Attachment D
Biological Technical Memorandum

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MEMORANDUM

To:	Rob Hazard, Santa Barbara County Fire Safe Council
From:	Dave Compton, Dudek
Subject:	Biological Technical Memorandum for the Santa Barbara South Coast Herbivory Project
Date:	September 5, 2023
cc:	Dana Link-Herrera and Scott Eckhardt, Dudek
Attachments:	A: Figures 1 and 2-1 to 2-16
	B: Special-Status Plant and Wildlife Species with Potential to Occur in the Project Site
	C: Potentially Occurring Special-Status Plant and Wildlife Species by Treatment Area
	D: California Department of Fish and Wildlife Comments
	E: U.S. Department of Fish and Wildlife Comments

This memorandum was prepared in support of the Santa Barbara Fire Safe Council's Santa Barbara South Coast Herbivory Project (project), in southern Santa Barbara County, California. The project is being proposed under the California Board of Forestry and Fire Protection's California Vegetation Treatment Program (CalVTP), Final Environmental Impact Report, State Clearinghouse No. 2019012052, Volume II: Program Environmental Impact Report (PEIR), as Revised (CBFFP 2019). The PEIR provides guidelines for impact assessment under California Environmental Quality Act disciplines, including biological resources. This memorandum provides methods for determining what resources occur within the project site and the results of this analysis and makes recommendations for implementing PEIR requirements and mitigation measures.

1 Introduction

1.1 Project Location

The project site spans along the south coast of the County of Santa Barbara (County) from Gaviota to Santa Barbara. The County is located on the central coast of California. The project site generally lies between the Pacific Ocean to the south, the foothills of the Santa Ynez Mountains to the north, the City of Santa Barbara to the west, and Point Conception to the east. Prescribed herbivory treatment activities are proposed throughout the project site adjacent to critical roadways and communities adjacent to wildland vegetation (Figure 1, Project Location; all figures can be found in Attachment A).

1.2 Project Description

The proposed treatment activities aim to reduce fuel loads to create buffers between the wildland vegetation in wildland urban interface areas and to reduce fuel loads adjacent to critical transportation corridors. These strategic treatments would help to mitigate the potential for high intensity wildfire and reduce the potential for wildfire ignitions.

The proposed prescribed herbivory treatments would occur within 27 treatment areas comprising approximately 1,639 acres (see Table 1) and are intended to be implemented over a 4-year period. The project will aim for a minimum target of 1,000 acres treated per year and would include maintenance treatments where feasible. The project site is characterized by gentle to steep slopes with multiple aspects covered in vegetation typical of Southern California; foothills covered in grass and oak woodland with mixed chaparral on the upper slopes and ridgetops. These areas include large areas of grasslands and also contain steep slopes, which provide for limited access by hand crews or mechanical equipment, making prescribed herbivory the most realistic vegetation management treatment activity in the proposed treatment areas. The prescribed herbivory treatment activities would involve the use of temporary electric fences to contain the animals. The fences would be constructed along existing road and trail systems. During project implementation, narrow (approximately 3-foot-wide) saw lines would need to be constructed to facilitate fence construction. Limited ground disturbance is expected to occur in any of the treatment areas.

Prescribed herbivory treatments would follow best practices to reduce the potential for overgrazing or the spread of invasive species. Attachment F of the Project Specific Analysis/Addendum for the project includes a description of best management practices that would be followed for all grazing treatments implemented under the project. Animals would be confined within small (1–10 acre) paddocks using portable electric fencing until the agreed upon level of grazing in the paddock is completed. Prior to being brought to the site, the herd would be sequestered for at least 3 days where feed utilized does not contain unwanted seed/plant material. Grazing activities would be conducted in a manner that keeps all animals under the shepherd's/shepherdess' control and appropriately confined. Measures would be taken to ensure no grazing animals or herd control animals (e.g., dogs) cause noise that disturbs adjoining neighbors and any animals that cause a noise nuisance be removed. Within each paddock, the goal would be an 80% reduction of herbaceous fuels (grasses), whether trampled or consumed. Roots would be left in place and mature shrubs and trees would be retained. The animals would be moved to the next paddock once desired results are achieved.

Project Goals

The goals of the project are as follows:

- Enhance fire safety along main transportation corridors by reducing flammable vegetation
- Protect community areas by creating and/or increasing defensible space beyond PRC Section 4291 requirements
- Reduce the size and intensity of wildland fires common to this area
- Reduce the frequency of wildfire ignitions
- Improve forest health and biodiversity while enhancing forested communities' safety
- Reduce the impacts of climate change

Project Objectives

The objectives of the project are as follows:

- Complete environmental review of project treatments
- Complete 27 fuel reduction treatments through the use of prescribed herbivory

Project Outcomes

The project would result in the following outcomes:

- A reduction in the number and severity of roadside fires in the project area
- A decrease in number of large-scale wildfires as a result of reduced fuel loads within the project area
- An increase in firefighter safety while responding to and engaging in fire suppression actions
- Enhancement of the protection of lives, property, critical infrastructure, and natural resources from wildland fire
- Enhancement of health and resilience of local grasslands and oak woodlands
- Reduction of GHG emissions as a result of smaller and less severe wildland fires

Schedule

The project is anticipated to occur over a 4-year period, with grazing treatments beginning as early as summer 2023. The first 1,000 acres are anticipated to be completed by fall 2023, with an additional 1,000 acres treated by fall 2024, and an additional 1,000 acres treated by fall 2025. Treatment maintenance activities would be conducted in high priority treatment areas throughout the 4-year grant period and all initial treatment and treatment maintenance activities conducted under the grant funding would be implemented by winter or spring 2026. Grazing in the treatment areas may continue beyond the 4-year grant period as additional funds become available.

Access and Transportation

The project parcels are located on public and private property and accessible from existing roads. Herbivores would be transported to the project site by trucks, left on site until desired grazing level is achieved, and removed from the project site by trucks. It is anticipated that two trucks per project site would be needed to transport animals, with a total of four truck trips per site. Where feasible, animals would be moved between adjacent treatment areas by herding across property boundaries, reducing the need for truck transportation. Additional vehicles arriving on site when transporting animals would include passenger vehicles for project management staff (approximately two to three vehicles arriving on site at once are anticipated).

Biomass Disposal

The use of prescribed herbivory eliminates the possibility of leftover biomass. A shepherd would remain on site with the animals during treatment activities. Any trash or refuse produced by the shepherd would be nominal and would be properly disposed of.

Proposed Treatments

Details of the proposed treatment areas are shown in Table 1, and the map ID shown in the first column corresponds to Figure 1.

Table 1. Proposed Treatment Sites

Map ID	Treatment Area	Ownership	Jurisdiction	Acres	Timeframe (weeks)	Personnel Required	Treatment Maintenance
1	Arroyo Hondo West	SB Land Trust	SRA	88.3	11	2-3	Yes- annually
2	Arroyo Hondo East	SB Land Trust	SRA	53.5	7	2-3	Yes- annually
3	Baron Ranch West	SB County	SRA	160.7	18	2-3	Yes- annually
4	Baron Ranch East	SB County	SRA	220.5	28	2-3	Yes- annually
5	Las Flores	Exxon Corp	SRA	241.8	30	2-3	Yes- annually
6	Coral Canyon	Exxon Corp	SRA	218.3	28	2-3	Yes- annually
7	Ellwood Mesa	City of Goleta	LRA	204.0	20	2-3	Yes- annually
8	Northgate	City of Goleta	LRA	10.2	1	2-3	Yes- annually
9	Evergreen Park	City of Goleta	LRA	28.8	4	2-3	Yes- annually
10	Lake Los Carneros	City of Goleta	LRA	104.4	14	2-3	Yes- annually
11	La Goleta North	City of Goleta	LRA	1.8	.5	2-3	Yes- annually
12	La Goleta South	City of Goleta	LRA	3.0	1	2-3	Yes- annually
13	Via Salerno South	City of Goleta	LRA	2.6	1	2-3	Yes- annually
14	Via Salerno North	City of Goleta	LRA	2.2	.5	2-3	Yes- annually
15	Trout Club	Private HOA	SRA	12.4	1.5	2-3	Yes- annually
16	Painted Cave South FB	Private	SRA	7.7	1	2-3	Yes- annually
17	Oak Grove	Private HOA	LRA	8.3	1	2-3	Yes- annually
18	County Range	SB County	LRA	21.9	3	2-3	Yes- annually
19	West Mesa	Private Preserve	SRA	93.6	13	2-3	Yes- annually
20	SM Foothills	SB County	SRA	37.1	5	2-3	Yes- annually
21	Preserve SM Private	Private	SRA	20.7	3	2-3	Yes- annually
22	Preserve SM HOA	Private HOA	SRA	13.8	2	2-3	Yes- annually
23	SM Foothills East	SB County	SRA	23.4	3	2-3	Yes- annually
24	San Roque West	Private	SRA	15.9	2	2-3	Yes- annually
25	San Roque East	Private	SRA	24.8	3	2-3	Yes- annually
26	San Roque South	Private	SRA	9.4	1	2-3	Yes- annually
27	Tunnel Rd FB	City of Santa Barbara	SRA	10.5	2	2-3	Yes- annually

Note: SRA = State Responsibility Area; LRA = Local Responsibility Area.

1.3 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. The following sections describe the methods and results of the data review and the 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.

2 Methods

SPR BIO-1 identifies sources and types of sources to be consulted for the data review, the purposes of the reconnaissance-level survey, and steps to be taken depending on biological resources identified and potential impacts to these resources. This section provides the details of the methods for the data review and the reconnaissance-level survey conducted for the project.

2.1 Data Review

SPR BIO-1 requires that the data review includes "the biological resources setting, species and sensitive natural communities tables, and habitat information in this 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, CNDDB, California Native Plant Society (CNPS) Rare Plant Inventory, relevant BIOS queries, and relevant general and regional plans." In addition to reviewing the above-noted information for the project eco-region (261B, Southern California Coast), Dudek conducted the following database reviews:

- California Natural Diversity Database (CNDDB) (CDFW 2023a). Query of CNDDB based on the project's U.S. Geological Survey quadrangles and surrounding quadrangles
- CNPS Inventory of Rare and Endangered Plants (CNPS 2023)
- Information for Planning and Consulting (USFWS 2023a)

- National Hydrography Dataset (USGS 2023)
- National Wetlands Inventory (USFWS 2023b)

Dudek also consulted relevant local plans, including the Gaviota Coast Plan (County of Santa Barbara 2016), the Goleta General Plan/Local Coastal Program (LCP) (City of Goleta 2006), and the Eastern Goleta Valley Community Plan (EGVCP) (County of Santa Barbara 2015), for policies and development standards that may apply to the project. Additional sources were consulted that provide information on local and state-wide occurrences of wildlife, such as Paul Lehman's Birds of Santa Barbara County, California (Lehman 2022), California Bird Species of Special Concern (Shuford and Gardali 2008), and California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016). In addition to conducting the data review, Dudek coordinated with the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (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 (ESA) and the California Endangered Species Act (CESA).

To determine lists of potentially occurring special-status plant and wildlife species, Dudek first referred to PEIR Appendix BIO-3, Eco-Regions. The nine-quad CNDDB query 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).

2.2 Reconnaissance-Level Survey

Dudek biologists visited all treatment areas between February 2023 and early July 2023 (Table 2). After conducting the literature review, Dudek biologists drove or walked to view the entirety of all treatment areas and determine general vegetation types, presence of sensitive natural communities, presence of potential aquatic resources under the jurisdiction of resource agencies, and habitat for listed and non-listed special-status plant and wildlife species. The surveys focused on 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. The survey was conducted so that Dudek biologists were able to view all parts of the treatment areas, either from a vehicle or by walking. Biologists walked to all areas that were not visible from a vehicle or road. The survey was sufficient for identifying general vegetation communities within the treatment areas, but was not sufficient for mapping all communities. It was also sufficient for identifying where aquatic resources may occur within and immediately adjacent to the treatment areas. But these resources, including riparian habitat, streams, and aquatic habitat, generally were not delineated in the field. Although some plant species were identified, the survey was not intended to identify all special-status plants. It also did not include protocol or focused surveys to detect special-status wildlife.

Table 2. Reconnaissance Survey Dates, Personnel, Conditions

Date/Time	Personnel	Location(s)	Conditions
2/17/2023 9:20 a.m.—5:00 pm	Dave Compton (DC), Rachel Swick (RS)	West Mesa, Preserve SM HOA, SM Foothills, SMF East, Lake Los Carneros, La Goleta North, La Goleta South	30%–70% cloud cover (cc), 54°F–65°F, 0–1 miles per hour (mph) winds
4/19/2023 9:20 a.m.—2:00 pm	RS	Baron Ranch East, Baron Ranch West, Coral Canyon, Las Flores	0% cc, 57°F–67°F, 5–15 mph winds
5/4/2023 9:20 a.m.—1:00 p.m.	RS	Painted Cave South FB, San Roque South, San Roque East, San Roque West	100% cc, 55°F–60°F, 0–5 mph winds; some light rain
5/11/2023 12:44 p.m.—1:30 p.m.	RS	Trout Club	N.A.
5/19/2023 10:42 a.m.—2:11 p.m.	RS	Arroyo Honda East, Arroyo Hondo West, Evergreen Park, Northgate	100% cc, 62°F–64°F, 1–6 mph winds
5/20/2023 3:36 p.m.—4:30 p.m.	RS	Ellwood Mesa	0% cc, 61°F, 5–7 mph winds
5/23/2023 8:25 a.m.—9:20 a.m.	DC	County Range	100% cc, 57°F–68°F, 0–3 mph winds
5/25/2023 3:08 p.m.—5:28 p.m.	RS	Tunnel Rd FB, Oak Grove, Via Salerno South, Via Salerno North	100% cc, 62°F–64°F, 0–1 mph winds
7/1/2023 11:15 a.m.—12:39 p.m.	DC	Arroyo Hondo West (extension)	40%–60% cc, 62°F –65°F, 3–7 mph winds
7/2/2023 10:35 a.m.—11:10 a.m.	DC	Preserve SM Private	0% cc, 62°F–63°F, 5–10 mph winds

3 Results

The data review and reconnaissance-level survey identified several sensitive resources that could be affected by the project, including resources identified directly and those that have the potential to occur. Three sensitive communities were identified that have a state ranking of S3 and/or global ranking of G3 and that therefore are considered sensitive. These were purple needle grass grassland (West Mesa, SM Foothills), giant wild rye grassland herbaceous alliance (Arroyo Hondo Reserve West and East, Baron Ranch West and East, Las Flores Canyon, Coral Canyon, and County Range), and California brittle bush scrub (County Range, Oak Grove). Additional native grassland is likely present at Ellwood Mesa. Coast live oak woodland, considered sensitive under the PEIR and in the County, as well as the City of Goleta, occurs in several of the treatment areas. Riparian vegetation, also considered sensitive, occurs along stream courses that border the treatment areas, but little riparian habitat occurs

within the treatment area boundaries. Other areas considered Environmentally Sensitive Habitat (ESH), depending on the jurisdiction, were identified. This includes some areas designated as sensitive scrub in the Goleta General Plan. However, Dudek also identified several areas where habitat mapped as ESH was not consistent with what was observed on the ground, including sensitive scrub ESH at Lake Los Carneros that was grassland with very little scrub and coastal scrub at Northgate that extended well beyond the boundaries of the mapped ESH scrub.

Several special-status plant and wildlife species also have potential to occur (see Attachment B, Special-Status Plant and Wildlife Species with Potential to Occur, and Attachment C, Potentially Occurring Special-Status Plant and Wildlife Species by Treatment Area). Although it has not been recorded in the immediate project vicinity and was not detected during reconnaissance surveys, seaside bird's beak (*Cordylanthus rigidus* ssp. *littoralis*), listed as endangered under the CESA, potentially occurs in woodland and coastal scrub in the treatment areas. Several other non-listed special-status plants also have potential to occur (Attachment B).

Among the wildlife species, one federally listed species has the potential to occur or is known to occur: California red-legged frog (*Rana draytonii*), listed as threatened under the ESA. Other species, including southern steelhead (*Oncorhynchus mykiss*), listed as endangered under ESA and a candidate for listing under CESA; tidewater goby (*Eucyclogobius newberryi*), a federally endangered species; and western snowy plover (*Charadrius nivosus nivosus*), federally listed as threated, potentially occur near several treatment areas but not within their boundaries. White-tailed kite (*Elanus leucurus*) is a state fully protected species that is known to occur in several of the treatment areas, including Lake Los Carneros, Ellwood Mesa, and the West Mesa of San Marcos Foothills, and likely occurs at several other treatment areas. Several California Species of Special Concern (SSC) also have potential to occur, based on range and habitats present, including California newt (*Taricha torosa*), Blainville's (coast) horned lizard (*Phrynosoma blainvillii*), northern California legless lizard (*Anniella pulchra*), western pond turtle (*Emys marmorata*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), two-striped gartersnake (*Thamnophis hammondii*), San Diego desert woodrat (*Neotoma lepida intermedia*), and western red bat (*Lasiurus blossevillii*). No special-status wildlife species were observed during surveys. Little wetland habitat was observed, although two small potential wetlands were noted at Lake Los Carneros and two features within the western portion of Arroyo Hondo West supported potential wetlands, based on presence of surface water and hydrophytic vegetation. The treatment area boundaries have been drawn to avoid streams; in most areas only potential ephemeral streams or swales were observed during surveys. Results by resource are discussed in more detail below.

3.1 Environmental Setting

The project site occurs largely on the coastal plain and the lower foothills of the Santa Ynez Mountains in southern Santa Barbara County. Several treatment areas (Trout Club, Painted Cave South FB) occur at slightly higher elevation near State Route 154 northwest of Santa Barbara. Several of the treatment areas in the coastal plain occur within the Coastal Zone boundary (Figures 2-1 through 2-16). Elevations within the treatment areas range from approximately 50 feet up to approximately 2,550 feet above mean sea level. Most treatment areas occur below 750 feet above mean sea level. Treatment areas in the western part of the project area (the Gaviota Coast) occur in rural settings. Most treatment areas in the Goleta and Santa Barbara areas occur within largely developed areas interspersed with undeveloped areas, including parks and open spaces. The higher elevations are adjacent to communities occurring within largely undeveloped areas along State Route 154 and within the Los Padres National Forest, which is part of a large block of undeveloped land supporting a variety of natural habitats covering much of the interior of Santa Barbara County and extending into Ventura County and beyond.

Most treatment areas occur in open grassland and other herbaceous habitat, but a variety of other habitats typical of the region are interspersed throughout these areas, including coastal scrub, chaparral, oak woodlands, eucalyptus woodlands, and very limited areas of riparian habitat. Perennial streams generally do not occur within the treatment areas, with streams limited to adjacent areas. Large areas of non-native vegetation, mostly consisting of non-native grasses and invasive herbaceous vegetation such as mustard stands, occur in many of the treatment areas. Although the treatment areas support extensive areas of herbaceous habitats dominated by non-native grasses and invasive forbs, other habitats considered sensitive in local planning documents do occur. These include limited areas of oak woodland, riparian vegetation (mostly overlapping the treatment areas only minimally), coastal scrub (including several stands considered ESH in Goleta), chaparral, and eucalyptus woodland, which in several areas is known to support winter roosting monarch butterflies (*Danaus plexippus*). Critical habitat for one federally listed species, California red-legged frog, occurs in the treatment areas, although aquatic breeding habitat for the species is absent. Critical habitat for tidewater goby, southern steelhead, and western snowy plover occur near several of the treatment areas.

