, preventing suitable locations for egg growth and basking for this species. One freshwater pond southeast of Defensible Space Fuel Break 04D in Sanborn County Park may provide suitable breeding habitat for this species, but this location is surrounded by paved pedestrian trails and has high pedestrian activity. This species may use the drainages and associated upland areas within the Project site for foraging and dispersal. This species has been documented approximately 1.4 miles northeast of Sanborn County Park within Saratoga Creek, a historical occurrence from 1997 (Occ. No. 211) (CDFW 2022). This species has also historically been known to breed in Calabasas Creek, approximately 1.2 miles north of the Sanborn County Park Project site; individuals were documented breeding in 2007 (Occ. No. 961) (CDFW 2022).
<i>Taricha rivularis</i>	red-bellied newt	None/SSC	Redwood forests (and sometimes other forest types) along coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Lives in terrestrial habitats; juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 kilometer to breed, typically in streams with moderate flow and clean rocky substrate.	High potential to occur. Streams and drainages throughout the redwood forests of the Project site provide suitable habitat for this species. This species has been documented on numerous occasions within Upper Stevens Creek County Park, along Grizzly Flat Trailhead and Upper Stevens Creek between 2010 and 2016 (Occ. No. 135) (CDFW 2022).
Birds				
<i>Aquila chrysaetos</i> (nesting and wintering)	golden eagle	None/FP, WL	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats.	Low potential to nest and forage. Suitable nesting habitat for this species is present in steep riparian areas within the Project site, but the lack of open grassland and pastures within the Project site likely precludes this species from occurring. There are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022). This species has been documented on numerous occasions by citizen scientists flying over Lake Ranch Reservoir within Sanborn County Park, with the most recent observation from March 2022 (eBird 2022).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
<i>Asio otus</i> (nesting)	long-eared owl	BCC/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats.	Moderate potential to nest, low potential to forage. High-quality, suitable riparian nesting habitat with live oak thickets is present for this species throughout the Project site, but open foraging habitat is absent. There is a historical occurrence approximately 1.7 miles northwest of the Upper Stevens Creek Project site, a nesting record from 1986 (Occ. No. 37) (CDFW 2022).
<i>Athene cunicularia</i> (burrow sites and some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows.	Not expected to nest or forage. The Project site lacks open grassland and scrub habitat with ground squirrel burrows as required for this species. There are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).
<i>Brachyramphus marmoratus</i> (nesting)	marbled murrelet	FT/SE	Nests in old-growth coastal forests; forages in subtidal and pelagic habitats.	Moderate potential to nest, not expected to forage. Forest habitat throughout the Project site may contain suitable nesting habitat for this species, but old-growth forest is absent. Critical habitat for this species is located just outside of the Sanborn County Park Project site, west of Skyline Boulevard within Castle Rock State Park. The nearest document occurrence of this species is approximately 2.5 miles west of the Upper Stevens Creek County Park Project site, an occupied nest site within Portola Redwoods State Park from 2007 (Occ. No. 30) (CDFW 2022).
<i>Elanus leucurus</i> (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands.	Moderate potential to nest, not expected to forage. High-quality and suitable woodland and riparian nesting habitat is present throughout the Project site, but open grassland and meadows for foraging are absent. The nearest documented nesting occurrence is approximately 4.7 miles northeast of Upper Stevens Creek County Park Project site from 2007, a pair observed nesting within Stevens Creek (Occ. No. 85) (CDFW 2022). A few individuals of this species were documented by citizen scientists within the vicinity of Sanborn County Park in 2019 (eBird 2022).
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration.	Not expected to nest or forage. Riparian canopy along streams is present throughout the Project site, but the habitat is fairly open and fragmented, and the species prefers more dense vegetation with riparian thickets. Additionally, the species is more commonly associated with the Cascade and Sierra Mountain ranges (Zeiner et. al. 1988). There are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).
<i>Falco peregrinus anatum</i> (nesting)	American peregrine falcon	FPD/FP, SCD	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present.	Known to occur. This species has been known to nest within Summit Rock of Sanborn County Park since 2008 (Santa Clara Valley Audubon Society 2012). There are documented occurrences (however, specific locations are suppressed) of this species within the Mindego Hill and Castle Rock Ridge U.S. Geological Survey 7.5-minute quadrangles, in which the Project site occurs (CDFW 2022). Suitable nesting and foraging habitat for this species is present within the Project site.
<i>Progne subis</i> (nesting)	purple martin	None/SSC	Nests and forages in woodland habitats, including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways.	Low potential to nest and forage. Although the Project site contains suitable riparian and woodland habitat for this species, the site is out of the typical range for this species (Sacramento region), and occurrences in the Bay Area/Peninsula are not common. There are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).
<i>Rallus obsoletus obsoletus</i>	Ridgway's rail	FE/FP, SE	Coastal salt or brackish marshes.	Not expected to nest or forage. Coastal salt or brackish marshes are absent from the Project site.
<i>Sternula antillarum browni</i> (nesting colony)	California least tern	FE/FP, SE	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats.	Not expected to nest or forage. Shallow estuary and sandy beach habitat is absent from the Project site.
<i>Vireo bellii pusillus</i> (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season.	Low potential to nest and forage. Although the Project site contains some suitable riparian vegetation for this species, the vegetation is largely woodland with little to no areas with dense riparian thickets, as required by this species. There are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Fishes				