3.2 Sensitive Biological Resources

Table 3 identifies sensitive resources by treatment area and PEIR biological resource impact. Potentially occurring non-listed special-status plants and wildlife species are listed by treatment area in Attachment C. Figures 2-1 through 2-16 provide specific locations of some sensitive resources and potential sensitive resources. Because the survey conducted under SPR BIO-1 is only a reconnaissance-level survey, some 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 MMs in the PEIR and as discussed in Chapter 4, Recommendations.

The following sections provide an overview of the sensitive resources. As the treatment areas do not overlap any Habitat Conservation Plans, no impacts would occur to this resource and no further discussion of this impact is included.

3.2.1 Sensitive Vegetation Communities

Few natural communities designated as rare (with a state ranking of S1 to S3 or a global ranking of G1 to G3) occur in the treatment areas. However, as noted above, several areas of giant wild rye grassland, purple needle grass grassland, and California brittle bush scrub were mapped or identified across the treatment areas. In addition, riparian vegetation occurring in several locations around the treatment areas (Table 3), including some areas mapped as ESH, is also protected under provisions of the California Fish and Game Code and considered an aquatic resource under the jurisdiction of CDFW. Also, the Gaviota Coast Plan (County of Santa Barbara 2016), the Goleta General Plan/LCP (City of Goleta 2006), and the EGVCP (County of Santa Barbara 2015) provide protections to oak woodland, which also receives protections under the CalVTP PEIR as a sensitive community. Finally, coastal scrub vegetation, considered sensitive under the City of Goleta General Plan and the EGVCP, was identified in several locations. Two such locations appeared to be habitat created through restoration efforts.

3.2.2 Special-Status Plant Species

As noted above, several special-status plant species have the potential occur within the treatment areas. One state listed endangered species, seaside bird's beak, has a low likelihood of occurrence. However, due to concerns over an incomplete understanding of the species' distribution, CDFW considers it to have potential to occur throughout the project site in suitable habitat occurring there (coastal scrub, woodland) (CDFW 2023b). Another plant species

listed as endangered under both the federal ESA and CESA, Gaviota tarplant (*Deinandra increscens* ssp. *villosa*), may have potential to occur in the westernmost treatment areas. The potential occurrence of non-listed special-status plants is discussed in detail in Attachment B. Non-listed special-status plant species that may occur, or that are known to occur, in one or more treatment area, with their California Rare Plant Rank as identified by the CNPS (2023) include the following:

- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*); 1B.2
- Late-flowered mariposa lily (*Calochortus fimbriatus*); 1B.3
- Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*); 1B.2
- Southern tarplant (*Centromadia parryi* ssp. *australis*); 1B.1
- Umbrella larkspur (*Delphinium umbraculorum*); 1B.3
- Mesa horkelia (*Horkelia cuneata* var. *puberula*); 1B.1
- Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*); 1B.2
- White-veined monardella (*Monardella hypoleuca* ssp. *hypoleuca*); 1B.3
- Nuttall's scrub oak (*Quercus dumosa*); 1B.1
- Black-flowered figwort (*Scrophularia atrata*); 1B.2

Potential for these species to occur in specific treatment areas was determined based on vegetation types identified in the different areas, proximity to known occurrences/ranges, and elevation. Attachment C shows the potential for each species to occur by treatment area.

3.2.3 Special-Status Wildlife Species

Four federally listed wildlife species, California red-legged frog, southern steelhead, tidewater goby, and western snowy plover were identified as potentially occurring within or adjacent to one or more treatment areas. However, occurrence of southern steelhead and tidewater goby is limited to aquatic habitats within creeks, which are entirely outside the treatment areas, while potential occurrence of western snowy plover is limited to beaches, which also occur outside the treatment areas. The potential occurrence of steelhead is well known and it is restricted to the following watersheds supporting federal critical habitat adjacent to the treatment areas: Arroyo Hondo Creek, San Jose Creek, San Ysidro Creek, and Cieneguitas Creek. Occurrence of tidewater goby adjacent to the treatment areas is limited to the lower reaches of Arroyo Hondo Creek, which support critical habitat. Western snowy plover critical habitat occurs along the beach and dunes below the ocean bluffs at the southern edge of Ellwood Mesa. California red-legged frog is known from occurrences along Arroyo Quemada Creek near the Baron Ranch East and West treatment areas, where critical habitat encompassing the creek also includes extensive uplands that overlap the majority of the Baron Ranch East and West treatment areas. The species is also known from Arroyo Hondo Creek, which runs between the Arroyo Hondo East and West treatment areas; several locations near the Coral Canyon and Las Flores treatment areas; Ellwood Canyon near the Northgate site; and historic locations near the Trout Club and Painted Cave South FB treatment areas. It has the potential to occur in upland habitats near the aquatic breeding habitats where it has been detected.

Crotch bumble bee (*Bombus crotchii*) is a state candidate species for listing that has been recorded in an increasing number of locations in recent years and has the potential to occur in suitable habitats throughout the project site. As a candidate for listing under CESA, Crotch bumble bee receives the same protections as a species listed under CESA. Monarch butterfly is a federal candidate species that occurs in several groves of eucalyptus (*Eucalyptus* spp.)

and other groves of trees in the project vicinity. As a federal candidate species, monarch butterfly does not receive protections under the ESA. However, monarch butterfly winter roosts, in groves of eucalyptus and other trees, are considered ESH under policies in the Gaviota Coast Plan, the Goleta General Plan/LCP, and the EGVCP (County of Santa Barbara 2015). The potential occurrence of other non-listed special-status wildlife species is discussed in detail in Attachment B. Other non-listed special-status wildlife species are those identified as California SSC or California Fully Protected (FP) species. Those that are known to occur, or have potential to occur, in one or more of treatment areas, include:

- California newt; SSC
- Grasshopper sparrow (*Ammodramus savannarum*); SSC
- Burrowing owl (*Athene cunicularia*); SSC (winter only)
- White-tailed kite; FP
- San Diego desert woodrat (*Neotoma lepidus intermedia*); SSC
- American badger (*Taxidea taxus*); SSC
- Pallid bat (*Antrozous pallidus*); SSC
- Western red bat; SSC
- Northern California legless lizard; SSC
- Blainville's [coast] horned lizard; SSC
- Coast patch-nosed snake; SSC
- Two-striped gartersnake; SSC
- Western pond turtle; SSC

Potential for these species to occur in specific treatment areas was determined based on vegetation types identified in the different areas, as well as by elevation. Attachment C shows the potential for each species to occur by treatment area. The project may not result in impacts to all of these species. The potential for project activities to result in impacts to non-listed special-status wildlife is discussed in Chapter 4.

3.2.4 Jurisdictional Aquatic Resources

The reconnaissance surveys conducted as part of SPR BIO-1 do not require mapping of aquatic resources under the jurisdictions of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, or CDFW. However, the literature review and field reconnaissance identified the location of riparian habitat wherever it occurs and identified the location of potential wetlands. Streams that would likely be considered waters of the United States are relatively well known from data included in the National Hydrography Dataset (USGS 2023) and the National Wetlands Inventory (USFWS 2023b). Treatment areas supporting riparian vegetation and those potentially supporting wetlands are identified in Table 3. In general, few potentially jurisdictional waters or wetlands occur within the treatment areas, which were designed in part to avoid such areas.

3.2.5 Wildlife Movement and Nursery Sites

Much of the project site, particularly areas along the Gaviota Coast and in the Santa Ynez Mountains, is located at the edge of a vast area of undeveloped habitats supporting a wide variety of wildlife; because many other areas, such as in the San Marcos Foothills or along San Roque Creek, are in sparsely developed areas, larger wildlife

species such as mule deer (*Odocoileus hemionus*) likely move through regularly. Some of these species likely use creeks and other narrower areas of habitat extending southward to the coastal plain and may access more developed portions of the project site in the Goleta and Santa Barbara vicinities.

Movement of fish is tied to creeks within the project vicinity. Smaller animals occupying coastal scrub, chaparral, oak woodland, and streamside habitats outside the treatment areas occur along undeveloped corridors extending into more developed areas, which provide avenues of gene flow for populations of these less-mobile species, connecting populations in the Los Padres National Forest with those within the treatment areas. Therefore, nearly all of the treatment areas likely support some level of wildlife connectivity in the vicinity.

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
1. Arroyo Hondo West	Gaviota tarplant	No; see Attachment C	Single pass, May to October	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	Minimal, within potential wetland	Giant wild rye grassland (possible)	Y/N (mustards, non-native grasses)	Yes, within NWI Riverine (Figure 2-1)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2 3, 4, 6. 7, 8. 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 2a, 2a(1), 2b, 2b(1), 2g, 3a, 4
2. Arroyo Hondo East	Gaviota tarplant, seaside bird's-beak	Yes; see Attachment C	Single pass, May to July for all (May to October for herbaceous communities only)	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	None	Giant wild rye grassland (Figure 2-1), coast live oak woodland	Y/N (mustards, non-native grasses)	None	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 5, 6. 7, 8, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a
3. Baron Ranch West	Gaviota tarplant, seaside bird's-beak	Yes; see Attachment C	Single pass, May to October	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	None	Giant wild rye grassland (possible)	Y/N (mustards, non-native grasses)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 6, 7, 8, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b,

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
																2b(1), 2g, 3a, 4
4. Baron Ranch East	Gaviota tarplant, seaside bird's-beak	Yes; see Attachment C	Single pass, May to July for all (May to October for herbaceous communities only)	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	Yes (within ESH)	Giant wild rye grassland (possible)	Y/N (mustards, non-native grasses)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 5, 6, 7, 8, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a, 4
5. Las Flores Canyon	seaside bird's-beak	Yes; see Attachment C	Single pass, May to July for all (*no survey necessary for herbaceous habitats*)	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	None	Giant wild rye grassland,	Y/N (mustards, non-native grasses)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 5, 6, 7, 8, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a, 4
6. Coral Canyon	seaside bird's-beak	Yes; see Attachment C	Single pass, May to July for all (*no survey necessary for herbaceous habitats*)	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	None (adjacent within ESH)	Giant wild rye grassland (potential; Figure 2-3)	Y/N (mustards, non-native grasses)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented[ESH]	None	SPR BIO-2, 3, 5, 6, 7, 8, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
																BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a, 4
7. Ellwood Mesa	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats only) May to July (scrub)	Crotch bumble bee	Yes; see Attachment C	Yes (within ESH)	Native grassland (?) riparian, eucalyptus woodland (monarch butterfly roosting)	Y/N (mustards, non-native grasses)	Yes (NWI freshwater emergent; wetlands within ESH)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2b, 2b(1), 2g, 3a, 4
8. Northgate	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July (scrub)	California red-legged frog, Crotch bumble bee	No	None	Coyote brush scrub ESH	Y/Y (mustards [Figure 2-5], non-native grasses)	None (but see NWI riverine – not observed in field)	No	No significant sites	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 5, 6. 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2g, 3a, 4
9. Evergreen Park	None	Yes; see Attachment C	Single pass, May to July (riparian only). No rare plant surveys necessary elsewhere	None	Yes; see Attachment C	Yes (within ESH)	Riparian, eucalyptus woodland (monarch butterfly habitat)	N/N	Yes (within ESH)	No	No significant sites	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
																1b, 2b, 2b(1), 3a, 4
10. Lake Los Carneros	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July (scrub, oak woodland)	Crotch bumble bee	Yes; see Attachment C	Yes (within ESH)	Riparian (arroyo willow scrub), coast live oak woodland, eucalyptus woodland (monarch roosting)	Y/N (non-native grasses; Figure 2-6)	Yes (within ESH; additional observed in field; Figure 2-6)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 5, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2b, 2b(1), 2g, 3a, 4
11. La Goleta North	None	Yes; see Attachment C	Single pass, May to November (herbaceous habitats only)	None	Yes; see Attachment C	Yes (within ESH)	Riparian, eucalyptus woodland (monarch potential)	Y/N (non-native grasses)	None	No	No significant sites	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1b, 2b, 2b(1), 3a
12. La Goleta South	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July (scrub, oak woodland)	None	Yes; see Attachment C	Yes (within ESH)	Riparian, coast live oak woodland	Y/N (non-native grasses)	None	No	No significant sites	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
																1a, 1b, 2b, 2b(1), 3a
13. Via Salerno South	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to August overall	None	No	None	Coast live oak woodland	Y/N (mustards, non-native grasses)	None observed (but see NWI freshwater forested/ shrub)	No	No significant sites	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 7, 9, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 3a, 4
14. Via Salerno North	None	Yes; see Attachment C	Single pass, May to November (herbaceous habitats only)	None	No	None	None	Y/N (mustards, non-native grasses)	None	No	No significant sites	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 7, 9, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1b
15. Trout Club	seaside bird's-beak	Yes; see Attachment C	Single pass, June	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	Yes (within ESH)	coast live oak woodland	Y/N (non-native grasses)	None	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 5, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a
16. Painted Cave South FB	None	Yes; see Attachment C	Single pass, June	California red-legged	Yes; see Attachment C	Yes (within ESH)	Coast live oak woodland, coastal	N/N	None (but see adjacent	Yes, due to temporary	No significant sites, but	LTS impacts	Yes	Consistent, with recommended	None	SPR BIO-2, 3, 4, 5, 6, 7, 9, 10,

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
				frog, Crotch bumble bee			scrub (sensitive in the EGVCP)		NWI riverine)	fencing for grazing	see “Non-listed Special-Status Wildlife”			measures implemented		11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a, 4
17. Oak Grove	seaside bird’s-efbeak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July overall	Crotch bumble bee	Yes; see Attachment C	None	California brittle bush scrub	Y/N (mustards, other forbs)	None	Yes, due to temporary fencing for grazing	No significant sites, but see “Non-listed Special-Status Wildlife”	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 5, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a
18. County Range	seaside bird’s-beak	Yes; see Attachment C	Single pass May to November (herbaceous habitats only) May to July elsewhere	Crotch bumble bee	Yes; see Attachment C	None	Coast live oak woodland, giant wild rye grassland, California brittle bush scrub, scrub restoration area (Figure 2-11)	Y/Y (mustards, yellow sweet clover, etc.; Figure 2-11)	None	Yes, due to temporary fencing for grazing	No significant sites, but see “Non-listed Special-Status Wildlife”	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 5, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2b, 2b(1), 2g, 3a

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
19. West Mesa	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July overall	Crotch bumble bee	Yes; see Attachment C	None (adjacent within ESH)	minimal coast live oak woodland (riparian and upland)	Y/N (non-native grasses)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 5, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2b, 2b(1), 2g, 3a, 4
20. SM Foothills	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July overall	Crotch bumble bee	Yes; see Attachment C	Yes (within ESH)	Purple needle grass grassland, coast live oak woodland/ savanna, restored scrub (Figure 2-13)	Y/N (non-native grasses)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2b, 2b(1), 2g, 3a, 4
21. Preserve SM Private	Seaside bird's-beak	Yes, Attachment C	Single pass, May to November (herbaceous); May to July overall	Crotch bumble bee	Yes; see Attachment C	None (adjacent within ESH)	Restored scrub (Figure 2-13)	Y/N (non-native grasses, mostly maintained)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS Impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 5, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2b, 2b(1), 2g, 3a, 4

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
22. Preserve SM HOA	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July overall	Crotch bumble bee	Yes; see Attachment C	Yes (within ESH)	Riparian (note: "bulrush" mapped by Envicom [City of Santa Barbara data] is California sagebrush scrub)	Y/N (mustards, non-native grasses)	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 4, 5, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2b, 2b(1), 2g, 3a, 4
23. SM Foothills East	seaside bird's-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July overall	Crotch bumble bee	Yes; see Attachment C	Yes (within ESH)	Coast live oak woodland (riparian and upland)	Y/N (mustards, non-native grasses)	Yes (NWI riverine within oak woodland riparian)	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 4, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2b, 2b(1), 2g, 3a, 4
24. Rancho San Roque West	None	No	N.A.	California red-legged frog	Yes; see Attachment C	Yes (within ESH)	None	Y/N (non-native grasses)	None	Yes, due to temporary fencing for grazing	No significant sites, but see "Non-listed Special-Status Wildlife"	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-2a, 2a(1), 2b, 2b(1), 4

Table 3. Biological Resources by Treatment Area and California Vegetation Treatment Program PEIR Bio Impact

Treatment Area	Impact BIO-1			Impact BIO-2		Impact BIO-3			Impact BIO-4	Impact BIO-5		Impact BIO-6		Impact BIO-7	Impact BIO-8	
	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	Sensitive Natural Communities (SPR BIO-3, MM BIO-3a)	Invasives Present?/ Mapped?	Potential Wetlands	Wildlife Movement	Nursery Sites (MM BIO-5)	Common Wildlife	Nesting Birds	Local Plans, Policies, Ordinances	Conflict with HCP, etc.	Applicable SPRs and MMs
25. Rancho San Roque East	None	No	N.A.	California red-legged frog	Yes; see Attachment C	Yes (within ESH)	None	N/N	Yes (NWI riverine)	Yes, due to temporary fencing for grazing	No significant sites, but see “Non-listed Special-Status Wildlife”	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-2a, 2a(1), 2b, 2b(1), 4
26. Rancho San Roque South	seaside bird’s-beak	Yes; see Attachment C	Single pass, May to November (herbaceous habitats); May to July overall	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	None	coast live oak woodland	Y/N (non-native grasses)	None	Yes, due to temporary fencing for grazing	No significant sites, but see “Non-listed Special-Status Wildlife”	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 3, 6, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a
27. Tunnel Road FB	seaside bird’s-beak	Yes; see Attachment C	Single pass, May to July; no surveys necessary for herbaceous habitats	California red-legged frog, Crotch bumble bee	Yes; see Attachment C	None	None identified	Y/Y (mustards, non-native grasses; Figure 2-16)	None	Yes, due to temporary fencing for grazing	No significant sites, but see “Non-listed Special-Status Wildlife”	LTS impacts	Yes	Consistent, with recommended measures implemented	None	SPR BIO-2, 5, 7, 9, 10, 11, 12; SPR AD-3; SPR AQ-4; SPR GEO 1, 3, 4, 7; SPR HYD-1, 3, 4; MM BIO-1a, 1b, 2a, 2a(1), 2b, 2b(1), 2g, 3a

4 Recommendations

This section includes recommendations for implementing SPRs and MMs specific to the proposed treatment. SPR BIO-1 has been implemented for all treatment areas and no further action is required to satisfy this requirement. Table 3 lists the SPRs and MMs that should be implemented for each treatment area.