<i>Eucyclogobius newberryi</i>	tidewater goby	FE/None	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River.	Not expected to occur. The Project site lacks brackish water habitat as required for this species.
<i>Hypomesus transpacificus</i>	Delta smelt	FT/SE	Sacramento-San Joaquin Delta; seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay.	Not expected to occur. The Project site lacks suitable aquatic habitat for this species.
<i>Oncorhynchus kisutch</i> pop. 4	coho salmon – central California coast ESU	FE/SE	Streams and small freshwater tributaries during first half of life cycle, and estuarine and marine waters of the Pacific Ocean during the second half of life cycle. Spawns in small streams with stable gravel substrates.	Not expected to occur. The Project site lacks suitable aquatic habitat for this species.
<i>Oncorhynchus mykiss irideus</i> pop. 8	steelhead – central California coast DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead.	Not expected to occur. The Project sites lack suitable aquatic habitat for this species.
Invertebrates				
<i>Danaus plexippus</i> pop. 1	monarch	FC/None	Wind-protected tree groves with nectar sources and nearby water sources.	Not expected to occur. The Project site lacks protected groves with nectar and floral sources and nearby water. There are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).
<i>Trimerotropis infantilis</i>	Zayante band-winged grasshopper	FE/None	Isolated sandstone deposits in the Santa Cruz Mountains (the Zayante Sand Hills ecosystem).	Not expected to occur. The Project site lacks sandstone deposit habitat, and the site is outside of the typical range for this species (Zayante Sand Hills Ecosystem).
<i>Bombus crotchii</i>	Crotch bumble bee	None/SCE	Open grassland and scrub habitats with abundant floral resources. Feeds on the nectar of open flowers with short corollas. Nests underground and overwinters in soft, disturbed soil.	Low potential to occur. Although the Project site contains very small fragments of suitable habitat for this species, this habitat is isolated from other suitable habitat areas in the region. The floral resources required for this species were not observed during the reconnaissance-level surveys, and there are no documented occurrences of the species in the vicinity, making the potential for this species to occur low.
<i>Bombus occidentalis occidentalis</i>	western bumble bee	None/SCE	Meadows and grasslands with abundant floral resources. Feeds on the nectar of open flowers with short corollas. Nests in underground cavities, small rodent burrows, and aboveground in logs. Overwinters in soil and leaf litter.	Low potential to occur. Although the Project site contains very small fragments of suitable habitat for this species, this habitat is isolated from other suitable habitat areas in the region. The floral resources required for this species were not observed during the reconnaissance-level surveys, and there are no documented occurrences of the species in the vicinity, making the potential for this species to occur low.
Mammals				
<i>Antrozous pallidus</i>	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in human-made structures and trees.	Moderate potential to occur. Woodland and forest roosting and foraging habitat is available within the Project site, but open grasslands and shrublands are absent. There are several human-made structures and rocky outcrops within the Project site. There are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).
<i>Bassariscus astutus</i>	ringtail	None/FP	Mixed forests and shrublands near rocky areas or riparian habitats; forages near water and is seldom found more than 1 kilometer (0.62 miles) from a water source.	Moderate potential to occur. Suitable woodland and mixed forest habitat is present within the Project site, but there are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, human-made structures, and tunnels.	Moderate potential to occur. Deciduous forest and riparian habitat is available throughout the Project site, but limestones caves and lava tubes for roosting are absent. This species may roost within the human-made structures within the Project site. This species has been documented 2.3 miles southeast of the Sanborn County Park Project site; a 2002 occurrence within the Chapel at Alma College (Occ. No. 600) (CDFW 2022). This species has also been documented 2.45 miles east of the Upper Stevens Creek County Park Project site; an occurrence from 2000 within a barn (Occ. No. 601) (CDFW 2022).
<i>Neotoma fuscipes annectens</i>	San Francisco dusky footed woodrat	None/SSC	Forest habitats with a moderate canopy and moderate to dense understory.	Known to occur. The Project site contains high-quality suitable forest habitat for this species. Woodrat houses were observed throughout the Project site during the 2022 site surveys.
<i>Puma concolor</i>	puma	None/SCT	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant	High potential to occur. The Project site contains high-quality suitable forest habitat for this species, and the species has been documented as occurring within proximity of the Project site by the general public.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
			in riparian areas and brushy stages of most habitats throughout California, except deserts.	
<i>Taxidea taxus</i>	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils.	Not expected to occur. Open grassland, scrub, agricultural and pasture habitat, as required to support this species, is absent from the Project site. Additionally, there are no documented occurrences of this species within 5 miles of the Project site (CDFW 2022).
Reptiles				
<i>Emys marmorata</i>	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter.	High potential to occur. The freshwater pond southeast of Defensible Space Fuel Break 04D in Sanborn County Park may provide suitable habitat for this species. Additionally, Lake Ranch within Sanborn County Park provides suitable habitat for this species, with abundant surrounding upland habitat for nesting. This species has historically been documented as occurring within Lake Ranch (CDFW 2022).
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco garter snake	FE/FP, SE	Wide range of habitats, including grasslands or wetlands adjacent to ponds, marshes, and sloughs.	Moderate potential to occur. The freshwater pond southeast of Defensible Space Fuel Break 04D in Sanborn County Park may provide suitable habitat for this species, but vegetation is not present in continuous patches, the feature is surrounded by paved pedestrian trails, and the location lacks connectivity to other known populations of this species. There are documented occurrences (however, specific locations are suppressed) of this species within the Mindego Hill U.S. Geological Survey 7.5-minute quadrangles in which the Upper Stevens Creek County Park Project site occurs (CDFW 2022).