For some other biological resources SPRs, no additional details are described below, but the measures should be implemented as described in Section 1.2, Project Description, and as required in the PEIR. These include the following:

- SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Scrub
- SPR BIO-6: Prevent Spread of Plant Pathogens
- SPR BIO-8: Identify and Avoid or Minimize Impacts in Coastal Zone ESHAs.
- SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife
- SPR BIO-11: Install Wildlife Friendly Fencing

Several SPRs for other disciplines also should be implemented to address biological resources impacts, including the following:

- SPR AD-3: Consistency with Local Plans, Policies, and Ordinances
- SPR GEO-1: Suspend Disturbance during Heavy Precipitation
- SPR GEO-3: Stabilize Disturbed Soil Areas
- SPR GEO-4: Erosion Monitoring
- SPR GEO-7: Minimize Erosion
- SPR HAZ 5: Spill Prevention and Response Plan
- SPR HYD-1: Comply with Water Quality Regulations
- SPR HYD-3: Water Quality Protections for Prescribed Herbivory
- SPR HYD-4: Identify and Protect Watercourse and Lake Protection Zones

Several biological resources MMs will also be implemented where necessary (see Table 3), without any additional, project-specific requirements. These include the following:

- MM BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA (but see SPR BIO-7, below)
- MM BIO-1b: Avoid Loss of Special-Status Plants Not Listed under ESA or CESA (but see SPR BIO-7, below).
- MM BIO-3: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands (but see SPR BIO-3, below)
- MM BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites

The recommendations below incorporate those provided by CDFW (2023b) (Attachment D) and USFWS (2023c) (Attachment E) during coordination. USFWS provided no specific recommendations to avoid take of federally listed species at the time of preparation of this memorandum, but the recommendations below include several to avoid

take of California red-legged frog and federally listed plants. Any recommendations provided by USFWS at a later date, or additional recommendations by CDFW, should be incorporated into the final treatment plans.

For measures not listed above, this section provides "Project-Specific Requirements," which are intended as addenda to the existing SPRs and MMs specific to the project. These requirements are incorporated into the Project Specific Analysis/Addendum for the project.

SPR BIO-2: Require Biological Resource Training for Workers. This SPR should be implemented for all treatment areas.

Project-Specific Requirements: Resources to be addressed are those described in the Biological Technical Memorandum for the Santa Barbara South Coast Herbivory Project, Attachment C, Potentially Occurring Special-Status Plant and Wildlife Species by Treatment Area. The following listed species shall be addressed by the training:

- Seaside bird's beak
- Gaviota tarplant
- California red-legged frog
- Crotch bumble bee

Non-listed plant and wildlife species shall include those listed in Attachment C, Potentially Occurring Special-Status Plant and Wildlife Species by Treatment Area, of the Biological Technical Memorandum for the Santa Barbara South Coast Herbivory Project.

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats. Implementation of this measure according to Project-Specific Requirements will result in protection of sensitive communities identified during implementation of SPR BIO-1 and during pre-activity survey to be conducted under SPR BIO-3.

Project-Specific Requirements: All sensitive communities identified during implementation of SPR BIO-1 and listed by treatment area in Table 3 in the Biological Technical Memorandum for the Santa Barbara South Coast Herbivory Project shall be protected in accordance with this measure. Buffers shall adhere to recommendations provided in Table 4 of the Biological Technical Memorandum for the Santa Barbara South Coast Herbivory Project and shall be consistent with the applicable area plan, including the Gaviota Coast Plan, the City of Goleta General Plan/Local Coastal Program, and the Eastern Goleta Valley Community Plan. In addition to vegetation communities protected under the CalVTP PEIR, coastal scrub communities within the City of Goleta General Plan/Local Coastal Program area and the Eastern Goleta Valley Community Plan area shall receive protections in accordance with those plans. Oak woodlands shall be delineated and protected wherever they occur. However, for sites within the City of Goleta, treatment may be conducted within coastal scrub, native grassland, monarch butterfly roost, and oak woodland ESHA, in consultation with the City of Goleta. Restoration sites identified within County Range and Preserve SM Private should be protected as any sensitive communities.

SPR BIO-4: Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function. Treatment areas supporting riparian habitat or where riparian habitat potentially occurs were identified during implementation of SPR BIO-1 and are listed by treatment area in Table 3. Surveys should be conducted in these areas prior to conducting treatment activities, to delineate the habitat and buffers.

Project-Specific Requirements: In accordance with SPR HYD-3, no grazing shall occur within 50 feet of any riparian habitat. In addition, all no-disturbance buffers for riparian habitats shall conform with provisions of the Gaviota Coast Plan, the Goleta General Plan/Local Coastal Program, and the Eastern Goleta Valley Community Plan, whichever is applicable. Any disturbance occurring within riparian habitat subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) would require that the applicant seek a Lake and Streambed Alteration Agreement from CDFW.

SPR BIO-7: Survey for Special-Status Plants. Special-status plant surveys may not be required for all treatment areas. See Table 3 for treatment areas potentially supporting special-status plants and survey windows. As noted in the Project-Specific Requirements for SPR BIO-7, the timing of surveys for any particular treatment area, or even the necessity of surveys, may depend on the vegetation communities targeted by treatment. If grazing focuses exclusively on herbaceous communities (grassland, mustards, other invasive annuals or perennial herbs), the target species list is likely to be much shorter and the survey window is likely to be longer.

Project-Specific Requirements: Species that shall be the focus of special-status plant surveys are as follows:

- seaside bird's beak
- Gaviota tarplant
- black-flowered figwort
- Davidson's saltscale
- late-flowered mariposa-lily
- mesa horkelia
- Nuttall's scrub oak
- Santa Barbara honeysuckle
- southern tarplant
- umbrella larkspur
- white-veined monardella

The required timing of surveys may vary depending on vegetation communities targeted by project activities. Attachment B, Special-Status Plant and Wildlife Species with Potential to Occur in the Treatment Area, in the Biological Technical Memorandum for the Santa Barbara South Coast Herbivory Project (Biological Technical Memorandum), supplies the blooming period for each potentially occurring plant species, as well as vegetation communities in which the species occur. As well as being limited by vegetation type, the potential of several species to occur in the treatment areas may be limited geographically. For example, Gaviota tarplant potentially occurs only in Arroyo Hondo East and West and Baron Ranch East and West, on the Gaviota Coast. See Attachment C, Potentially Occurring Special-Status Species by Treatment Area, in the Biological Technical Memorandum, with regard to which species potentially occur in each project site. Table 3 of the Biological Technical Memorandum provides the recommended timing for surveys by treatment area. Buffers and avoidance for special-status plants shall comply with MM BIO-1a, Avoid Loss of Special-Status Plants Listed

under ESA or CESA, and MM BIO-1b, Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA, but shall also comply with requirements of the applicable local area plan, including the Gaviota Coast Plan, the City of Goleta General Plan/LCP, and the Eastern Goleta Valley Community Plan, depending on location.

Field data forms for the CNDDB shall be submitted for any observations of special-status plant species observed during pre-activity surveys or during treatment activities.

SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites. No surveys are required under any established survey protocol. However, the Project-Specific Requirements provide information on species for which surveys are required, as well as additional guidance related to surveys for these species.

The project is expected to avoid impacts to wooded habitats and grazing is not expected to result in impacts to special-status bats roosting in trees or to any roosting bats. In addition, no grazing will occur in aquatic habitats or riparian habitats or within 50 feet of such habitats. Therefore, no impacts are expected to steelhead, tidewater goby, or two-striped gartersnake. Western snowy plovers may occur adjacent to the Ellwood Mesa site, on beaches below the Pacific Ocean bluffs. But no impacts would occur to this species. Finally, grasshopper sparrows may occur in the appropriate season, but surveys and protection measures required under SPR BIO-12, Protect Common Nesting Birds, including Raptors, address potential impacts to this species. Therefore, no surveys are required for steelhead, tidewater goby, two-striped gartersnake, pallid bat, western red bat, western snowy plover, or grasshopper sparrow.

Project-Specific Requirements: Surveys shall be conducted for the following wildlife species in areas where they have the potential to occur:

- Monarch butterfly
- California red-legged frog
- California newt
- burrowing owl
- white-tailed kite
- San Diego desert woodrat
- American badger
- Blainville's [coast] horned lizard
- Western pond turtle

Surveys for California red-legged frog, California newt, and western pond turtle will focus on upland (i.e., non-aquatic) habitats in areas where these species may occur. However, for work in areas where California red-legged frog potentially occurs, a survey should be conducted that would include a search for suitable aquatic habitat in all areas within 100 meters (approximately 330 feet) of the treatment area, to the extent accessible. "Aquatic habitat" shall include all areas potentially providing any habitat value for these species, including temporary refuge. The California red-legged frog survey shall be conducted by a biologist qualified to survey for that species.

Burrowing owl is expected only from fall until early spring in the project area. Therefore, surveys for this species shall be conducted from September 15 through April 15. Surveys for all other species listed above shall be

conducted regardless of season. As no project activities would occur in aquatic habitats, protocol surveys for California red-legged frog are not required. But pedestrian surveys in upland areas should focus on the potential presence of this species, as well as nesting western pond turtles and California newts inhabiting upland areas.

Field data forms for the CNDDB shall be submitted for any observations of special-status wildlife species observed during pre-activity surveys or during treatment activities.

SPR BIO-12: Protect Common Nesting Birds, including Raptors. This SPR should be implemented in the appropriate season for all treatment areas.

Project-Specific Requirements: If treatment is initiated in any new areas between January 15 and August 31, conduct a pre-activity nesting bird survey in accordance with this requirement.

Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species. This measure will be implemented for areas where California red-legged frog or Crotch bumble bee potentially occur (see Table 3).

Project-Specific Requirements: To avoid take of California red-legged frog in accordance with MM BIO-2a, implement the following special measures:

- Avoid treatment activities during the rainy season (October 1 to April 30), in any area where California red-legged frog potentially occurs (see Table 3 in Biological Technical Memorandum for the Santa Barbara South Coast Herbivory Project) that is within 330 feet of aquatic habitat. Adjacent (offsite) areas where the absence of aquatic habitat cannot be verified should be considered as having aquatic habitats, and the buffer distance of 330 feet shall apply. For purposes of this measure, "aquatic habitat" refers to any habitat where the California red-legged frogs may potentially take refuge, including seeps and shallow pools, and not only aquatic breeding habitat.
- Project activities may take place within the 330-foot buffer during winter, only if a burrow survey is conducted prior to conducting project activities and avoidance of all burrows is implemented.
- Fence installation work shall not be scheduled or implemented when 0.5 inches or greater of rain is forecast or within 24 hours after a rain event in any area where California red-legged frog potentially occurs.
- If any California red-legged frogs are observed during pre-activity surveys (see SPR BIO-10, Project-Specific Requirements), consult with USFWS to determine appropriate avoidance measures in accordance with MM BIO-2a. If any California red-legged frogs are encountered during treatment, stop work in the vicinity of the observation and immediately notify USFWS of the occurrence. Consult with USFWS on the appropriate course of action.

Mitigation Measure BIO-2b: *Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species*. This measure will be implemented for areas where non-listed special-status species potentially occur (see Table 3).

Project-Specific Measures: Avoidance measures for non-listed special-status wildlife species shall include:

- California newt: In any area where California newt is detected during surveys, fence installation work shall not be scheduled or implemented when rain is forecast or within 48 hours after a rain event. A

buffer of 100 feet around any observation shall be established, as long as the species is present there. This buffer may be reduced, as determined by Registered Professional Forester or biologist.

- Western pond turtle: If pre-activity surveys identify the presence of western pond turtles or their nests in upland habitats subject to project activities, establish a buffer of 100 feet around the nest location or where the turtle was observed, within which no project activities, including grazing, may take place, as long as turtles or active nests are present. Install fencing to exclude grazing activities from the buffer area, in accordance with other CalVTP standard project requirements and mitigation measures.
- Blainville's horned lizard/coast patch-nosed snake: If Blainville's horned lizards or coast patch-nosed snakes are observed during pre-activity surveys, establish a buffer of 100 feet around the location of the observation, within which no project activities, including grazing, may take place. This buffer may be reduced, as determined by a Registered Professional Forester or biologist. Install fencing to exclude grazing activities from the buffer area, in accordance with other CalVTP standard project requirements and mitigation measures.
- San Diego desert woodrat: If San Diego desert woodrats or their nests are observed during pre-activity surveys, establish a buffer of 100 feet around the location of the observation, within which no project activities, including grazing, may take place. This buffer may be reduced, as determined by a Registered Professional Forester or biologist. Install fencing to exclude grazing activities from the buffer area, in accordance with other CalVTP standard project requirements and mitigation measures. This measure applies to any woodrat nests located for which the occupant species cannot be established.
- If burrowing owl or American badger is detected during surveys, establish a minimum buffer of 50 meters (164 feet) around any occupied burrow, within which no project activities may take place, as long as these species are present.
- If any special-status wildlife species not addressed in this measure are encountered, implement avoidance measures consistent with the above measures and the life history of the species involved, in accordance with MM BIO-2b.

Field data forms for the CNDDB shall be submitted for any observations of special-status wildlife species observed during pre-activity surveys or during treatment activities

Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees. This measure will be implemented in all areas where this species potentially occurs (Table 3).

Project-Specific Measures: to address the requirements of MM BIO-2g, implement the following measures:

- In addition to wet meadow, forest meadow, riparian, grassland, or coastal scrub habitats, also consider oak woodland and chaparral as suitable habitat for Crotch bumble bee, where these communities contain suitable floral resources.
- When considering whether suitable floral resources may remain after treatment, consider (1) potential presence of floral resources within habitats included in the project site but not subject to grazing (e.g., if implementation includes avoidance of coastal scrub or chaparral habitats or avoidance of sensitive natural communities [native grasslands, California brittle bush scrub]), (2)

exclusion of any areas due to steepness of slopes, and (3) the quality of habitat being treated and whether treatment may improve habitat by permitting suitable floral resources to grow. Avoidance of these areas may address the requirement to conduct treatment in a "patchy" pattern.

- During the season when workers are most likely to be present (typically, April to September), conduct a survey to search for presence of bumble bees to identify activity potentially signaling the presence of a nest. The actual survey period should be determined by the qualified biologist, based on site specific environmental factors, such as the location, local observation records, elevation, seasonal rainfall, average ambient air temperatures, and/or local seasonal weather conditions. Searching for a nest may include watching an area of high bee activity or following bees observed foraging. Suitable nesting and wintering habitats may include animal burrows of any size, debris piles, rock walls, or a duff layer.
- Follow any additional guidance provided by the California Department of Fish and Wildlife subsequent to completion of the project-specific analysis.

Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands. This measure should be implemented for nearly every treatment area (see Table 3).

> Project-Specific Requirements: Avoidance buffers for sensitive natural communities shall be in accordance with policies of the appropriate local area plan, including the Gaviota Coast Plan, the City of Goleta General Plan/Local Coastal Program, and the Eastern Goleta Valley Community Plan. Guidance from County of Santa Barbara or City of Goleta staff, as appropriate, including permitting grazing within buffers or with oak woodland or other sensitive habitats, may supersede buffer distance requirements and other prohibitions in policies.

Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands. This measure should be implemented whenever a potential state or federal wetland is observed.

> Project-Specific Requirements: All buffers established around delineated wetlands or potential wetlands shall conform with policies included in the appropriate local area plan, including the Gaviota Coast Plan, the City of Goleta General Plan/LCP, and the Eastern Goleta Vally Community Plan, as well as any standards for avoidance included in MM BIO-4.

Other Recommendations

In general, as the treatments are largely designed to target areas supporting invasives, large areas of native grasses, mustards, or other invasive annuals were noted on several of the treatment areas. Because such areas occur at nearly every site, they were not specifically delineated in the field in most cases. However, Figures 2-1 through 2-16 note locations of invasives for several treatment areas. Therefore, we recommend removing invasive species in the areas where delineated, but also focusing treatment on invasives in areas noted in Table 3, in accordance with SPR BIO-9.

Any additional recommendations provided by CDFW or USFWS prior to the implementation of treatment activities should be incorporated into the treatment plan. General information about the recommended approach for each project site is in Table 4. These recommendations focus on known resources (Table 3; Figures 2-1 to 2-16). For all of the treatment areas, applicable SPRs and MMs noted in Table 3 should be implemented.

Table 4. Recommendations by Project Site

Project Site	General Recommendations
1. Arroyo Hondo West	1. Avoid identified potential wetlands (Figure 2-1) and 100-foot buffer and avoid any other wetlands identified during implementation of MM BIO-2a and a 100-foot buffer 2. Avoid native grassland, if identified during implementation of SPR BIO-3 3. Avoidance of the above features would help address the requirement of MM BIO-2g with regard to Crotch bumble bee and conducting treatment "in a patchy pattern" 4. See Table 3 for potentially occurring species and for measures that should be implemented
2. Arroyo Hondo East	1. Field-delineate identified native grassland (Figure 2-1) and avoid this and any other native grassland identified during implementation of SPB BIO-3 2. Avoiding oak woodland, coastal scrub, and chaparral will reduce rare plant restrictions 3. Avoiding native grassland, oak woodland, coastal scrub, and chaparral would likely address the requirement of MM BIO-2g with regard to Crotch bumble bee and conducting treatment "in a patchy pattern" 4. Avoid riparian vegetation associated with Arroyo Hondo, in accordance with SPR HYD-3. 5. See Table 3 for potentially occurring species and for measures that should be implemented
3. Baron Ranch West	1. Avoid any areas of native grassland identified during implementation of SPR BIO-1 2. Avoiding swales shown on Figure 2-2, as "NWI – Riverine" and avoiding native grassland would help address the requirement of MM BIO-2g with regard to Crotch bumble bee and conducting treatment "in a patchy pattern" 3. Avoid riparian vegetation associated with Arroyo Quemado, in accordance with SPR HYD-3. 4. See Table 3 for potentially occurring species and for measures that should be implemented
4. Baron Ranch East	1. Avoid areas of native grassland identified during implementation of SPB BIO-3 2. Avoiding oak woodland and chaparral will reduce rare plant restrictions 3. Avoiding native grasslands, oak woodland, chaparral, and "NWI – Riverine (Figure 2-2), would help address the requirement of MM BIO-2g with regard to Crotch bumble bee and conducting treatment "in a patchy pattern" 4. See Table 3 for potentially occurring species and for measures that should be implemented
5. Las Flores Canyon	1. Avoid native grassland identified during implementation of SPR BIO-3 2. Avoiding coastal scrub and chaparral will reduce rare plant restrictions

Table 4. Recommendations by Project Site

Project Site	General Recommendations
	3. Implement a 50-foot buffer from adjacent monarch butterfly habitat in the coastal zone, in accordance with the Gaviota Coast Plan 4. Avoiding native grassland, coastal scrub, chaparral and "NWI – Riverine (Figure 2-3) would help address the requirement of MM BIO-2g with regard to Crotch bumble bee and conducting treatment "in a patchy pattern" 5. See Table 3 for potentially occurring species and for measures that should be implemented
6. Coral Canyon	1. Avoid areas of native grassland identified during implementation of SPR BIO-3 2. Avoiding oak woodland and chaparral will reduce rare plant restrictions 3. Implement a 50-foot buffer from adjacent monarch butterfly habitat in the coastal zone, in accordance with the Gaviota Coast Plan 4. Avoiding native grassland, oak woodland, chaparral and "NWI – Riverine (Figure 2-3) would help address the requirement of MM BIO-2g with regard to Crotch bumble bee and conducting treatment "in a patchy pattern" 4. See Table 3 for potentially occurring species and for measures that should be implemented
7. Ellwood Mesa	1. Map native grassland in the field during implementation of SPR BIO-3 and consult with the City of Goleta Parks as to whether grazing is consistent with City policies and beneficial. Any grazing of native grassland should be conducted seasonally, after native grasses have set seed. 2. Avoid Devereux Creek, tributary waters and wetlands, and an appropriate buffer (Figure 2-4). 3. Avoid Riparian/Marsh/Vernal as delineated during implementation of SPR BIO-4 and MM BIO-4, conducted under permits or in consultation with the appropriate agency (RWQCB, CDFW, California Coastal Commission). 4. Avoid treatment within Scrub ESHA, except in consultation with the City of Goleta. 4. Grazing may be conducted within eucalyptus woodland, in consultation with the City of Goleta, to target invasive herbaceous species. 5. ESH resources shown in Figure 2-4, in some cases, may not reflect conditions in the field and the extent of habitats depicted. If conducting treatment in areas where conditions in the field do not reflect the presence of sensitive resources shown in Figure 2-4, confirm with the City of Goleta before implementing treatment. 5. Avoiding sensitive resources identified in Figure 2-4 would help address the requirement in MM BIO-2g, with regard to Crotch bumble bee and conducting treatment "in a patchy pattern." 6. See Table 3 for potentially occurring species and for measures that should be implemented