Status Legend

Federal

- BCC: USFWS—Birds of Conservation Concern
- FC: Candidate for federal listing as threatened or endangered
- FE: Federally listed as endangered
- FPD: Federally proposed for delisting
- FPT: Federally proposed for listing as threatened
- FT: Federally listed as threatened

State

- FP: CDFW Fully Protected species
- SCE: State candidate for listing as endangered
- SCD: State candidate for delisting
- SCT: State candidate for listing as threatened
- SE: State listed as endangered
- SSC: California Species of Special Concern
- ST: State listed as threatened
- WL: CDFW Watch List species

References

- CDFW (California Department of Fish and Wildlife). 2022. California Natural Diversity Database (CNDDDB). RareFind 5, Version 5.2.14. Sacramento, California: CDFW, Biogeographic Data Branch. Accessed June 2022. <https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx>.
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- Santa Clara Valley Audubon Society. 2012. "American Peregrine Falcon." https://kipdf.com/the-peregrine-falcons-of-summit-rock_5ac1d1a21723dd47802cc83b.html.
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Attachment D

Representative Site Photographs



Photo 1. Sanborn eastern entrance south of proposed evacuation route off Sanborn Road.

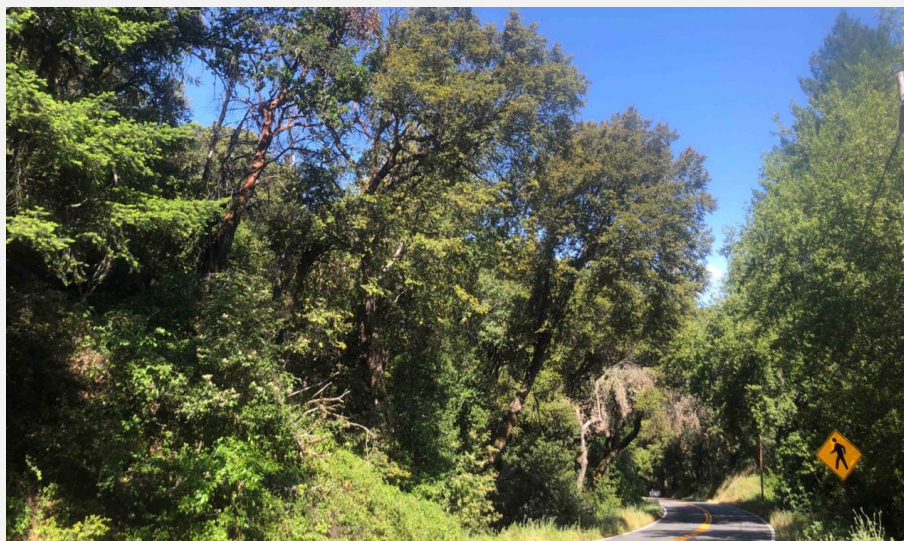


Photo 2. Southern portion of Upper Stevens Creek Park along Skyline Boulevard.



Photo 3. Representative Douglas fir (*Pseudotsuga menziesii*) and tan oak (*Notholithocarpus densiflorus*) forest in Sanborn Park.



Photo 4: Forest with Pacific madrone and understory shrubs in Upper Stevens Creek Park.



Photo 5. Representative dry ephemeral drainage (approximately 15 feet wide) in Sanborn Park.



Photo 6. Representative ephemeral drainage in Sanborn Park with ordinary high water mark indicators.



Photo 9. Grassland and scrub near transmission utility lines in Sanborn Park.



Photo 10. Dusky-footed wood rat (*Neotoma fuscipes*) stick house (aka. midden) in Upper Stevens Creek Park.