Table 4. Recommendations by Project Site

Project Site	General Recommendations
8. Northgate	1. Avoid Dudek's expanded ESH Scrub, unless treatment is conducted in consultation with the City of Goleta 2. Avoid "Riverine" feature at northern property boundary 3. Focusing treatment on herbaceous habitats only will limit rare plant survey requirements and help address the requirement of MM BIO-2g with regard to Crotch bumble bee and conducting treatment "in a patchy pattern" 4. See Table 3 for potentially occurring species and for measures that should be implemented
9. Evergreen Park	1. Avoid riparian habitat and a minimum a 50-foot buffer, in accordance with SPR HYD-3 2. Avoid wetlands and a minimum 50-foot buffer 3. Treatment may be conducted within eucalyptus woodland, in consultation with the City of Goleta, except within riparian and streambed habitat and buffer. 4. See Table 3 for potentially occurring species and for measures that should be implemented
10. Lake Los Carneros	1. Avoid Dudek-mapped potential wetlands and ESH wetlands (Figure 2-6) and 50-foot buffer 2. Avoid riparian habitat and a 50-foot buffer, in accordance with SPR HYD-3 3. Treatment may be conducted within and adjacent to ESH scrub, in consultation with the City of Goleta Parks. 4. Treatment may be conducted within and adjacent to monarch butterfly ESH, in consultation with City of Goleta Parks. 5. Area of Scrub ESH in northern part of site is not Scrub (see Figure 2-6) and should not be subject to restrictions on grazing (subject to concurrence of the City of Goleta Parks) 6. Treatment may be conducted within coast live oak woodland ESH, in consultation with City of Goleta Parks. 7. 4. See Table 3 for potentially occurring species and for measures that should be implemented
11. La Goleta North	1. Avoid riparian habitat and a 50-foot buffer, in accordance with SPR HYD-3 2. Treatment may be conducted within eucalyptus woodland, in consultation with the City of Goleta Parks, as long as restrictions on treatment within riparian and streambed (SPR HYD-3) are met. 3. See Table 3 for potentially occurring species and for measures that should be implemented
12. La Goleta South	1. Avoid riparian habitat and 50-foot buffer, in accordance with SPR HYD-3 2. Treatment may be conducted within oak woodland and other upland woodland, as long as restrictions on treatment within riparian and streambed (SPR HYD-3) are met 3. See Table 3 for potentially occurring species and for measures that should be implemented

Table 4. Recommendations by Project Site

Project Site	General Recommendations
13. Via Salerno South	1. Treatment may be conducted within oak woodland, in consultation with the City of Goleta 2. See Table 3 for potentially occurring species and for measures that should be implemented
14. Via Salerno North	1. No restrictions apply other than those described in SPRs and MMs listed in Table 3
15. Trout Club	1. Avoid ESH and any associated riparian vegetation and a 50-foot buffer in the southern part of site (Figure 2-9) 2. See Table 3 for potentially occurring species and for measures that should be implemented
16. Painted Cave South FB	1. Avoid oak woodland riparian and 50-foot buffer in southeast corner of site (Figure 2-10) 2. Avoid coastal scrub and a 25-foot buffer, in accordance with the EGVCP, except for removal of non-native vegetation. 3. See Table 3 for potentially occurring species and for measures that should be implemented
17. Oak Grove	1. Avoid California brittle bush scrub (not mapped) and other coastal scrub, as identified during implementation of SPR BIO-3, and in accordance with the EGVCP, except for removal of non-native vegetation. 2. See Table 3 for potentially occurring species and for measures that should be implemented
18. County Range	1. Prioritize treatment of invasives (Figure 2-11) 2. Avoid large area of ESH, sensitive vegetation (California brittle bush scrub), and restored vegetation in the north (Figure 2-11) 3. Avoid additional areas of coastal scrub identified during implementation of SPR BIO-3, in accordance with the EGVCP, except for removal of non-native vegetation. 4. Avoid any native grassland identified by Dudek (Figure 2-11) or identified during implementation of SPR BIO-3 5. See Table 3 for potentially occurring species and for measures that should be implemented
19. West Mesa	1. Avoid any native grasslands identified during implementation of SPR BIO-3 2. Avoid County riparian ESH and a 50-foot buffer, in accordance with the EGVCP and as identified during implementation of SPR BIO-3 3. Avoid coastal scrub identified during implementation of SPR BIO-3, and a 25-foot buffer, in accordance with the EGVCP, except for removal of non-native vegetation. 4. See Table 3 for potentially occurring species and for measures that should be implemented
20. SM Foothills	1. Avoid County riparian ESH and a 50-foot buffer in the southwest corner (Figure 2-13), in accordance with the EGVCP and as identified during implementation of SPR BIO-3 2. Avoid any native grassland identified during implementation of SPR BIO-3

Table 4. Recommendations by Project Site

Project Site	General Recommendations
	3. Avoid coastal scrub identified during implementation of SPR BIO-3, and a 25-foot buffer, in accordance with the EGVCP, except for removal of non-native vegetation. 4. See Table 3 for potentially occurring species and for measures that should be implemented
21. Preserve SM Private	1. Avoid restoration area identified in northern part of site (Figure 2-13), except for removal of non-native vegetation 2. Avoid/protect riparian/woodland habitat at eastern edge of site, as well as a 50-foot buffer 3. See Table 3 for potentially occurring species and for measures that should be implemented
22. Preserve SM HOA	1. Avoid riparian vegetation at eastern and western site edges and a 50-foot buffer and avoid NWI feature identified on Figure 2-13 2. Avoid coastal scrub identified during implementation of SPR BIO-3, and a 25-foot buffer, in accordance with the EGVCP, except for removal of non-native vegetation 3. See Table 3 for potentially occurring species and for measures that should be implemented
23. SM Foothills East	1. Avoid ESH woodland along Cieneguitas Creek, in southern and western parts of site, as well as a 50-foot buffer (Figure 2-13) 2. See Table 3 for potentially occurring species and for measures that should be implemented
24. Rancho San Roque West	1. Avoid ESH and associated riparian vegetation along east and west edges of site, as delineated during implementation of SPR BIO-4, as well as a 50-foot buffer (Figure 2-14) 2. See Table 3 for potentially occurring species and for measures that should be implemented
25. Rancho San Roque East	1. Avoid ESH and associated vegetation along west edge of site and at northern and southern tips of site, as delineated during implementation of SPR BIO-4, as well as a 50-foot buffer (Figure 2-14) 2. See Table 3 for potentially occurring species and for measures that should be implemented
26. Rancho San Roque South	1. Avoid small area of ESH and associated vegetation in north (Figure 2-15), as delineated during implementation of SPR BIO-4, as well as a 50-foot buffer 2. See Table 3 for potentially occurring species and for measures that should be implemented
27. Tunnel Road FB	1. Avoid identified swales, if determined potentially jurisdictional during implementation of SPR BIO-3 or MM BIO-4 2. See Table 3 for potentially occurring species and for measures that should be implemented

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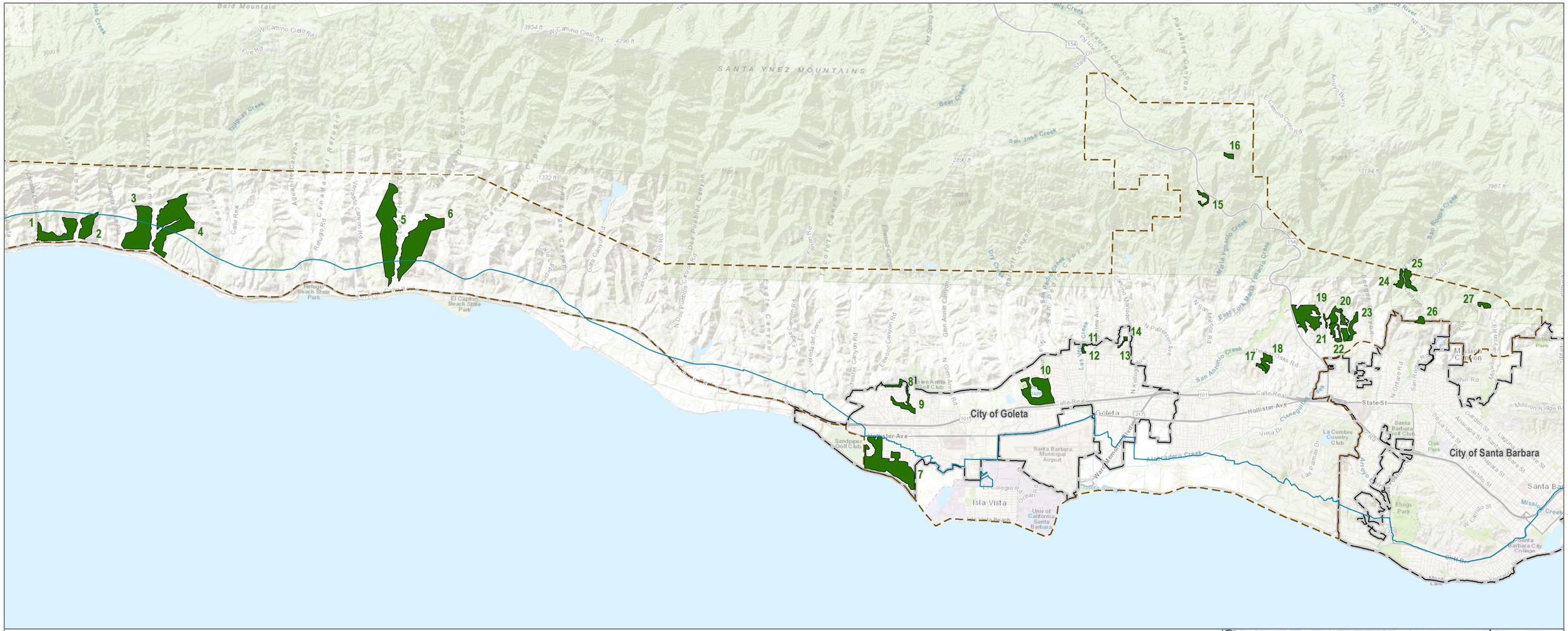
Attachment A

Figures 1 and 2-1 to 2-16



Project Study Area

Coastal Zone Boundary

Project Sites

1 : Arroyo Hondo West
2 : Arroyo Hondo East
3 : Baron Ranch West
4 : Baron Ranch East
5 : Las Flores
6 : Coral Canyon
7 : Ellwood Mesa
8 : Northgate
9 : Evergreen Park
10 : Lake Los Carneros
11 : La Goleta North
12 : La Goleta South
13 : Via Salerno South
14 : Via Salerno North
15 : Trout Club
16 : Painted Cave South FB
17 : Oak Grove
18 : County Range
19 : West Mesa
20 : SM Foothills
21 : Preserve SM Private
22 : Preserve SM HOA
23 : SM Foothills East
24 : San Roque West
25 : San Roque East
26 : San Roque South
27 : Tunnel Rd FB

SOURCE: USGS National Map

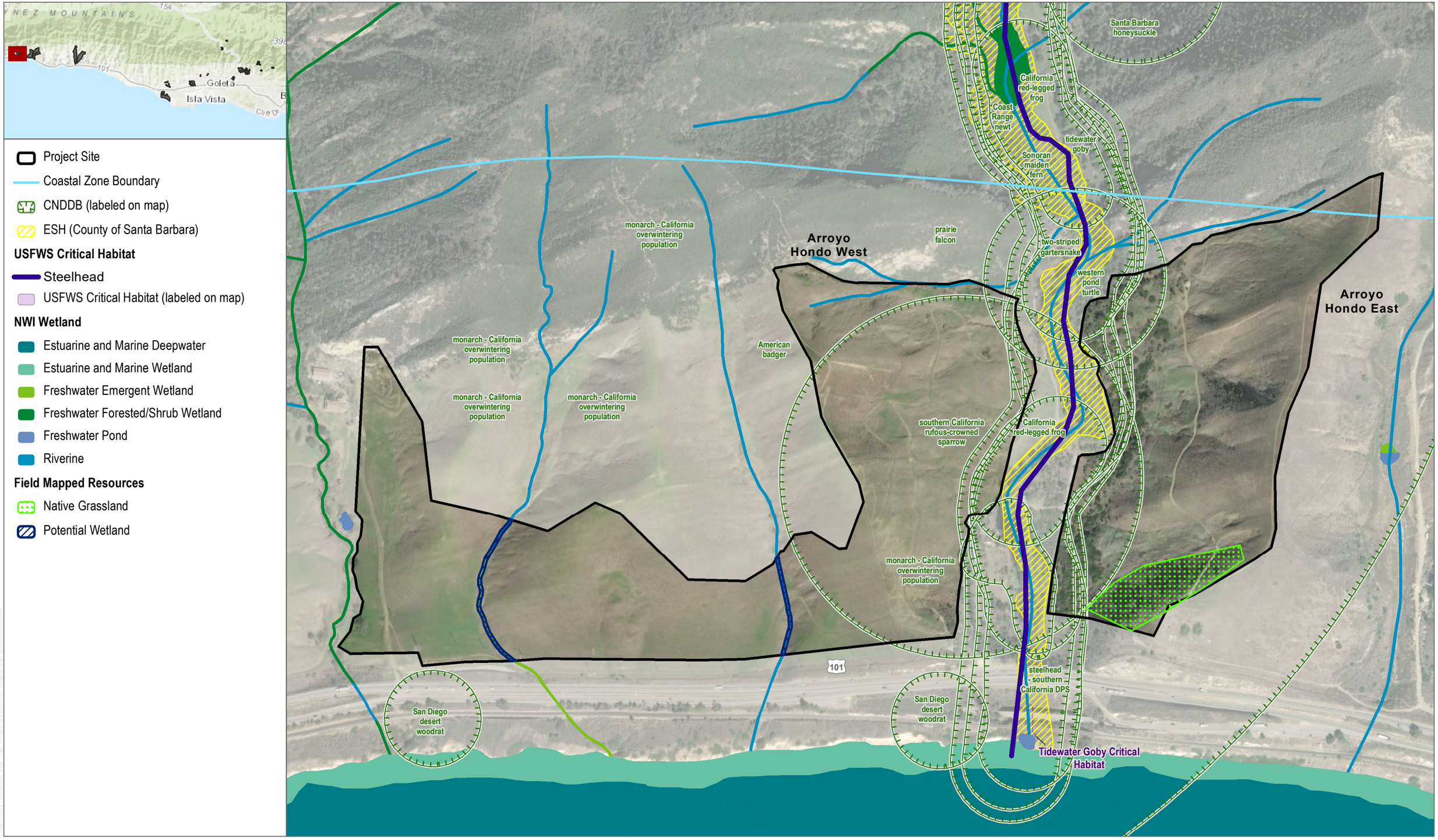
DUDEK

0 0.75 1.5 Miles

FIGURE 1

Project Location

Biological Technical Memo for the Santa Barbara South Coast Herbivory Project



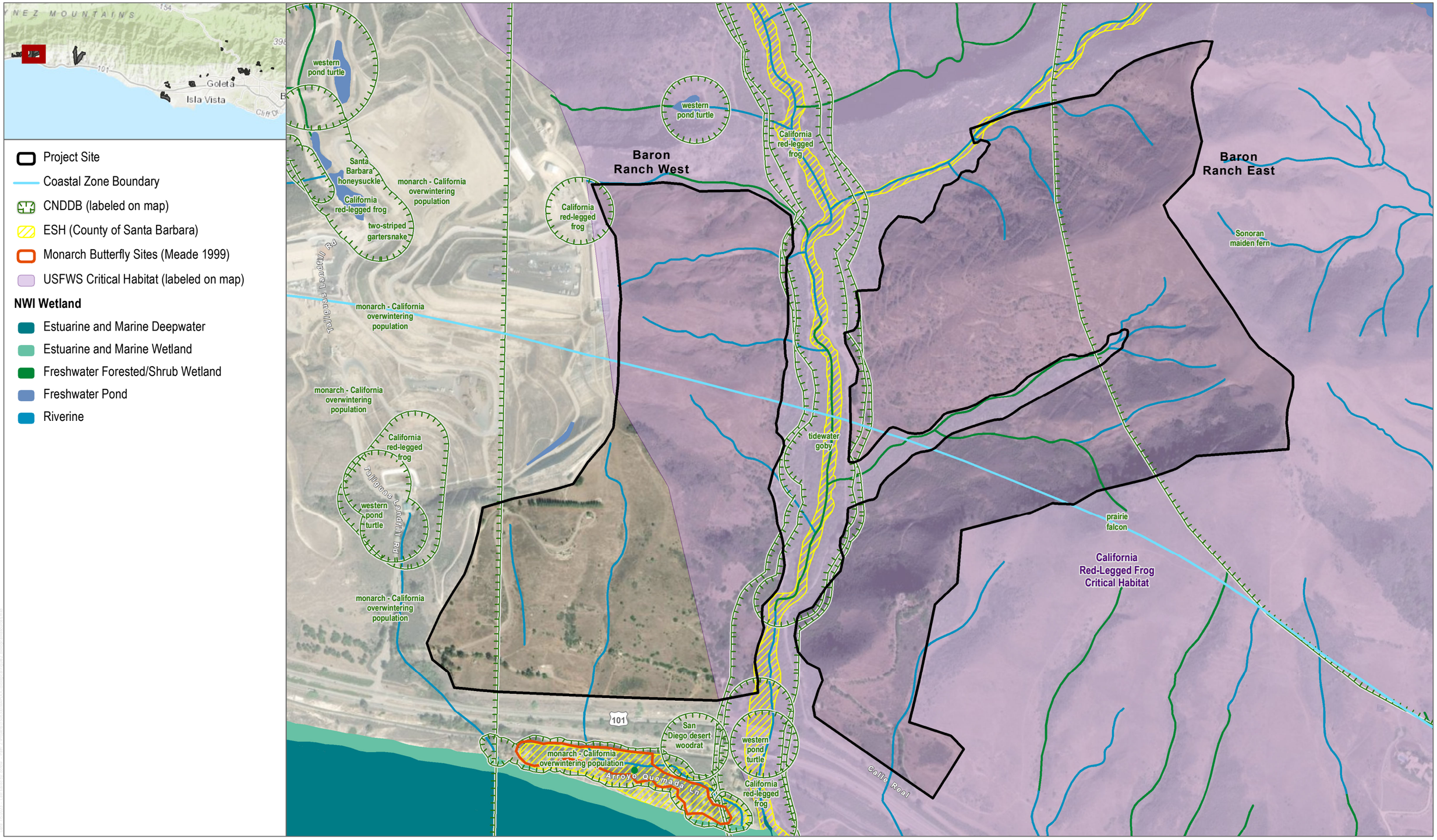
SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK

FIGURE 2-1

Arroyo Hondo East and Arroyo Hondo West

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK

0 345 690 Feet

FIGURE 2-2

Baron Ranch East and Baron Ranch West

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project

- Project Site
- Coastal Zone Boundary
- CNDDB (labeled on map)
- ESH (County of Santa Barbara)
- Monarch Butterfly Sites (Meade 1999)

USFWS Critical Habitat

- Steelhead
- USFWS Critical Habitat (labeled on map)

NWI Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Field Mapped Resources

- Native Grassland

SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK

0 550 1,100 Feet

FIGURE 2-3

Las Flores Canyon and Corral Canyon

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project

SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

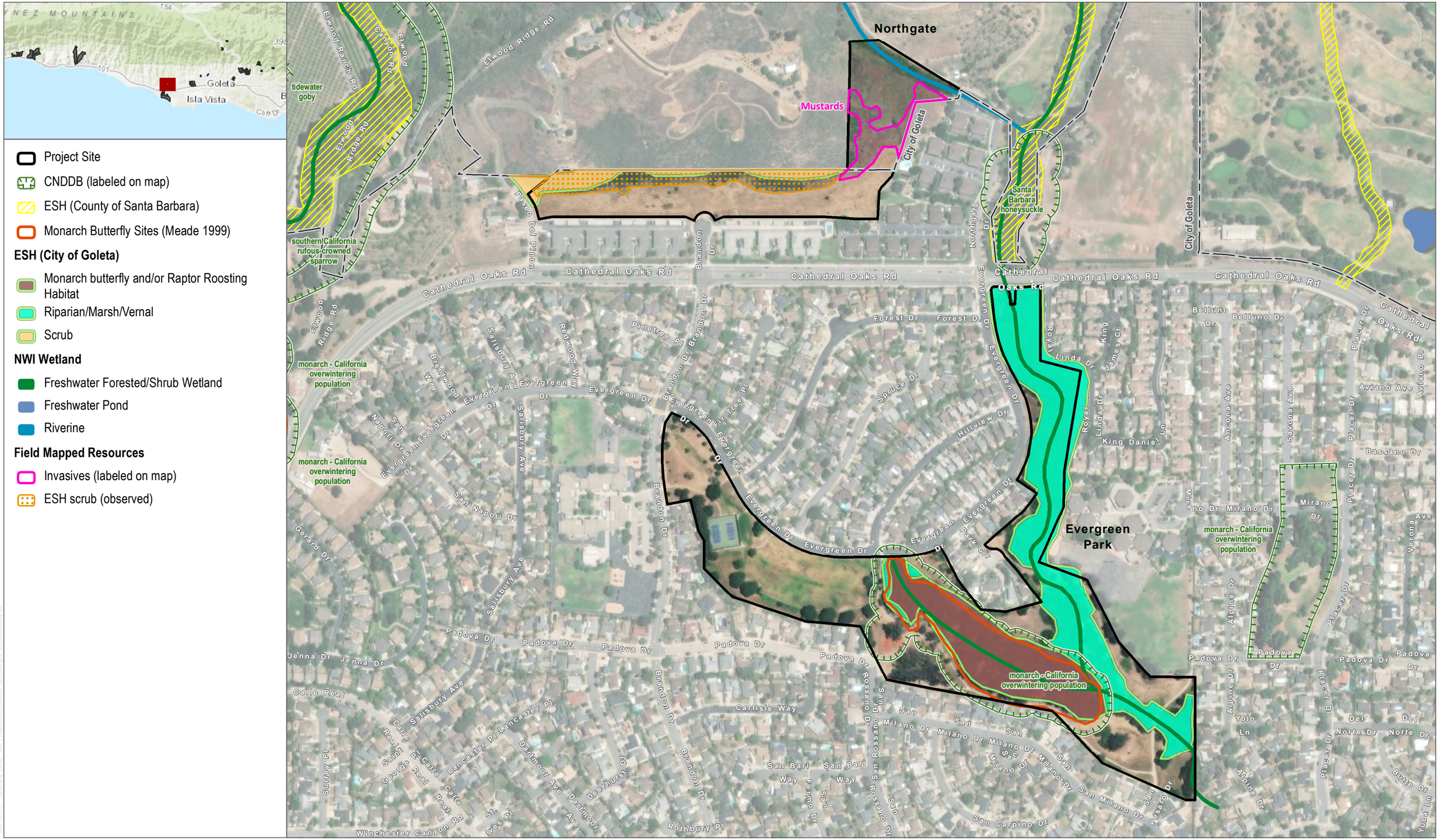
DUDEK

0 285 570 Feet

FIGURE 2-4

Ellwood Mesa

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

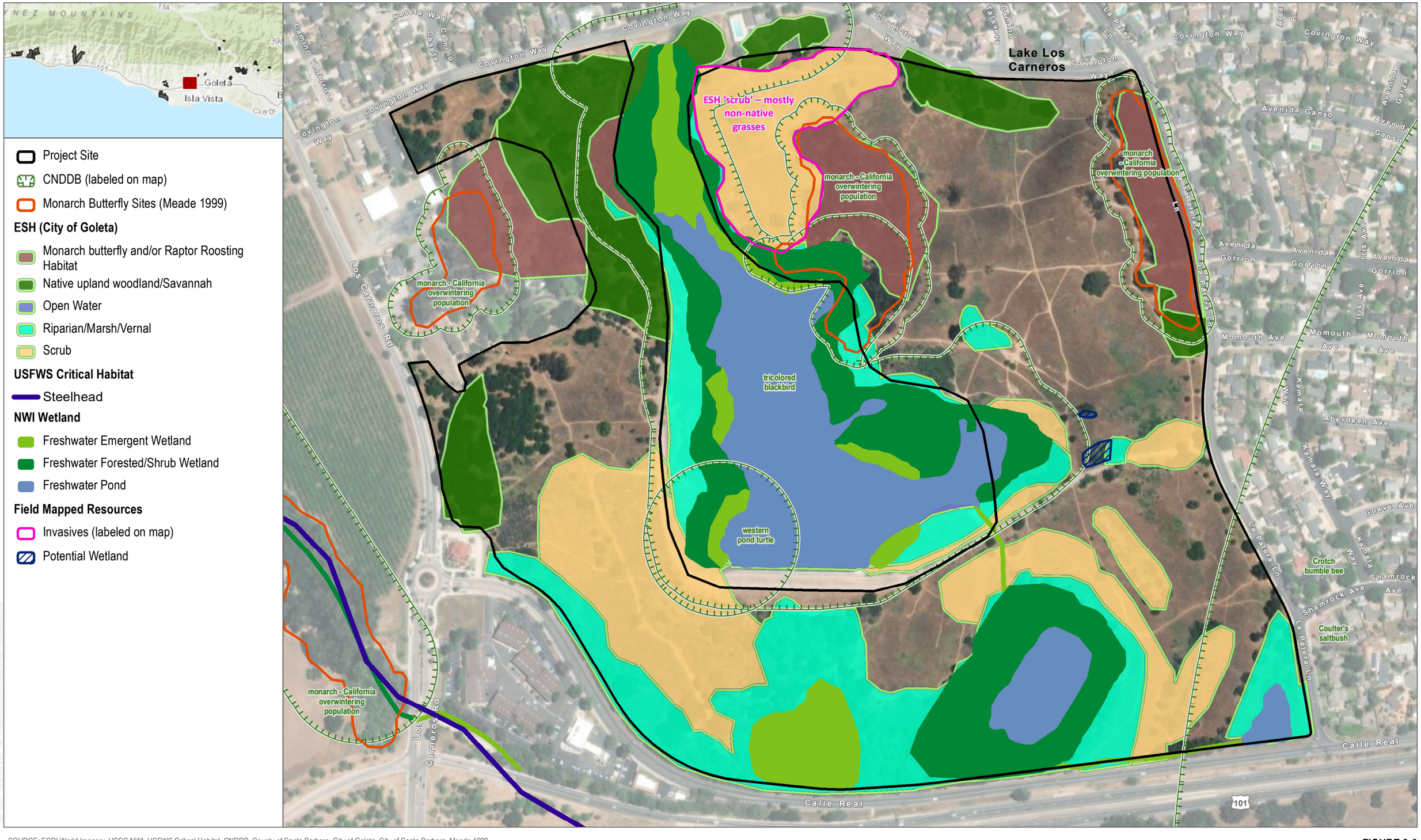
DUDEK

0 187.5 375 Feet

FIGURE 2-5

Northgate and Evergreen Open Space

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK 0 145 290 Feet

FIGURE 2-6

Lake Los Carneros

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project

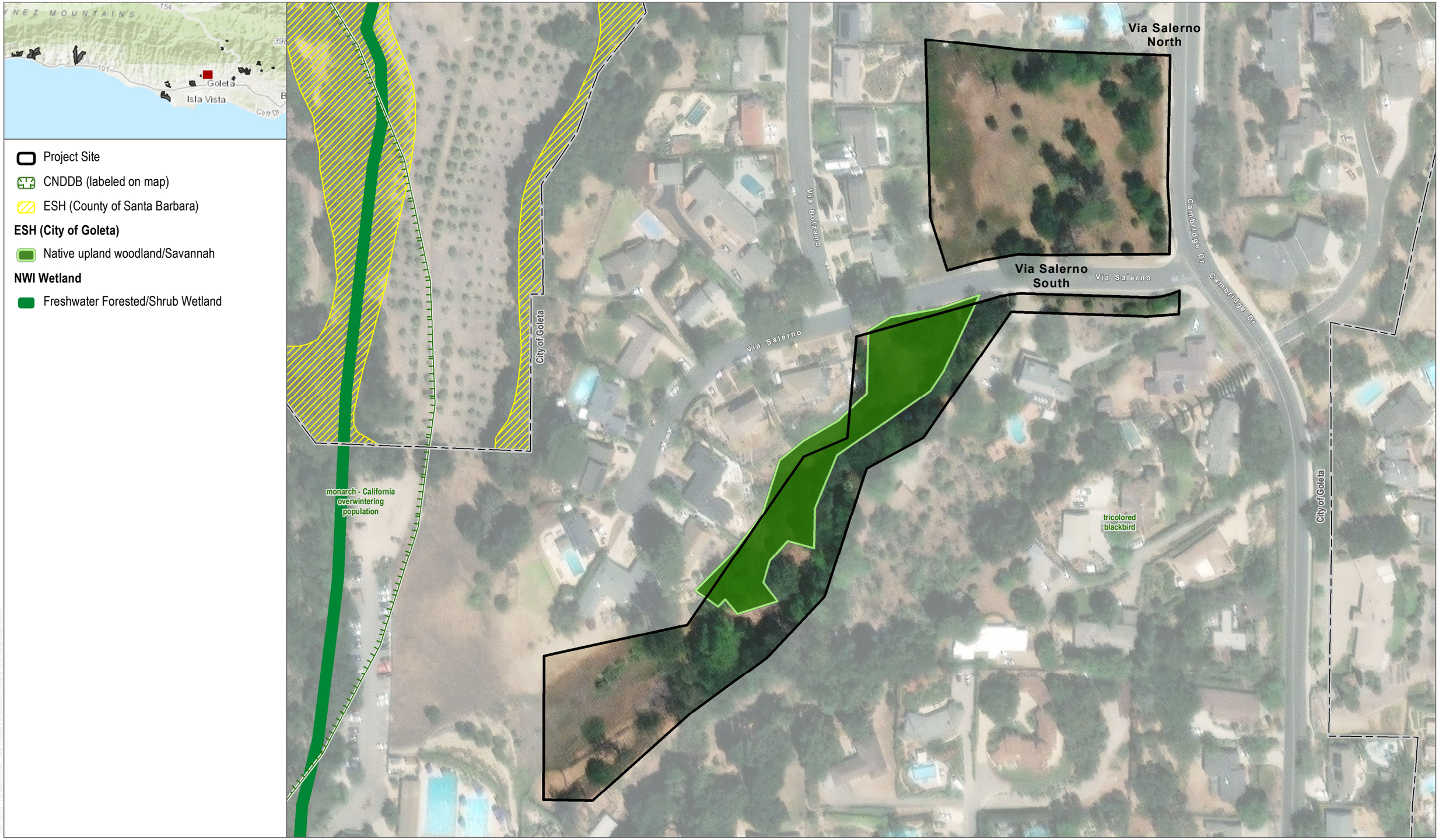
SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK 0 50 100 Feet

FIGURE 2-7

La Goleta North and La Goleta South

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



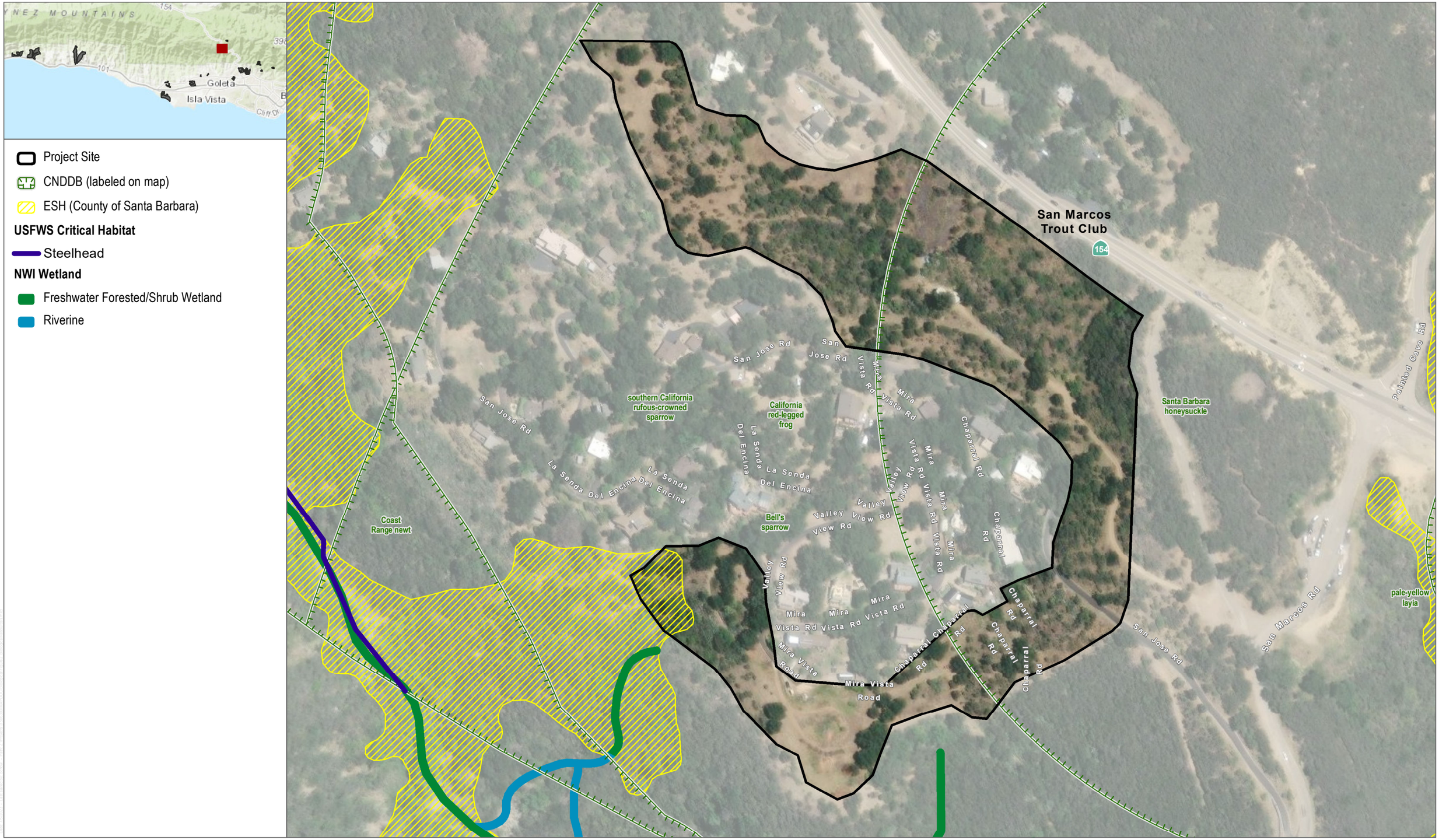
SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK 0 60 120 Feet

FIGURE 2-8

Via Salerno North and Via Salerno South

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK

FIGURE 2-9

San Marcos Trout Club

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project

Project Site

CNDDB (labeled on map)

ESH (County of Santa Barbara)

NWI Wetland

Riverine

SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK

0 37.5 75 Feet

FIGURE 2-10

Painted Cave

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project

Project Site

ESH (County of Santa Barbara)

NWI Wetland

Freshwater Forested/Shrub Wetland

Riverine

Field Mapped Resources

Invasives (labeled on map)