Attachment E

Plant Species Compendium

Vascular Species

Eudicots

ADOXACEAE – MUSKROOT FAMILY

Sambucus nigra ssp. *caerulea* – blue elderberry

ANACARDIACEAE – SUMAC OR CASHEW FAMILY

Toxicodendron diversilobum – poison oak

APIACEAE – CARROT FAMILY

* *Anthriscus caucalis* – bur chervil

APOCYNACEAE – DOGBANE FAMILY

* *Vinca major* – bigleaf periwinkle

ARALIACEAE – GINSENG FAMILY

* *Hedera helix* – English ivy

ASTERACEAE – SUNFLOWER FAMILY

Achillea millefolium – common yarrow

Adenocaulon bicolor – American trailplant

Agoseris grandiflora – bigflower agoseris

Artemisia douglasiana – Douglas' sagewort

Baccharis pilularis – coyote brush

* *Carduus pycnocephalus* – Italian plumeless thistle

* *Cichorium intybus* – chicory

Cirsium occidentale – cobwebby thistle

Euthamia occidentalis – western goldentop

Grindelia hirsutula – hairy gumweed

* *Hypochaeris glabra* – smooth cat's ear

Madia elegans – common madia

Madia sativa – coast tarweed

Symphotrichum chilense – Pacific aster

Xanthium strumarium – cocklebur

BETULACEAE – BIRCH FAMILY

Alnus rhombifolia – white alder

Corylus cornuta – beaked hazelnut

BORAGINACEAE – BORAGE FAMILY

Eriodictyon californicum – California yerba santa

BRASSICACEAE – MUSTARD FAMILY

- * *Brassica nigra* – black mustard
- * *Rosmarinus officinalis* – rosemary

CAPRIFOLIACEAE – HONEYSUCKLE FAMILY

Lonicera hispidula – pink honeysuckle

ERICACEAE – HEATH FAMILY

Arbutus menziesii – madrone
Arctostaphylos glauca – bigberry manzanita
Arctostaphylos sensitiva – glossyleaf manzanita

FABACEAE – LEGUME FAMILY

- Acmispon glaber* – deer weed
- * *Lathyrus latifolius* – perennial pea
 - Lupinus bicolor* – miniature lupine
 - Pickeringia montana* – chaparral pea
 - * *Spartium junceum* – Spanish broom
 - * *Vicia villosa* – winter vetch

FAGACEAE – OAK FAMILY

Notholithocarpus densiflorus – tanoak
Quercus agrifolia – coast live oak
Quercus chrysolepis – canyon live oak
Quercus dumosa – Nuttall's scrub oak
Quercus kelloggii – California black oak
Quercus wislizeni – interior live oak

GERANIACEAE – GERANIUM FAMILY

Geranium carolinianum – Carolina geranium

GROSSULARIACEAE – GOOSEBERRY FAMILY

Ribes sanguineum – redflower currant

HYPERICACEAE – ST. JOHN'S WORT FAMILY

- * *Hypericum calycinum* – Aaron's beard

LAMIACEAE – MINT FAMILY

Clinopodium douglasii – yerba buena
Stachys bullata – California hedgenettle

LAURACEAE – LAUREL FAMILY

Umbellularia californica – California bay

MONTIACEAE – MONTIA FAMILY

Claytonia parviflora – streambank springbeauty

ONAGRACEAE – EVENING PRIMROSE FAMILY

Clarkia purpurea – winecup clarkia

Clarkia unguiculata – elegant clarkia

PAPAVERACEAE – POPPY FAMILY

Dendromecon rigida – bush poppy

Eschscholzia californica – California poppy

PHRYMACEAE – LOPSEED FAMILY

Diplacus aurantiacus – bush monkeyflower

PLANTAGINACEAE – PLANTAIN FAMILY

Collinsia heterophylla – purple Chinese houses

RANUNCULACEAE – BUTTERCUP FAMILY

Delphinium nudicaule – red larkspur

Ranunculus californicus – California buttercup

RHAMNACEAE – BUCKTHORN FAMILY

Ceanothus cuneatus – wedge leaf ceanothus, buck brush

Ceanothus thyrsiflorus – blue blossom

ROSACEAE – ROSE FAMILY

Adenostoma fasciculatum – chamise

Cercocarpus betuloides – birch leaf mountain mahogany

Heteromeles arbutifolia – toyon

Holodiscus discolor – ocean spray brush

Rosa gymnocarpa – dwarf rose

* *Rubus armeniacus* – Himalayan blackberry

Rubus parviflorus – thimbleberry

Rubus ursinus – California blackberry

RUBIACEAE – MADDER FAMILY

Galium porrigens – graceful bedstraw

SALICACEAE – WILLOW FAMILY

Salix lasiolepis – arroyo willow

SAPINDACEAE – SOAPBERRY FAMILY

- Acer macrophyllum* – bigleaf maple
- Aesculus californica* – California buckeye

SIMAROUBACEAE – QUASSIA OR SIMAROUBA FAMILY

- * *Ailanthus altissima* – tree of heaven

URTICACEAE – NETTLE FAMILY

- Urtica dioica* – stinging nettle

VALERIANACEAE – VALERIAN FAMILY

- * *Centranthus ruber* – red valerian

VIOLACEAE – VIOLET FAMILY

- Viola sempervirens* – evergreen violet

Ferns and Fern Allies

AZOLLACEAE – MOSQUITO FERN FAMILY

- Azolla filiculoides* – Pacific mosquitofern

DRYOPTERIDACEAE – WOOD FERN FAMILY

- Dryopteris arguta* – coastal woodfern
- Polystichum munitum* – western swordfern

EQUISETACEAE – HORSETAIL FAMILY

- Equisetum telmateia* – giant horsetail

PTERIDACEAE – BRAKE FAMILY

- Adiantum aleuticum* – Aleutian maidenhair
- Adiantum jordanii* – California maidenhair
- Pentagramma triangularis* – goldback fern