Native Grassland

Sensitive/Restored Vegetation

SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

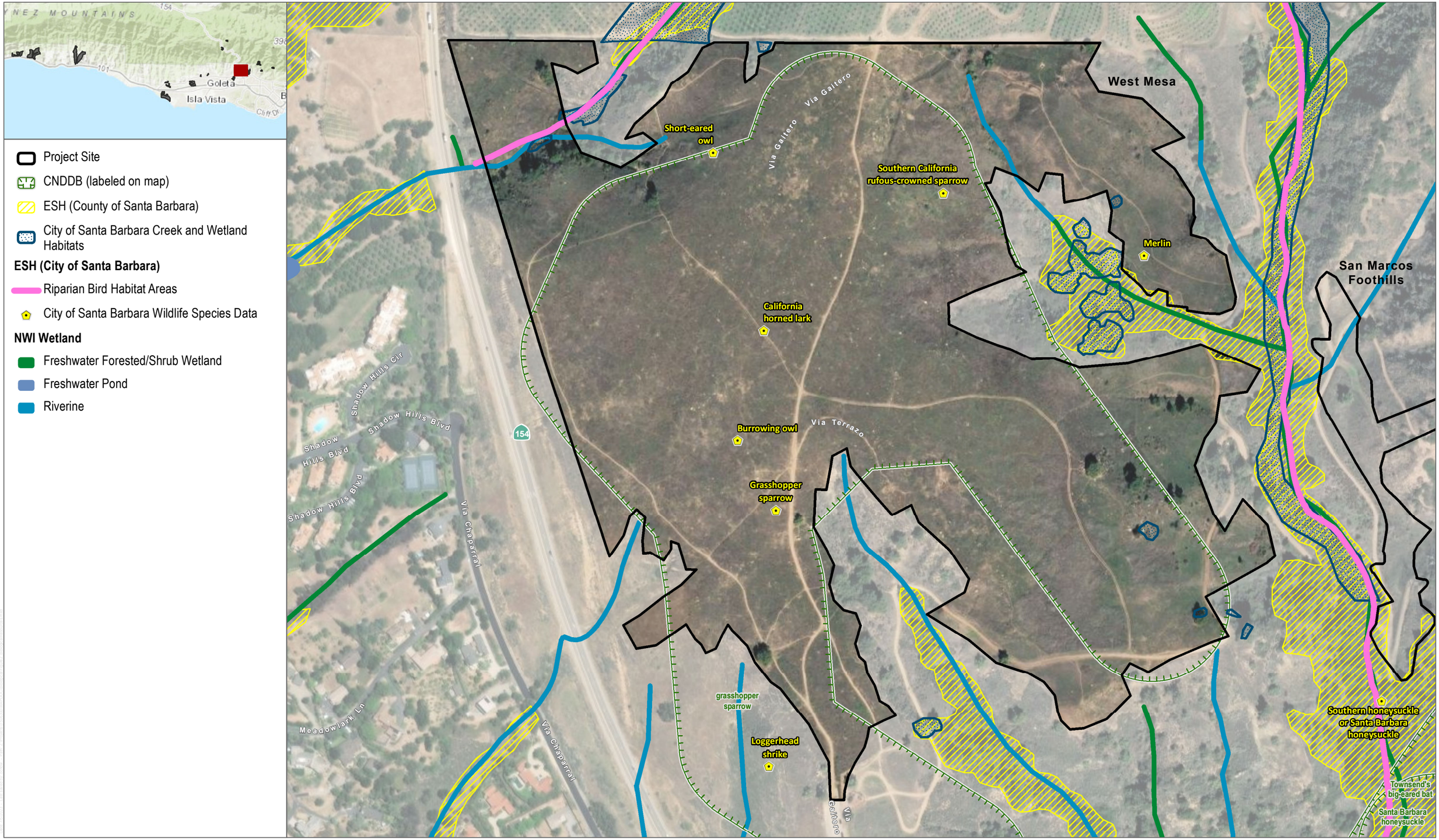
DUDEK

0 112.5 225 Feet

FIGURE 2-11

County Range and Oak Grove

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



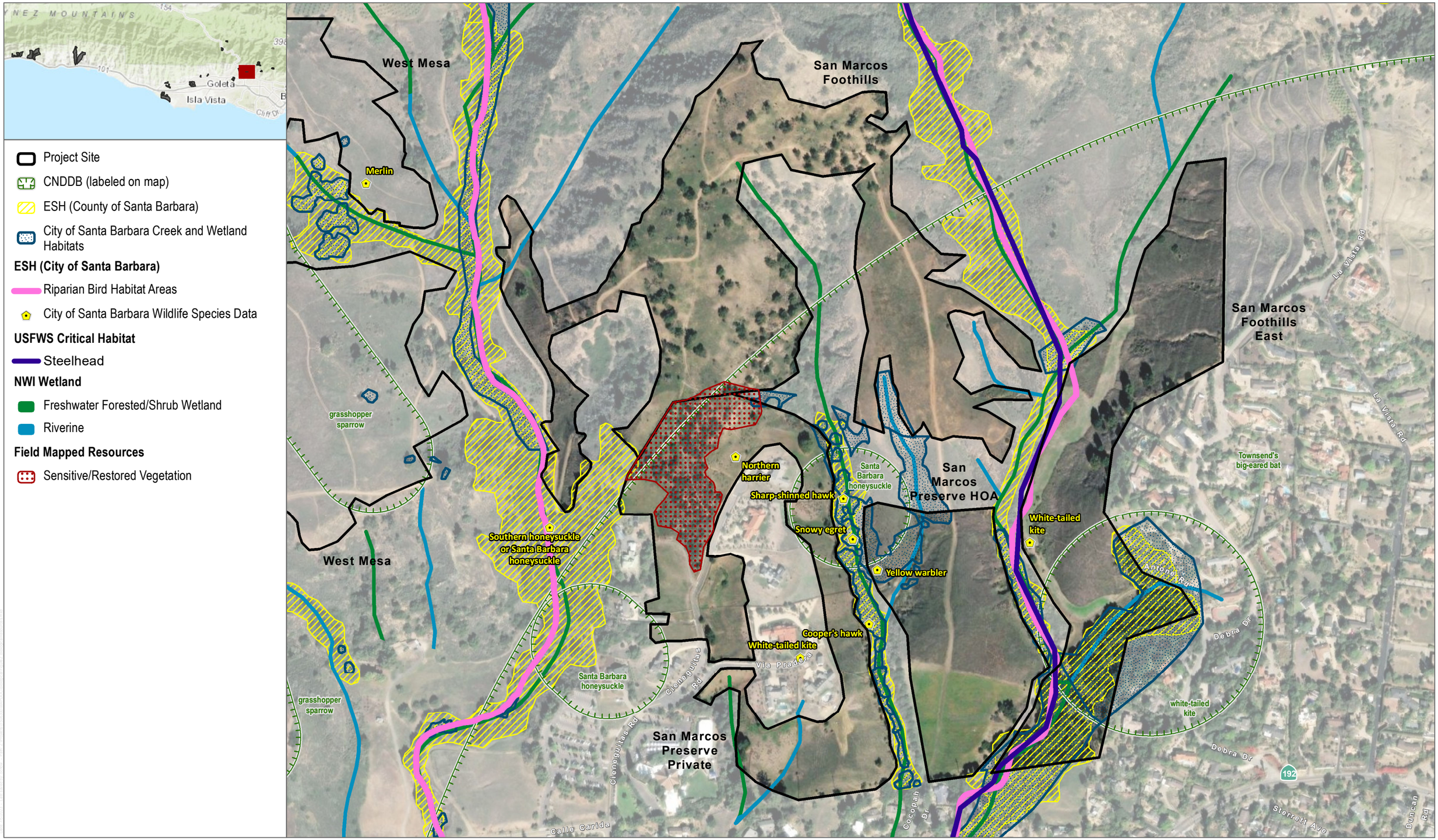
SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK 0 150 300 Feet

FIGURE 2-12

West Mesa

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



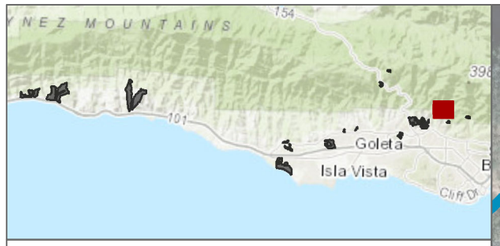
SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK 0 195 390 Feet

FIGURE 2-13

San Marcos Foothills and San Marcos Preserve

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



Project Site

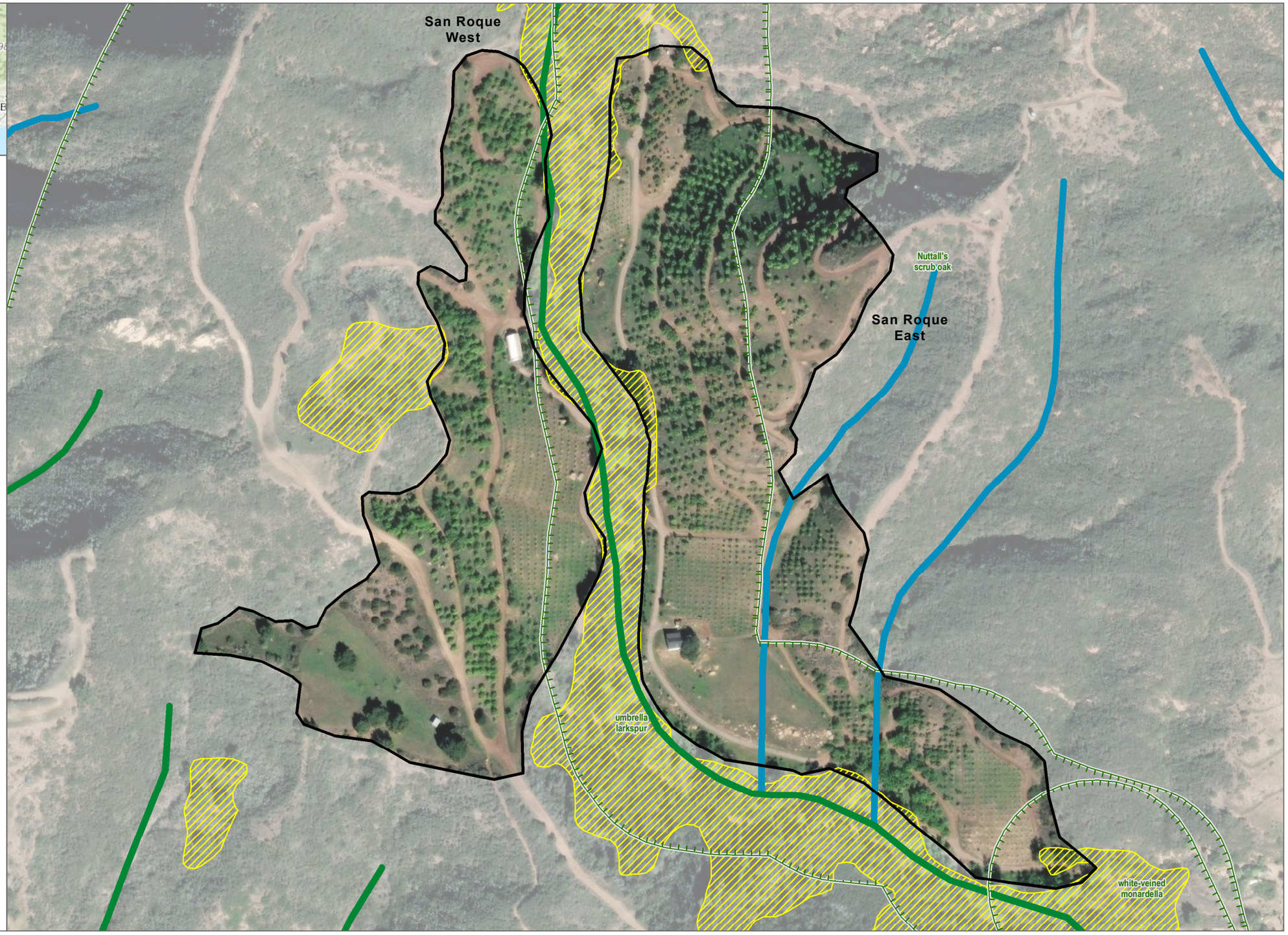
CNDDB (labeled on map)

ESH (County of Santa Barbara)

NWI Wetland

Freshwater Forested/Shrub Wetland

Riverine



SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK

0 120 240 Feet

FIGURE 2-14

San Roque East and San Roque West

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project

SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

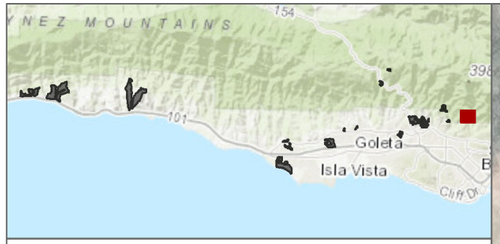
DUDEK

0 40 80 Feet

FIGURE 2-15

San Roque South

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project



- Project Site
- ESH (County of Santa Barbara)
- City of Santa Barbara Creek and Wetland Habitats

NWI Wetland

- Riverine

Field Mapped Resources

- Invasives (labeled on map)
- Potential Non-wetland Waters

Tunnel Road

Non-native Grassland

Spy Glass Ridge

Tunnel Rd

Tunnel Rd

SOURCE: ESRI World Imagery, USGS NWI, USFWS Critical Habitat, CNDDB, County of Santa Barbara, City of Goleta, City of Santa Barbara, Meade 1999

DUDEK

0 50 100 Feet

FIGURE 2-16

Tunnel Road

Biological Technical Memo for the South Coast Herbivory Cal-VTP Project

Attachment B

Special-Status Plant and Wildlife Species with Potential to Occur in the Project Site

Special-Status Plant Species with Potential to Occur in the Project Sites

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Arctostaphylos purissima	La Purisima manzanita	None/None/1B.1	Chaparral (sandy), Coastal scrub/perennial evergreen shrub/Nov–May/195–1,275	Not expected to occur. Known occurrences are more than 3.0 miles northwest of the nearest project site, and suitable habitat is absent in the westernmost project sites.
Arctostaphylos refugioensis	Refugio manzanita	None/None/1B.2	Chaparral (sandstone)/perennial evergreen shrub/(May)Dec–Mar/ 900–2,690	Not expected to occur. Gaviota coast project sites an Goleta project sites within the geographic range, are outside the elevational range of this species.
Astragalus didymocarpus var. *milesianus*	Miles' milk-vetch	None/None/1B.2	Coastal scrub (clay)/annual herb/Mar–June/65–295	Not expected to occur. The only occurrences is a historical record, from 1902, from approximately 5 miles west of the Arroyo Hondo sites.
Atriplex coulteri	Coulter's saltbush	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Alkaline (sometimes), Clay (sometimes)/perennial herb/ Mar–Oct/10–1,505	Not expected to occur. CNDDB includes only one historical occurrence in Santa Barbara, from 1956 (CDFW 2023).
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; Alkaline/annual herb/Apr–Oct/ 35–655	**Potentially occurs**. The one recent occurrence is from the Gaviota area, and this species may have potential to occur at the Arroyo Hondo and Baron Ranch sites.
Calochortus fimbriatus	late-flowered mariposa-lily	None/None/1B.3	Chaparral, Cismontane woodland, Riparian woodland; Serpentinite (sometimes)/perennial bulbiferous herb/June–Aug/900–6,250	**Potentially occurs**. May occur in suitable habitat above 900 feet in elevation.
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/None/1B.2	Chaparral, Lower montane coniferous forest, Meadows and seeps; Mesic/perennial bulbiferous herb/Apr–July/2,325–7,840	**Low potential to occur**. The only location within the elevation range of this species is Painted Cave South FB.
Calystegia sepium ssp. *binghamiae*	Santa Barbara morning-glory	None/None/1A	Marshes and swamps (coastal)/perennial rhizomatous herb/Aug/ 15–15	Not expected to occur. Suitable coastal marsh habitat is absent from the treatment areas.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1,570	**Potentially occurs**. Occurrences are limited to the Santa Barbara and Goleta areas, and this species is not expected at the Gaviota Coast sites.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. Suitable coastal dune and coastal marsh habitats are absent from the treatment areas.
Cordylanthus rigidus ssp. *littoralis*	seaside bird's-beak	None/SE/1B.1	Chaparral (maritime), Cismontane woodland, Closed-cone coniferous forest, Coastal dunes, Coastal scrub; Disturbed areas (often), Sandy/annual herb (hemiparasitic)/Apr–Oct/0–1,685	**Low potential to occur**. One occurrence in the Santa Ynez Mountains and within 3 miles of the Gaviota Coast sites was from the 1960s. CDFW considers this species as potentially occurring throughout the project area in suitable habitats, which include chaparral and oak woodland in the project sites.
Deinandra increscens ssp. *villosa*	Gaviota tarplant	FE/SE/1B.1	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland/ annual herb/May–Oct/65–1,410	**Potentially occurs**. Known occurrences are approximately 1.5 miles and greater west of Arroyo Hondo West, and this species only potentially occurs in Arroyo Hondo and Baron Ranch sites.
Delphinium umbraculorum	umbrella larkspur	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/Apr–June/1,310–5,245	**Potentially occurs**. CNDDB includes one occurrence within the San Roque East and West project sites, but the species has a low likelihood of occurring elsewhere.
Eriodictyon capitatum	Lompoc yerba santa	FE/SR/1B.2	Chaparral (maritime), Closed-cone coniferous forest, Coastal bluff scrub; Sandy/perennial evergreen shrub/May–Sep/130–2,950	Not expected to occur. Known occurrences are all west of Gaviota and U.S. 101, more than 5.0 miles west of the nearest treatment area.
Eriogonum giganteum var. *compactum*	Santa Barbara Island buckwheat	None/SR/1B.3	Coastal bluff scrub (usually rocky)/perennial deciduous shrub/May–Aug(Sep)/35–985	Not expected to occur. No suitable vegetation present.
Fritillaria ojaiensis	Ojai fritillary	None/None/1B.2	Broadleafed upland forest (mesic), Chaparral, Cismontane woodland, Lower montane coniferous forest; Rocky/perennial bulbiferous herb/Feb–May/740–3,270	Not expected to occur. Suitable chaparral and cismontane woodland vegetation communities occur within the treatment areas. However, this species is typically seen on the north side of the Santa Ynez Mountains (Calflora 2023).

Special-Status Plant Species with Potential to Occur in the Project Sites

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/perennial herb/Feb–July(Sep)/230–2,655	**Potentially occurs**. Suitable chaparral and cismontane woodland vegetation communities occur within the several treatment areas about 230 feet in elevation.
Horkelia cuneata var. *sericea*	Kellogg's horkelia	None/None/1B.1	Chaparral (maritime), Closed-cone coniferous forest, Coastal dunes, Coastal scrub; Gravelly (sometimes), Openings, Sandy (sometimes)/perennial herb/Apr–Sep/35–655	Not expected to occur. The nearest occurrence is more than 10 miles west of the Arroyo Hondo West site.
Juncus luciensis	Santa Lucia dwarf rush	None/None/1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools/annual herb/Apr–July/985–6,690	Not expected to occur. All nearby occurrences are along the Santa Ynez Mountain crest or farther north.
Lasthenia conjugens	Contra Costa goldfields	FE/None/1B.1	Cismontane woodland, Playas (alkaline), Valley and foothill grassland, Vernal pools; Mesic/annual herb/Mar–June/0–1,540	Not expected to occur. The only occurrence from the region is a historical occurrence from 1950, in the Isla Vista area and near Ellwood Mesa, that is considered extirpated (CDFW 2023).
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/5–4,000	Not expected to occur. Known to occur in the region only in Goleta Slough, and suitable habitat is absent in the project sites.
Layia heterotricha	pale-yellow layia	None/None/1B.1	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland; Alkaline (sometimes), Clay (sometimes)/annual herb/Mar–June/985–5,590	Not expected to occur. Some cismontane woodland and grassland vegetation communities could be considered suitable for this species. However, these areas are limited, and this species is typically found north of the Santa Ynez Mountains (Calflora 2023).
Lonicera subspicata var. *subspicata*	Santa Barbara honeysuckle	None/None/1B.2	Chaparral, Cismontane woodland, Coastal scrub/perennial evergreen shrub/(Feb)May–Aug(Dec)/35–3,280	**Potentially occurs** in suitable communities anywhere in the project sites.
Malacothrix saxatilis var. *arachnoidea*	Carmel Valley malacothrix	None/None/1B.2	Chaparral (rocky), Coastal scrub/perennial rhizomatous herb/(Mar)June–Dec/80–3,395	Not expected to occur. The only occurrence in the County is a historical occurrence north of the Santa Ynez Mountains.
Monardella hypoleuca ssp. *hypoleuca*	white-veined monardella	None/None/1B.3	Chaparral, Cismontane woodland/perennial herb/(Apr)May–Aug(Sep–Dec)/165–5,000	**Potentially occurs**. Suitable chaparral, and cismontane woodland vegetation communities occur within the treatment areas.
Nasturtium gambelii	Gambel's water cress	FE/ST/1B.1	Marshes and swamps (brackish, freshwater)/perennial rhizomatous herb/Apr–Oct/15–1,080	Not expected to occur. Suitable marshes and swamps are absent.
Pelazoneuron puberulum var. *sonorense*	Sonoran maiden fern	None/None/2B.2	Meadows and seeps (seeps, streams)/perennial rhizomatous herb/Jan–Sep/165–2,000	Not expected to occur. No suitable vegetation present.
Platystemon californicus var. *ciliatus*	Santa Barbara Island cream cups	None/None/1B.2	Coastal bluff scrub/annual herb/Feb–May/165–165	Not expected to occur. No suitable vegetation present.
Pleuridium mexicanum	Mexican earthmoss	None/None/2B.1	Chaparral; Sandstone/moss//1,440–1,440	Not expected to occur. The only known occurrence in the state is near Highway 154 northwest of San Marcos Pass.
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1	Chaparral, Closed-cone coniferous forest, Coastal scrub; Clay, Loam, Sandy/perennial evergreen shrub/Feb–Apr(May–Aug)/50–1,310	**Potentially occurs**. Several CNDDB occurrences near sites in the Santa Ynez Mountain foothills, and suitable habitat occurs in several locations.
Scrophularia atrata	black-flowered figwort	None/None/1B.2	Chaparral, Closed-cone coniferous forest, Coastal dunes, Coastal scrub, Riparian scrub/perennial herb/Mar–July/35–1,640	**Potentially occurs**. May occur in any project site supporting suitable habitat.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; Alkaline (sometimes)/annual herb/Jan–Apr(May)/50–2,620	Not expected to occur. All known occurrences in the County are north of the Santa Ynez Mountain crest or north of Point Conception.
Suaeda esteroa	estuary seablite	None/None/1B.2	Marshes and swamps (coastal salt)/perennial herb/(Jan–May)July–Oct/0–15	Not expected to occur. No suitable vegetation present.
Thermopsis macrophylla	Santa Ynez false lupine	None/SR/1B.3	Chaparral (disturbed areas, granitic, sandy)/perennial rhizomatous herb/Apr–June/1,390–4,590	Not expected to occur. All known regional occurrences are north of the Santa Ynez Mountain crest.

Notes:

Status Legend:
FE: Federally listed as endangered
SE: State listed as endangered
ST: State listed as threatened
SR: State Rare
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 occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Special-Status Wildlife Species with Potential to Occur in the Treatment Areas

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Amphibians				
Anaxyrus californicus	arroyo toad	FE/SSC	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected potential to occur. CNDDB occurrences (CDFW 2023) and this species' range do not extend south of the Santa Ynez Mountain crest in Santa Barbara County.
Rana boylii pop. 6	foothill yellow-legged frog - south coast DPS	FPE/SE	Rocky streams and rivers with open banks in forest, chaparral, and woodland	Not expected to occur. CNDDB includes four historical occurrences (CDFW 2023) at or north of the Santa Ynez Mountain crest and another historical occurrence, from 1974, along Refugio Creek, between the Coral Canyon and Baron Ranch East sites, and more than a mile from both.. All of these occurrences are considered extirpated, and the species is no currently known to occur along the south coast and adjacent south-facing slopes of the Santa Ynez Mountains.
Rana draytonii	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	Observed. Known to occur along streams adjacent to several project sites, including Arroyo Hondo, Baron Ranch, Las Flores Canyon, and Coral Canyon.
Taricha torosa (Monterey Co. south only)	California newt	None/SSC	Wet forests, oak forests, chaparral, and rolling grassland	High potential to occur. Known to occur adjacent to the Trout Club and in Arroyo Hondo, and likely occurs in the vicinity of the Painted Cave South FB and Tunnel Road. There are several reports at lower elevations along the Gaviota Coast.
Birds				
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Low potential to occur. Formerly nested in the Goleta area, but is no longer known to occur there in the nesting season, although it may occur rarely in winter in parts of the study area.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Observed. Known to occur at the West Mesa and Ellwood Mesa, and likely occurs in other areas with suitable grassland habitats.

Special-Status Wildlife Species with Potential to Occur in the Treatment Areas

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Aquila chrysaetos (nesting & 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	Moderate potential to occur. Not likely to nest, but likely occurs on occasion in some of the project sites, especially in the western part of the study area.
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Observed at West Mesa of San Marcos Foothill Preserve in winter. Also potentially winter on occasion is other areas supporting short-grass and open scrub habitats.
Charadrius nivosus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. Suitable beaches, dunes, estuarine habitats, and sparsely vegetated flats are absent, although some habitat may occur below the bluffs and adjacent to Ellwood Mesa.
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	Not expected to occur. Suitable coastal marsh and wet meadow habitats are absent, and this species is not known to breed or winter in the region.
Elanus leucurus (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	Observed at several sites in the San Marcos Foothills area, at Ellwood Mesa, and Lake Los Carneros, and has nested within or adjacent to these sites (CDFW 2023, Lehman 2022). The species likely occurs elsewhere on occasion.
Empidonax traillii extimus (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 occur. This species has not been recorded nesting in southern Santa Barbara County, although willow flycatchers of unknown subspecies are uncommon migrants in a variety of habitats.
Gymnogyps californianus	California condor	FE/FP, SE	Nests in rock formations, deep caves, and occasionally in cavities in giant sequoia trees (Sequoiadendron giganteus); forages in relatively open habitats where large animal carcasses can be detected	Not expected to occur. This species may rarely fly over parts of the study area, but is typically found farther from the coast.
Haliaeetus leucocephalus (nesting & wintering)	bald eagle	FD/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Low potential to occur. This species occurs rarely in winter and during migration in southern Santa Barbara County, but suitable habitat for nesting is largely absent.
Laterallus jamaicensis coturniculus	California black rail	None/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. Suitable tidal and freshwater marsh habitats are absent.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	BCC/SE	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	Not expected to occur. Suitable coastal marsh habitat is absent.
Pelecanus occidentalis californicus (nesting colonies & communal roosts)	California brown pelican	FPD/FP	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Not expected to occur. Suitable habitat is absent.
Progne subis (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	Not expected to occur. The nearest known nesting areas are north of the Santa Ynez Mountains (CDFW 2023, Lehman 2022).

Special-Status Wildlife Species with Potential to Occur in the Treatment Areas

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
				This species is known as a rare transient only in southern Santa Barbara County.
Rallus obsoletus levipes	Light-footed Ridgway's rail	FE/FP, SE, SCE	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. Suitable coastal marsh habitat is absent.
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to occur. Not currently known to nest in the region, and occurs only as a rare migrant.
Sternula antillarum browni (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 occur. Suitable estuarine, lagoon, and beach habitats are absent.
Vireo bellii pusillus (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	Not expected to occur. This species is not known to nest in Santa Barbara County south of the Santa Ynez Mountains (CDFW 2023, Lehman 2022). Riparian habitats within or adjacent to the projects sites are generally poor quality for this species.
Fishes				
Eucyclogobius newberryi	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. However, critical habitat is designated along streams adjacent to treatment areas at Arroyo Hondo, Baron Ranch, and Coral Canyon/Las Flores Canyon.
Oncorhynchus mykiss irideus pop. 10	southern steelhead - southern California DPS	FE/SCE	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	Not expected to occur. Critical habitat occurs within several creeks adjacent to treatment areas, including Arroyo Hondo and in Atascadero Creek adjacent to Preserve San Marcos HOA, San Marcos Foothills East, and San Marco Foothills. However, these streams do not occur within the treatment areas.
Invertebrates				
Bombus crotchii	Crotch bumble bee	None/SCE	Open grassland and scrub communities supporting suitable floral resources.	Observed. CNDDB (CDFW 2023) includes an occurrence from within Ellwood Mesa.
Danaus plexippus plexippus pop. 1	monarch - California overwintering population	FC/None	Wind-protected tree groves with nectar sources and nearby water sources	Observed. Occurs widely in the region while migrating or flying between roosts and foraging sites. Several roosts occur within eucalyptus stands in the Ellwood Mesa site. Additional known roosts are at Evergreen Open Space and Lake Los Carneros Park in the City of Goleta, and at Arroyo Hondo (City of Goleta 2016; CDFW 2023).
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Moderate potential to occur. Likely forages on occasion over some of the project sites, but suitable roosting habitat is absent from the sites.

Special-Status Wildlife Species with Potential to Occur in the Treatment Areas

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Corynorhinus townsendii	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, man-made structures, and tunnels	Low potential to occur. May forage rarely over some of the project sites, but roosting habitat is largely absent.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Low potential to occur. May forage on occasion in the study area, but unlikely to roost within or near the project sites.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Moderate potential to occur. May occur in some scrub habitats within the project sites. Known to occur near Baron Ranch and Arroyo Hondo (CDFW 2023).
Nyctinomops macrotis	big free-tailed bat	None/SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Low potential to occur. The study area is not known to be in the expected range of this species.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Moderate potential to occur. May occur on occasion, especially within project sites west of Goleta.
Lasiurus frantzii	western red bat	None/SSC	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	Moderate potential to occur. Potentially forages anywhere in the study area and may roost in areas with suitable woodland habitat.
Reptiles				
Anniella pulchra	northern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and sandy or loose, loamy soils	High potential to occur. Although CNDDB includes no occurrences within a mile of any treatment areas, this species is known to occur in suitable microhabitats in the vicinity and likely occurs within or adjacent to one or more treatment area.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. The study area is just east of the known range of this species.
Emys marmorata	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. Known to occur along several creeks adjacent to or within several treatment areas, including San Roque East, Lake Los Carneros Park, Baron Ranch West, and Arroyo Hondo.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Moderate potential to occur. The only CNDDB occurrences near any of the treatment sites is north of Painted Cave South FB. The species is most likely to occur in scrub habitats in the Santa Ynez Mountain foothills.
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Moderate potential to occur. Most likely to occur in the vicinity of Painted Cave South FB and the Trout Club.
Thamnophis hammondii	two-striped gartersnake	None/SSC	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Moderate potential to occur. CNDDB includes occurrences adjacent to Arroyo Hondo and Tunnel Road.

Notes:

Status Abbreviations:
FE: Federally Endangered
FPE: Federally Proposed Endangered
FT: Federally Threatened
FC: Federal Candidate Species
FD: Federally Delisted
SSC: California Species of Special Concern
FP: California Fully Protected Species
ST: State Threatened
SE: State Endangered
SCE: State Candidate Endangered

Attachment C

Potentially Occurring Special-Status Plant and Wildlife Species by Treatment Area

Common Name	Gaviota Coast Treatment Areas						Goleta/Santa Barbara Treatment Areas																			
	Arroyo Hondo West	Arroyo Hondo East	Baron Ranch West	Baron Ranch East	Coral Canyon	Las Flores	Ellwood Mesa	North-gate	Ever-green Park	Lake Los Carneros	La Goleta North	La Goleta South	Via Salerno North	Via Salerno South	Trout Club	Painted Cave South FB	Oak Grove	County Range	West Mesa	SM Foot-hills	Preserve SM Private	Preserve SM HOA	SM Foothills East	San Roque South	San Roque East	San Roque West	Tunnel Rd FB
Listed Plant Species																										
Gaviota tarplant	x	x	x	x																						
seaside bird's-beak		x	x		x	x	x	x		x				x	x		x	x	x		x		x	x			x
Non-listed Special-Status Plant Species																										
black-flowered figwort		x	x		x	x	x	x	x	x		x			x		x	x	x	x	x	x	x	x			x
Davidson's saltscale								x		x							x	x	x		x	x					
late-flowered mariposa-lily															x	x											
mesa horkelia		x	x		x	x		x							x	x			x	x	x		x	x			x
Nuttall's scrub oak		x	x		x	x		x							x		x	x			x						x
Palmer's mariposa-lily																x											
Santa Barbara honeysuckle		x	x		x	x	x	x		x		x		x	x	x	x	x	x	x	x		x	x			x
southern tarplant							x	x		x	x	x	x	x			x		x	x	x	x	x	x			
umbrella larkspur															x	x											
white-veined monardella		x			x	x				x		x		x	x	x	x	x						x			x
Listed Wildlife Species																										
California red-legged frog	x	x	x	x	x	x		x							x	x	x	x	x	x	x	x	x	x	x	x	x
Crotch bumble bee	x	x	x	x	x	x	x	x		x					x	x	x	x	x	x	x	x	x	x			x
Non-Listed Special-Status Wildlife Species																										
Amphibians																										
California newt	x	x	x	x	x	x					x	x			x											

Common Name	Gaviota Coast Treatment Areas						Goleta/Santa Barbara Treatment Areas																			
	Arroyo Hondo West	Arroyo Hondo East	Baron Ranch West	Baron Ranch East	Coral Canyon	Las Flores	Ellwood Mesa	North-gate	Ever-green Park	Lake Los Carneros	La Goleta North	La Goleta South	Via Salerno North	Via Salerno South	Trout Club	Painted Cave South FB	Oak Grove	County Range	West Mesa	SM Foot-hills	Preserve SM Private	Preserve SM HOA	SM Foothills East	San Roque South	San Roque East	San Roque West	Tunnel Rd FB
Birds																										
grasshopper sparrow	x	x	x	x	x	x	x												x	x			x				
burrowing owl (wintering)	x	x					x												x	x			x				
white-tailed kite	x	x	x	x	x	x	x			x									x	x		x	x				
Invertebrates																										
monarch butterfly							x		x	x	x																
Mammals																										
San Diego desert woodrat		x	x		x	x									x	x	x	x			x			x			x
American badger	x	x	x	x	x	x	x																				
Reptiles																										
Blainville's horned lizard															x	x					x			x			x
coast patch-nosed snake															x	x								x			x
western pond-turtle	x	x	x	x	x	x	x			x	x	x			x										x	x	

Note: Several species considered as potentially occurring are omitted from this table, due to the low likelihood that the project could result in impacts to these species. All bat species are omitted, as roosting habitat species such as pallid bat is absent and roosting habitat for tree-roosting species, such as western red bat, would not be affected by the project. The project will avoid impacts to riparian and aquatic habitats; therefore it will not result in impacts to two-striped gartersnake. Several additional species, such as northern California legless lizard, are included on the list despite a relatively low likelihood of impacts, because the project has a somewhat greater possibility of resulting in impacts.

Attachment D

California Department of Fish and Wildlife Comments

David Compton

From: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Sent: Thursday, August 31, 2023 12:04 PM
To: David Compton
Cc: Dana Link-Herrera
Subject: RE: South Coast Herbivory Cal-VTP project

Hi David,
CDFW agrees with this overall approach! Including the measures described for stream and wetland habitat, and CESA species of concern. Has any language been worked on to determine appropriate stocking rates for grazing activity and/or grazing management tactics to ensure grazing is effective for reaching the stated project goals (as in, avoids overgrazing beyond the intended reduction in fuels)?

CDFW now has a Survey Considerations for CESA Candidate Bumble Bees, as well as range maps for the four candidate species, are now available on our public facing web pages. They can be accessed here:

Threatened and Endangered Species (ca.gov)

https://wildlife.ca.gov/Conservation/Survey-Protocols#377281281-invertebrates

The range map covers the entire project area (it is not very specific), but we would agree with the assessment you provided below that includes suitable habitat in chaparral, oak woodland, and some disturbed habitat. I would note, the best survey window may be subject to change on an annual basis, depending on environmental factors (heat, rain, ect.), but we recommend avoiding implementing surveys when Queens are in flight to avoid capture or disturbance of a queen. The considerations document says flight season for queen bees extends through March and that colonies would emerge from April-September. I included some proposed language edits below.

CDFW is still internally working on a more comprehensive considerations document, so there may be additional information related to bees and survey protocols available in the future (but probably not before the posting of the PSA) that could help refine the survey efforts.

As for the contact person, I am changing positions in a few weeks, so I will have to check and get back to you with a contact person. We just completed a reorg and the new supervisor for CESA related work is now Steve Gibson, Steve.Gibson@wildlife.ca.gov, so he is probably the best person to contact while they backfill my position.

Thanks for checking in with me again and I am glad to hear that you are making so much progress with the project.

Thanks,

Audrey Kelly
Environmental Scientist
California Department of Fish and Wildlife – South Coast Region
Temporary line: (805)861-8475

From: David Compton
Sent: Thursday, August 31, 2023 10:37 AM
To: Kelly, Audrey@Wildlife
Cc: Dana Link-Herrera
Subject: RE: South Coast Herbivory Cal-VTP project

HI again, Audrey. I know it's been only three days since I sent this. But we're trying to wrap up our project-specific analysis by the end of the week. We ARE including a note in our measures that any requirements from CDFW coming in after preparation of the PSA should be incorporated into the project.

Also, when you do respond, if would be helpful if we had a CDFW contact person for implementation, especially given MM BIO-2g requires CDFW concurrence on bumble bee potential.

Thanks!

Dave

From: David Compton
Sent: Monday, August 28, 2023 7:49 PM
To: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Cc: Dana Link-Herrera <dlinkherrera@dudek.com>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi Audrey,

Attached, please find the grazing BMPs for the Santa Barbara Fire Safe Council's Santa Barbara South Coast Herbivory Project, plus the updated version of the project description. I've also included a map with the treatment areas again, for ease of reference.

I believe the only potentially open question involves Crotch bumble bee. But please confirm whether or not you concur with the approach described below for other resources.

For Crotch bumble bee, we will be principally be implementing the following measures:

SPR BIO-10, which requires surveys for special-status wildlife species that potentially occur in each treatment area.
MM BIO-2g, which requires additional measures where bumble bees or suitable habitat is identified (which is nearly every treatment area). Under this measure, treatment in each area will be done in smaller units to ensure that not all areas are treated each year, and that floral resources will always be available. The measure also requires treatment be conducted in a "patchy pattern" so that habitat is always available. And treatment will occur only if a qualified biologist determines that it will not result in injury or mortality to Crotch bumble bee. Finally, the qualified biologist must consult with CDFW to receive concurrence with this determination.

We have also added the following Project-Specific Measures for implementation of MM BIO-2g:

"Project-Specific Measures: to address the requirements of MM BIO-2g, implement the following measures:

- In addition to wet meadow, forest meadow, riparian, grassland, or coastal scrub habitats, also consider oak woodland and chaparral as suitable habitat for Crotch bumble bee, where these communities contain suitable floral resources.
- When considering whether suitable floral resources may remain after treatment, consider (1) potential presence of floral resources within habitats included in the project site but not subject to grazing (e.g., if implementation includes avoidance of coastal scrub or chaparral habitats or avoidance of sensitive natural communities [native grasslands, California brittle bush scrub]), (2) exclusion of any areas due to steepness of slopes, and (3) the quality of habitat being treated and whether treatment may improve habitat by permitting suitable floral resources to grow. Avoidance of these areas may address the requirement to conduct treatment in a "patchy" pattern.
- During the ~~nesting season (March to October)~~ ***season in which worker bees are most likely to be present (April to September)***, conduct a survey to search for presence of bumble bees to identify activity potentially signaling the presence of a nest. ***Actual survey period should be determined by the qualified biologist, based on site specific environmental factors, such as the location, local observation records, elevation, seasonal rainfall, average ambient air temperatures, and/or local seasonal weather conditions***. Searching for a nest may include watching an area of high bee activity or following bees observed foraging. Suitable nesting and wintering habitats may include animal burrows of any size, debris piles, rock walls, or a duff layer.
- Follow any additional guidance provided by the California Department of Fish and Wildlife subsequent to completion of the project-specific analysis."

Let us know what you think. Thanks.

Dave Compton
Senior Biologist
DUDEK
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From: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Sent: Friday, July 21, 2023 10:34 AM
To: David Compton <dcompton@dudek.com>
Cc: Dana Link-Herrera <dlinkherrera@dudek.com>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi David,
I am acknowledging your email. So far, I have no comments or concerns with the approach you have described. I had blocked off time this afternoon to review our most recent Crotch's bumble bee guidance and I will get back to you!

Thanks,
Audrey Kelly
Environmental Scientist

California Department of Fish and Wildlife – South Coast Region
Temporary line: (805)861-8475

From: David Compton <dcompton@dudek.com>
Sent: Wednesday, July 19, 2023 1:13 PM
To: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Cc: Dana Link-Herrera <dlinkherrera@dudek.com>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi Audrey,

I wanted to check in about CDFW thoughts on this project, i.e., the Santa Barbara Fire Safe Council's South Coast Herbivory Project, and pass along some additional information.