Gymnosperms and Gnetophytes

CUPRESSACEAE – CYPRESS FAMILY

- Calocedrus decurrens* – incense cedar
- Sequoia sempervirens* – redwood
- Sequoiadendron giganteum* – giant sequoia

PINACEAE – PINE FAMILY

- Pinus attenuata* – knobcone pine
- Pinus sabiniana* – foothill pine
- Pseudotsuga menziesii* – Douglas fir

Monocots

CYPERACEAE – SEDGE FAMILY

- Cyperus eragrostis* – tall flatsedge
- Schoenoplectus acutus* – hardstem bulrush

IRIDACEAE – IRIS FAMILY

- Iris fernaldii* – Fernald's iris
- Sisyrinchium bellum* – western blue-eyed grass

JUNCACEAE – RUSH FAMILY

- Juncus effusus* – soft rush

LILIACEAE – LILY FAMILY

- Calochortus albus* – white fairy-lantern

POACEAE – GRASS FAMILY

- * *Avena fatua* – wild oat
- * *Briza maxima* – big quakinggrass
- * *Bromus diandrus* – ripgut brome
- * *Bromus hordeaceus* – soft brome
- Bromus sitchensis* var. *carinatus* – California brome
- * *Cynosurus echinatus* – annual dogtails
- Deschampsia elongata* – slender hairgrass
- Elymus glaucus* – blue wildrye
- * *Festuca perennis* – perennial rye grass
- Hordeum brachyantherum* – meadow barley
- * *Hordeum marinum* – seaside barley
- Melica imperfecta* – smallflower melicgrass
- Melica torreyana* – Torrey's melicgrass
- * *Phalaris aquatica* – Harding grass
- * *Stipa miliacea* – no common name
- Stipa pulchra* – purple needlegrass

RUSCACEAE – LILY-OF-THE-VALLEY FAMILY

- Maianthemum racemosum* – feathery false lily of the valley

THEMIDACEAE – BRODIAEA FAMILY

- Brodiaea elegans* – harvest brodiaea
- Triteleia laxa* – Ithuriel's spear

TYPHACEAE – CATTAIL FAMILY

Typha latifolia – broadleaf cattail

- * signifies introduced (non-native) species

Attachment F

Wildlife Species Compendium

Amphibians

Frogs

RANIDAE – TRUE FROGS

- * *Lithobates catesbeianus* – American bullfrog

Salamanders

SALAMANDRIDAE – NEWTS

- Taricha torosa* – California newt

Birds

Blackbirds, Orioles and Allies

ICTERIDAE – BLACKBIRDS

- Agelaius phoeniceus* – red-winged blackbird

Bushtits

AEGITHALIDAE – LONG-TAILED TITS AND BUSHTITS

- Psaltriparus minimus* – bushtit

Creepers

CERTHIIDAE – CREEPERS

- Certhia americana* – brown creeper

Finches

FRINGILLIDAE – FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

- Haemorhous mexicanus* – house finch

Flycatchers

TYRANNIDAE – TYRANT FLYCATCHERS

- Empidonax difficilis* – Pacific-slope flycatcher
- Myiarchus cinerascens* – ash-throated flycatcher
- Sayornis nigricans* – black phoebe

Hawks

ACCIPITRIDAE – HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis – red-tailed hawk

Buteo lineatus – red-shouldered hawk

Jays, Magpies and Crows

CORVIDAE – CROWS AND JAYS

Aphelocoma californica – California scrub-jay

Corvus brachyrhynchos – American crow

Corvus corax – common raven

Cyanocitta stelleri – Steller's jay

New World Quail

ODONTOPHORIDAE – NEW WORLD QUAIL

Callipepla californica – California quail

Nuthatches

SITTIDAE – NUTHATCHES

Sitta carolinensis – white-breasted nuthatch

Old World Warblers and Gnatcatchers

POLIOPTILIDAE – GNATCATCHERS

Polioptila caerulea – blue-gray gnatcatcher

Pigeons and Doves

COLUMBIDAE – PIGEONS AND DOVES

Patagioenas fasciata – band-tailed pigeon

Zenaida macroura – mourning dove

Rails, Gallinules and Coots

RALLIDAE – RAILS, GALLINULES, AND COOTS

Fulica americana – American coot

Terns and Gulls

LARIDAE – GULLS, TERNS, AND SKIMMERS

Sterna forsteri – Forster's tern

Thrushes

TURDIDAE – THRUSHES

Catharus guttatus – hermit thrush

Turdus migratorius – American robin

Titmice

PARIDAE – CHICKADEES AND TITMICE

Poecile rufescens – chestnut-backed chickadee

Woodpeckers

PICIDAE – WOODPECKERS AND ALLIES

Colaptes auratus – northern flicker

Melanerpes formicivorus – acorn woodpecker

Dryobates nuttallii – Nuttall's woodpecker

Dryobates pubescens – downy woodpecker

Wrens

TROGLODYTIDAE – WRENS

(blank)

New World Sparrows

PASSERELLIDAE – NEW WORLD SPARROWS

Junco hyemalis – dark-eyed junco

Melospiza crissalis – California towhee

Pipilo maculatus – spotted towhee

Typical Warblers, Parrotbills, Wrentit

SYLVIIDAE – SYLVIID WARBLERS

Chamaea fasciata – wrentit

Fishes

Other Bony Fishes

POECILIIDAE – POECILIIDS

- * *Gambusia affinis* – mosquitofish

Minnnows and Carps

CYPRINIDAE – MINNOWS AND CARPS

- * *Cyprinus carpio* – common carp

Sunfishes And Freshwater Basses

CENTRARCHIDAE – SUNFISHES

- Micropterus* sp.

Invertebrates

Butterflies

LYCAENIDAE – BLUES, HAIRSTREAKS, AND COPPERS

- Plebejus* sp.

PAPILIONIDAE – SWALLOWTAILS

- Papilio* sp.

Mammals

Domestic

FELIDAE – CATS

- * *Felis catus* – domestic cat

Squirrels

SCIURIDAE – SQUIRRELS

- Otospermophilus beecheyi* – California ground squirrel

Ungulates

CERVIDAE – DEERS

Odocoileus hemionus – mule deer

Reptiles

Lizards

PHRYNOSOMATIDAE – IGUANID LIZARDS

Sceloporus occidentalis – western fence lizard

* signifies introduced (non-native) species

Attachment G

California Department of Fish and Wildlife Comments

Sanborn and Upper Stevens Creek County Parks Forest Health Plan Project
Santa Clara County Parks and Recreation Department
Santa Clara County

California Department of Fish and Wildlife – Bay Delta Region
Comments and Recommendations
March 24, 2023

The California Department of Fish and Wildlife (CDFW) has received a request for review and comment of the Biological Technical Memorandum that provides biological resources assessments conducted for the **Sanborn and Upper Stevens Creek County Parks Forest Health Plan**, proposed to be implemented under the California Vegetation Treatment Program (CalVTP).

The project proposes to implement vegetation treatments on 4,843 acres of land owned by The Wildlands Conservancy in Sonoma County. Proposed treatment types include shaded fuel breaks and ecological restoration that will be implemented utilizing mechanical and manual vegetation removal, and prescribed burning.

The purpose of the request is to initiate consultation and feedback from CDFW regarding proposed project avoidance and mitigation measures consistent with the CalVTP PEIR and the use of appropriate Standard Project Requirements (SPRs) and Mitigation Measures for listed species and sensitive resources that have the potential to occur within the project area during vegetation treatment activities.

CDFW has reviewed the Biological Technical Memorandum (memo) and is providing additional comments and/or recommendations to the **Sanborn and Upper Stevens Creek County Parks Forest Health Plan** as they pertain to potential impacts to sensitive habitat and special status species:

1. Riparian Area Protection

The proposed treatment areas contain several watercourses, tributaries, and drainages, including Lake Ranch Reservoir located in Sanborn County Park. The project proposes to implement *SPR BIO-4: Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function* (memo page 40) to reduce impacts to riparian habitats. Will the project also consider the implementation of *SPR HYD-4 Identify and Protect Watercourse and Lake Protection Zones*? CDFW recommends the project implement *SPR HYD-4* which will provide additional riparian habitat protection within the Watercourse and lake Protection Zones (WLPZ) by limiting equipment and vehicle use, prohibiting burn piles and fire ignitions (with the exception for low intensity backing fires), and minimizing soil erosion in these areas.

2. Biomass Disposal

The project proposes to manage biomass by mastication, chipping, and removal to composting or biomass processing facilities (memo Section 1.3, page 3). Will the project provide any standards or guidelines for biomass processing? CDFW recommends the project provide standards for chip and mulch depth, which is typically no more than 4 to 6 inches in depth, and a maximum percent cover for the treatment areas. The spreading of chips and mulch should be avoided within WLPZ areas (per *SPR HYD-4*) and areas of identified mammal burrows.

3. Special Status Bumble Bees

On September 30th, 2022, candidacy was reinstated for the four bumble bee species petitioned for listing—franklin's, crotch, western, and suckley cuckoo—under the California Endangered Species Act (CESA). Candidate species are given protection under CESA until a determination is made on their listing status. More information on the bumble bee listing can be found on the Fish and Game Commission website at <https://fgc.ca.gov/CESA#bb>.

The candidate bumble bee species within the range of the project area are the Crotch bumble bee (*Bombus crotchii*) and, to a lesser degree, the Western bumble bee (*Bombus occidentalis occidentalis*). In the memo under *Project-Specific Requirements* (memo page 50), the project proposes to either survey for the Crotch and western bumble bee or assume presence and implement *Mitigation Measure BIO-2g*. However, these bees are not listed in *Table 5. Special-Status Wildlife with Potential to Occur* (memo page 12) nor is it listed in *Table 6 Sensitive Resource by Treatment Area* or *Attachment C*. Have the project treatment areas been properly assessed for suitable bumble bee habitat?

CDFW recommends that prior to project activities, a qualified biologist conduct reconnaissance surveys within the treatment areas for suitable special status bumble bee habitat (grassland, meadows, shrub) that contain associated floral resources. If suitable special status bumble bee habitat is present, CDFW recommends implementing *Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities)* in those specific suitable habitat areas of the project. In addition, CDFW recommends the project provide a no-disturbance buffer to any special status bumble bee nesting sites that are discovered during project activities and treatments should be avoided within the buffer until the bumble bee nesting season is over.

If the project chooses to determine presence of special status bumble bees, a qualified biologist should conduct focused visual surveys for special status bumble bee species in potential habitat within the project area during the appropriate bumble bee flight period. The surveys should be conducted prior to project activities to evaluate impacts resulting from potential ground and vegetation-disturbance associated with the treatment areas. Please note that protocol-level bumble bee surveys often require the species to be caught and photographed for identification. Because these special status bees are CESA candidate species, they are given protection under CESA until a determination is made on their listing status. Therefore, take authorization may be required by CDFW prior to conducting surveys.

Bumble bees depend on the availability of habitats with a rich supply of floral resources that bloom continuously during the entirety of the colony's life. Suitable habitat for the crotch bumble bee can be defined as open grasslands, shrublands, and chaparral. While the western bumble bee can be found in meadows and grasslands with abundant floral resources and in some natural areas within urban environments. Although bumble bees are generalist foragers and do not depend on any one flower type, there are plant families known to be associated with bumble bee observations. Surveys for floral resources should be floristic in nature and timed to coincide with the blooming period of the flowering species.

Information on bumble bee habitat requirements and associated floral resources can be found in the following references:

CDFW's *Evaluation of the petition from the Xerces Society, Defenders of Wildlife, and the Center for Food Safety to list four species of bumble bees as endangered under the California Endangered Species Act*, available online at

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=166804&inline>

A Petition to the State of California Fish and Game Commission to List the Crotch bumble bee (*Bombus crotchii*), Franklin's bumble bee (*Bombus franklini*), Suckley cuckoo bumble bee (*Bombus suckleyi*), and western bumble bee (*Bombus occidentalis occidentalis*) as Endangered under the California Endangered Species Act, available online at

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=161902&inline>

4. San Francisco Dusky Footed Woodrats

In the discussion of *SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites*, the project proposes to implement nest relocation procedures if woodrat nests within treatment areas cannot be avoided (memo page 47). In addition to the proposed nest dismantling procedures, CDFW recommends the following additional measures to further reduce impacts to woodrats:

- Nest removal efforts should not take place during inclement or extreme weather conditions and should take place at dusk or dawn when woodrats are least susceptible to predators.
- Prior to any nest removal, safety measures should be employed to minimize potential human exposure to possible diseases carried by woodrats. Adequate protection, such as protective clothing, equipment and tools, gloves, and appropriate masks, to ensure safety regarding viruses and diseases potentially carried by rodents, is recommended.

The project includes pile burning as a prescribed burning treatment activity. CDFW recommends that in areas of existing woodrat habitat, piles be burned as soon as feasible to reduce the risk of woodrats having moved into the vegetation debris piles. Where feasible, prior to burning, piles in these areas should be disturbed to ensure any woodrats inside of the piles have the opportunity to escape.

5. California red-legged frog

In the discussion of California red-legged frogs under *Other Recommendations* (memo page 52-53), the project states "*If herbicide use is proposed, only cut stump and basal bark applications may be used if the treatment is not applied within 60 feet of aquatic habitat.*" The measure is in contradiction of the implementation of *SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife* (memo page 45), which states that "*The use of herbicides is not currently proposed*" and "*if, in the future, herbicides are considered for use in treating/removing invasive plants, they would not be applied in any area within 300 feet of potential California red-legged frog/foothill yellow-legged frog habitat*". Please clarify this contradiction. CDFW concurs with the latter limitations of herbicide treatments and that herbicides should not be applied within 300 feet of potential aquatic amphibian habitat.

In the same discussion of California red-legged frogs under *Other Recommendations* (memo page 53), the project states "*No mechanized operations may occur in a Class I or Class II*

watercourse...”. Is this language meant to refer to no mechanized operations within a Class I or Class II WLPZ or watercourse channel? Please clarify.

6. San Francisco Garter Snake

In both section 3.1.5 *Treatment Areas 04C and 04D* and *Attachment C*, the project discloses that a freshwater pond immediately adjacent to the defensible space activity in Treatment Area 04D may support San Francisco garter snake (*Thamnophis sirtalis tetrataenia*). However, the memo doesn't provide any protection measures if this species is found present within the treatment area. Will project activities in Treatment Area 04D involve mechanical treatments (such as mastication), heavy equipment or prescribed burns? If so, impacts to San Francisco garter snake may occur.

CDFW recommends the project provide avoidance measures for the San Francisco garter snake in species suitable habitat. Prior to any vegetation removal activity within Treatment Area 04D, a qualified biologist should visually inspect the treatment area for the presence of San Francisco garter snake. San Francisco garter snake is fully protected under *Fish and Game Code Section 5050*. Under this statute, take of a fully protected species may not occur except for scientific or recovery purposes. Catch, pursue, capture, or attempt to catch, pursue and capture is considered take as defined in *Section 86* of the Fish and Game Code. Therefore, any San Francisco garter snake encountered in the project area should not be handled, a no disturbance buffer should be implemented, and the species should be left alone until it leaves the area on its own. CDFW also recommends that all vehicles and equipment staged near suitable garter snake habitat be checked for the species prior to moving.

7. Marbled Murrelet

The project discusses the potential for the marbled murrelet, a federally threatened and state endangered species, to occur within the project area. In the section *Other Recommendations* (memo page 52), other than common nesting bird surveys under *SPR BIO-12* the project states that “*If any marbled murrelets are encountered during treatment, work in the vicinity of the observation would be stopped...*”.

The marbled murrelet is a secretive, solitary species with soft, or no vocalizations around nest sites, passive defense behaviors and physical characteristics that tend to decrease the visibility of a nesting murrelet. It is unlikely that marbled murrelets will be detected and encountered during common nesting bird surveys and therefore require specific protocol-level surveys to determine occupancy within a project area.

To reduce significant impacts to marbled murrelets, CDFW recommends the following specific avoidance and mitigation measures to be implemented in treatment areas with marbled murrelet habitat:

- a. Marbled Murrelet Habitat Assessment. In areas where marbled murrelet nesting habitat may be present, CDFW recommends a qualified biologist conduct a habitat assessment prior to the start of project activities. The habitat assessment shall include a visual inspection of suitable nesting habitat features within 0.25 miles of the project area that occur within conifer forested areas. Suitable habitat characteristics shall follow the definitions of potential habitat and nesting platforms as described in *Methods for Surveying Marbled Murrelets in Forests; A revised Protocol for Land Management and*

Research (Mack et al. 2003), which includes mature and old-growth coniferous forest stands, and younger coniferous forest stands having platforms with a relatively flat surface at least 10 cm in diameter and 10 m high in the live crown of a coniferous tree. Platforms can be created by a wide bare branch, moss or lichen covering a branch, mistletoe, witches' brooms, and other deformities, or structures such as squirrel nests (Mack et al. 2003). Habitat features found during the assessment shall be identified, flagged, mapped, or marked for avoidance and retention as a sensitive area.

- b. Marbled Murrelet Surveys. If any suitable marbled murrelet nesting habitat is identified during the habitat assessment, CDFW recommends a qualified biologist conduct protocol level audio-visual murrelet surveys following the *Pacific Seabird Group Methods for Surveying Marbled Murrelets in Forests: A Revised Protocol for Land Management and Research* (Mack et al. 2003) available online at <http://www.pacificseabirdgroup.org>, which may entail two years of surveys. Protocol level surveys should be utilized to determine the presence of nesting murrelets within 0.25 miles of the project area and assess whether project activities will have an impact on marbled murrelets.
- c. Marbled Murrelet Audio and Visual Disturbance Buffers. If conducting two-year protocol level surveys is not feasible, if nesting marbled murrelets are detected during surveys, or if the project chooses to assume presence, CDFW recommends a qualified biologist develop appropriate avoidance disturbance buffers around suitable habitat identified within 0.25 miles of the project area to be implemented during project activities that occur during the murrelet breeding season (March 24 to September 15). Appropriate audio and visual disturbance buffers shall follow the U.S. Fish and Wildlife Service's (USFWS) *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California*, dated October 1, 2020. Although the cover letter indicates that the guidance is valid only to the southern limit of the Russian River watershed, CDFW recommends use of the guidance document throughout the entire murrelet range.

If suitable marbled murrelet habitat is identified and the project proposes to conduct protocol level surveys, consultation with CDFW is recommended to allow the agency to provide technical assistance with habitat determinations and pre-project survey planning and methods.

Marbled murrelet references:

- Evans Mack, D., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, P. Harrison, and T. E. Hamer. 2003. Methods for surveying Marbled Murrelets in forests: a revised protocol for land management and research. Pacific Seabird Group Technical Publication Number 2. Available from <http://www.pacificseabirdgroup.org>
- USFWS, 2020. Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California. 10 October 2020.

8. Other Special Status Birds

In the memo section *Other Recommendations* (memo page 53), the project doesn't provide any specific no-disturbance buffers for the American peregrine falcon, a Fully Protected Species under *Fish and Game Code 3511*. The project identifies that the American peregrine falcon is known to occur within the project area. How will this species be avoided if found within the

treatment areas? CDFW recommends the project provide a specific no-disturbance buffer if this species is found during SPR BIO-10 surveys.

In *Table 5. Special-Status Wildlife with Potential to Occur* (memo page 12), the least Bell's vireo, a federal and state endangered species, is listed as a species with a potential to occur within the project area, however the project doesn't provide any specific avoidance measures nor is it listed in *Table 6 Sensitive Resource by Treatment Area*. CDFW recommends the project identify which treatment areas the least Bell's vireo has the potential to occur in, discuss how the species will be avoided during project activities, and provide a specific no-disturbance buffer if this species is found during SPR BIO-10 surveys.

Should project activities or project locations change, additional consultation with CDFW may be necessary. CDFW appreciates the opportunity to review the **Sanborn and Upper Stevens Creek County Parks Forest Health Plan**. Please contact Robynn Swan, Senior Environmental Scientist (Specialist) at Robynn.Swan@wildlife.ca.gov or (707) 210-4467, with any questions, comments, or clarification on provided recommendations.