First off, I promised to send you our grazing BMPs, so you would have a good idea of how grazing will be practiced. I've cc'd Dana Link-Herrera, Dudek's project manager for this project. She's working on the appendix to the PSA checklist that will include the BMPs. Since I'm going out of town for a week, she will send that to you when it's ready. I can tell you that there area a couple of measures for geology that are relevant here. SPR GEO-1 calls for suspension of the treatment when rain is predicted and during rain events. SPR GEO-3 requires soil stabilization for mechanical and grazing treatments that result in exposure of bare soil at more than 50%. SPR GEO-4 requires erosion monitoring.

As for other matters:

Riparian habitat: the project boundaries include very little riparian, and we are recommending that all be avoided. The minimum buffer recommendation will be 50 feet. Several standard project requirements provide protection for riparian areas, but still allow some level of treatment, but we understand CDFW would require an LSA notification for any grazing within riparian or stream habitat. We will therefore note that any impacts to riparian habitat will require LSAA and will therefore recommend avoidance.

Wetlands: the project will implement SPR BIO-4, Avoid State and Federally Protected Wetlands. Some potential wetlands have been identified, and pre-activity survey included in this measure will ensure that all are identified and avoided. The minimum buffer in this measure is 25 feet, but the project will respect requirements of local planning documents, which specify a greater buffer than this.

As discussed, we believe the following CESA listed species are of concern:

Seaside bird's beak – we believe this species has a low potential to occur, but will perform pre-activity surveys (in accordance with SPR BIO-7) in the appropriate season to determine presence. If we find it, we are recommending the project avoid the species, in accordance with MM BIO-1a. Buffers for rare plant avoidance will comply with MM BIO-1a, which requires that buffers "will generally be a minimum of 50 feet" for listed plants.

Gaviota tarplant – The strategy is the same as for seaside bird's beak, with application of SPR BIO-7, and of MM BIO-1a, if any are located during surveys. As agreed, this plant potentially occurs in Arroyo Hondo West, Arroyo Hondo East, Baron Ranch West, and Baron Ranch West (or areas 1 through 4, as your email noted).

Crotch bumble bee –

Habitat: We believe this species potentially occurs in nearly every treatment area. Therefore, although MM BIO-2g requires implementation of the measure only in areas supporting "wet meadow, forest meadow, riparian, grassland, or coastal scrub," we believe it also potentially occurs in chaparral and oak woodland, as well as in disturbed habitats, based on previous coordination with CDFW with regard to Crotch bumble bee. Therefore, we will implement MM BIO-2g more broadly, to preserve floral resources across the above-mentioned habitats, and so that grazing is in a more patch pattern overall. This will be achieved, in part, because the project is avoiding steeper areas, and is avoiding coastal scrub and oak woodland in most areas, and is avoiding riparian habitat completely. But additional avoidance may be necessary in some areas annual, especially areas that are dominated by large areas of herbaceous habitats.
Avoid mortality, injury, or disturbance: We still seek CDFW's opinion with regard to this issue. We propose that a thorough search for bumble bee activity and nests from March through July (the period of greatest activity), with negative results, would satisfy this requirement. Avoidance should be implemented, if Crotch bumble bees or their nests are found. If treatment is implemented in the nesting season during less active period (February or August through September), we propose avoidance of nesting resources—burrows, debris, duff layer, etc.—is sufficient for avoidance. We propose there should be no restrictions from October 1 through January 31.

Foothill yellow-legged frog – our assessment is that the species does not potentially occur. If it does occur, it will be along perennial streams that the project avoids.

A complete list of measures to be implemented for biological resources is below. As I mentioned, we'll provide the grazing BMPs soon. Let us know if you have additional recommendations or requirements regarding Crotch bumble bee, or any other potentially occurring resources.

Thanks,
Dave Compton
Senior Biologist
DUDEK
621 Chapala Street
Santa Barbara, CA 93101
T: 805 . 308 . 8536
F: 805 . 963 . 2074
C: 805 . 252 . 0557

SPR BIO-1. Review and Survey Project-Specific Biological Resources (completed)
SPR BIO-2. Require Biological Resource Training for Workers
SPR BIO-3. Survey Sensitive Natural Communities and Other Sensitive Habitats
SPR BIO-4. Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function
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
SPR BIO-7. Survey for Special-Status Plants
SPR BIO-8. Identify and Avoid or Minimize Impacts in Coastal Zone ESHAs
SPR BIO-9. Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife
SPR BIO-10. Survey for Special-Status Wildlife and Nursery Sites
SPR BIO-11. Install Wildlife-Friendly Fencing
SPR BIO-12. Protect Common Nesting Birds, Including Raptors
MM BIO-1a. Avoid Loss of Special-Status Plants Listed under ESA or CESA
MM BIO-1b. Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA
MM BIO-2a. Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species
MM BIO-2b. Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species
MM BIO-2g. Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees

MM BIO-3a. Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands
MM BIO-4. Avoid State and Federally Protected Wetlands
MM BIO-5. Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites

SPR AD-3. Consistency with Local Plans, Policies, and Ordinances
SPR AQ-4. Minimize Dust
SPR GEO-1. Suspend Disturbance during Heavy Precipitation
SPR GEO-3. Stabilize Disturbed Soil Areas
SPR GEO-4. Erosion Monitoring
SPR GEO-7. Minimize Erosion
SPR HYD-1. Comply with Water Quality Regulations
SPR HYD-3. Water Quality Protections for Prescribed Herbivory
SPR HYD-4. Identify and Protect Watercourse and Lake Protection Zones

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From: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Sent: Wednesday, June 28, 2023 12:51 PM
To: David Compton <dcompton@dudek.com>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi David,
After additional review and conferring with other Gaviota tarplant species experts, CDFW is recommending surveys in locations 1-4. I will continue reviewing and get back to you with the other topics we discussed later.

Thanks!
Audrey
Audrey Kelly
Environmental Scientist
California Department of Fish and Wildlife – South Coast Region
Temporary line: (805)861-8475

From: David Compton <dcompton@dudek.com>
Sent: Wednesday, June 28, 2023 12:24 PM
To: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi Audrey,

A quick follow-up on our meeting. It turns out I did, in fact, raise the Gaviota tarplant issue to Chris Diel and told him pretty much the same as I told you: we would do seasonally timed surveys and avoidance, if any are found. But I haven't gotten a response about his concurrence for the area where it occurs. Given how far the Goleta and Santa Barbara

projects are from the nearest occurrences (17 miles plus), and despite a long history of botanical information for those areas, we have always assumed the species does not occur in that area.

I asked our project manager, Dana Link-Herrera, for more details on the grazing practices. She is preparing a grazing BMPs appendix, and we can share this with you when it's done.

Dave

From: David Compton
Sent: Wednesday, June 28, 2023 10:04 AM
To: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Subject: RE: South Coast Herbivory Cal-VTP project

Updated project description

The proposed treatment activities aim to reduce fuel loads to create buffers between the wildland vegetation in wildland urban interface (WUI) areas as well as reducing fuel loads adjacent to critical transportation corridors. These strategic treatments would help to to reduce fuel loading to mitigate the potential for high intensity wildfire and reduce the potential for wildfire ignitions.
The proposed prescribed herbivory treatments would occur within 27 project sites comprising approximately 1,639 acres (see Table 1) and are intended to be implemented over a 4-year period. The project will aim for a minimum target of 1000 acres treated per year and would include maintenance treatments where feasible. The project area is characterized by gentle to steep slopes with multiple aspects covered in vegetation typical of Southern California; foothills covered in grass and oak woodland with mixed chaparral on the upper slopes and ridgetops. These areas provide for limited access by hand crews or mechanical equipment, making prescribed herbivory the most realistic vegetation management treatment activity in the proposed project areas. The prescribed herbivory treatment activities would involve the use of temporary electric fences to contain the animals. The fences would be constructed along existing road and trail systems. During project implementation, narrow (approximately 3-foot-wide) saw lines would need to be constructed to facilitate fence construction. Limited ground disturbance is expected to occur on any of the proposed projects.
Prescribed herbivory treatments would follow best practices to reduce the potential for overgrazing or the spread of invasive species. Attachment XX includes a description of best management practices that would be follow for all grazing treatments implemented under the project. Animals would be confined within small (1-10 acre) paddocks using portable electric fencing until the agreed upon level of grazing in the paddock is completed. Prior to being brought to the site, the herd would be sequestered for at least 3 days where feed utilized does not contain unwanted seed/plant material. Grazing activities would be conducted in a manner which keeps all animals under herdsman's control and appropriately confined. Measures would be taken to ensure no grazing animals or herd control animals cause noise which disturbs adjoining neighbors, and to remove animals that cause a noise nuisance. Within each paddock, the goal would be a 80% reduction of herbaceous fuels (grasses), trampled or consumed. XX ADD DISCUSSION OF VEGETATION TO BE RETAINED. The animals would be moved to the next paddock once desired results are achieved.

Project Goals

- Enhance fire safety along main transportation corridors by reducing flammable vegetation.
- Protect community areas by creating and/or increasing defensible space beyond PRC 4291 requirements.
- Reduce the size and intensity of wildland fires common to this area.
- Reduce the frequency of wildfire ignitions.
- Improve forest health and biodiversity while enhancing forested communities' safety.
- Reduce the impacts of climate change.

Project Objectives

- Complete environmental review of project treatments.
- Complete 27 fuel reduction treatments through the use of prescribed herbivory.

Project Outcomes

- A reduction in the number and severity of roadside fires in the project area.

- A decrease in number of large-scale wildfires as a result of reduced fuel loads within the project area.
- An increase in firefighter safety while responding to and engaging in fire suppression actions.
- Enhancement of the protection of lives, property, critical infrastructure, and natural resources from wildland fire.
- Enhancement of health and resilience of local grasslands and oak woodlands.
- Reduction of GHG emissions as a result of smaller and less severe wildland fires.

Schedule

The project is anticipated to occur over a 4-year period, with grazing treatments beginning as early as summer 2023. The first 1,000 acres are anticipated to be completed by fall 2023, with an additional 1,000 acres treated by fall 2024, and an additional 1,000 acres treated by fall 2025. Treatment maintenance activities would be conducted in high priority treatment areas throughout the 4-year grant period and all initial treatment and treatment maintenance activities conducted under the grant funding would be implemented by winter or spring 2026.

Access and Transportation

The project parcels are located on public and private property and accessible from existing roads. Herbivores would be transported to the project site by trucks and left on site until desired grazing level is achieved, and removed from the project site by trucks. It is anticipated that X trucks per project site would be needed to transport animals, with a total of two truck trips per site. Where feasible, animals would be moved between adjacent project sites by herding across property boundaries, reducing the need for truck transportation. Additional vehicles arriving on site when transporting animals would include passenger vehicles for project management staff (no more than five vehicles arriving on site at once are anticipated).

Biomass Disposal

The use of prescribed herbivory eliminates the possibility of left-over biomass. A shepherd would remain on site with the animals during treatment activities. Any trash or refuse produced by the shepherd would be nominal and would be properly disposed of.

Proposed Treatments

Table 1. Proposed Treatment Sites

Map ID	Treatment Area .	Ownership	Jurisdiction	Acres	Timeframe (weeks)	Personnel Required	Treatment Maintenance
1	Arroyo Hondo West	SB Land Trust	SRA	88.3			
2	Arroyo Hondo East	SB Land Trust	SRA	53.5			
3	Baron Ranch West	SB County	SRA	160.7			
4	Baron Ranch East	SB County	SRA	220.5			
5	Las Flores	Exxon Corp	SRA	241.8			
6	Coral Canyon	Exxon Corp	SRA	218.3			
7	Ellwood Mesa	City of Goleta	LRA	204.0			
8	Northgate	City of Goleta	LRA	10.2			
9	Evergreen Park	City of Goleta	LRA	28.8			
10	Lake Los Carneros	City of Goleta	LRA	104.4			
11	La Goleta North	City of Goleta	LRA	1.8			
12	La Goleta South	City of Goleta	LRA	3.0			
13	Via Salerno South	City of Goleta	LRA	2.6			
14	Via Salerno North	City of Goleta	LRA	2.2			
15	Trout Club	Private HOA	SRA	12.4			

Map ID	Treatment Area .	Ownership	Jurisdiction	Acres	Timeframe (weeks)	Personnel Required	Treatment Maintenance
16	Painted Cave South FB	Private	SRA	7.7			
17	Oak Grove	Private HOA	LRA	8.3			
18	County Range	SB County	LRA	21.9			
19	West Mesa	Private Preserve	SRA	93.6			
20	SM Foothills	SB County	SRA	37.1			
21	Preserve SM Private	Private	SRA	20.7			
22	Preserve SM HOA	Private HOA	SRA	13.8			
23	SM Foothills East	SB County	SRA	23.4			
24	San Roque West	Private	SRA	15.9			
25	San Roque East	Private	SRA	24.8			
26	San Roque South	Private	SRA	9.4			
27	Tunnel Rd FB	City of Santa Barbara	SRA	10.5			

From: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Sent: Friday, June 23, 2023 12:45 PM
To: David Compton <dcompton@dudek.com>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi David,
Sounds good. Talk to you then.

Thanks,
Audrey

From: David Compton <dcompton@dudek.com>
Sent: Friday, June 23, 2023 12:30 PM
To: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi Audrey,

I think Wednesday is great. How about 10am? Not sure it needs to be a Zoom. I could just call you at the number below your signature.

Dave

From: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Sent: Friday, June 23, 2023 11:10 AM
To: David Compton <dcompton@dudek.com>
Subject: RE: South Coast Herbivory Cal-VTP project

Hi David,
Yes I would be the contact. I am available for an initial discussion next week. My schedule looks entirely open on Wednesday after 9AM and with the exception of between 1-2 PM. If sometime that day works for you let me know. Otherwise, I can look for another time.

Thanks,
Audrey
Audrey Kelly
Environmental Scientist
California Department of Fish and Wildlife – South Coast Region
Temporary line: (805)861-8475

From: David Compton <dcompton@dudek.com>
Sent: Thursday, June 22, 2023 3:50 PM
To: Kelly, Audrey@Wildlife <Audrey.Kelly@Wildlife.ca.gov>
Subject: South Coast Herbivory Cal-VTP project

Hi Audrey,

I hope you are doing well. Dudek is helping the Santa Barbara County Fire Safe Council and Santa Barbara County Fire with a new project that is proposed under CalFire's California Vegetation Treatment Program Final Programmatic Environmental Impact Report (December 2019). As we have worked together on two previous Cal-VTP projects in Santa Barbara County, I assumed I should be reaching out to you with regard to this project, for coordination with CDFW.

I have provided a download link for both a current version of the project description and a figure showing the location of the various smaller projects that compose the greater project. On the figure, we are currently proposing to do only the "Project Sites," shown in dark green, and not the "Potential Project Site in light orange/yellow. The South Coast Herbivory project, as implied by its name, is exclusively a grazing treatment project, using mostly sheep, but also possibly goats. No large, mechanized equipment is proposed for use, no vehicles should be driving off road, and no hand tools will be used to remove vegetation. The treatments are all proposed on private and public lands.

The project occurs on five U.S. Geological Survey quadrangles: Santa Barbara, Goleta, Dos Pueblos Canyon, Tajiguas, and Gaviota. It is on the south coast of Santa Barbara County, in the Santa Ynez Mountain foothills and coastal plain from Santa Barbara west to the Gaviota Coast. Several projects in Goleta and along the Gaviota coast are all or partly in the Coastal Zone. The proposed project area is shown on the attached map. The attached project description describes the treatment activities the district proposes to conduct. The project will be conducted mostly within herbaceous habitats, and is designed to avoid streams and riparian habitats. However, the boundaries are generally drawn, and additional avoidance of such areas will be necessary. We believe the project will also require some surveys and avoidance for rare plants and sensitive natural communities, and special-status wildlife surveys and avoidance. We are also seeking to coordinate with USFWS with regard to occurrence of federally listed species (specifically, California red-legged frog) and

possibly with the National Marine Fisheries Service with regard to occurrence of steelhead, to ensure avoidance of stream impacts is adequate.

We are looking for concurrence with approaches to resources we've identified as potentially occurring. Are you available for an initial discussion of the project in a call or Zoom meeting next week? If so, could you provide times over the next couple of weeks that you are available?

The CNDDB query yielded occurrences of several CESA-listed wildlife species, but we don't believe any have potential to occur in the treatment areas. Other special-status wildlife and plant species potentially occur, or are known to occur, in the treatment areas. The listed wildlife species included:

Bald eagle – not known to nest south of the Santa Ynez Mountain crest; no habitat
Least Bell's vireo – does not breed in the county south of the Santa Ynez Mtns
Belding's savannah sparrow – limited to coastal marshes, which do not occur in any of the project areas
Light-footed Ridgway's rail – limited to coastal marshes
Bank swallow – extirpated in the county; no suitable habitat
California black rail – limited to coastal marshes and extirpated as a resident/breeder
California least tern – limited to the immediate coast; no suitable habitat
California brown pelican [delisted, but fully protected] – limited to the coast and marine environments
Foothill yellow-legged frog – probably extirpated – no records in the county south of the Santa Ynez Mtn crest
California condor –no habitat
Southwestern willow flycatcher – no habitat; not recorded nesting in the county south of the Santa Ynez Mtns
Tricolored blackbird – no habitat
Western snowy plover – limited in the region to coastal beach and dune habitat, which does not occur

Several fully protected species also potentially occur, most notably the white-tailed kite, which is known to nest and forage within several treatment areas, especially, Lake Los Carneros Park and Ellwood Mesa, and less regularly at other locations, such as at several sites within the San Marcos Foothills. I believe the main method of avoidance will be to do pre-activity nesting bird surveys in season and establishing buffers, if any area found, in accordance with SPR BIO-12, which applies to all treatment types.

The query identified several CESA listed plant species:

Gambel's water cress – one occurrence from the 19th century from an unspecific location, and considered extirpated; not expected to occur
Gaviota tarplant – we are recommending surveys at the appropriate season for identifying this species, and recommending avoidance, if this species is found. We believe it potentially occurs only in project sites 1 through 6
Salt marsh bird's beak – occurs only in dunes and coastal marshes, which are absent in the project sites
Seaside bird's beak – we understand that CDFW believes this species potentially occurs along the south coast and will recommend surveys and avoidance (if found) where suitable habitat occurs.

So, of these, we are treating only Gaviota tarplant and seaside bird's beak as species that have potential to occur.

Let me know if you'd like to discuss the project. It would be great to talk in the next week.

Best,
Dave Compton
Senior Biologist
DUDEK
621 Chapala Street
Santa Barbara, CA 93101
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C: 805 . 252 . 0557

Attachment E

U.S. Department of Fish and Wildlife Comments

David Compton

From: Dellith, Chris <chris_dellith@fws.gov>
Sent: Friday, September 1, 2023 11:50 AM
To: David Compton
Cc: Diel, Christopher; Bartlett, Kirby M; Dana Link-Herrera
Subject: RE: [EXTERNAL] RE: Santa Barbara Fire Safe Council/Santa Barbara Fire South Coast Herbivory Project, Cal-VTP PEIR

Hi Dave,

Your suggestions described below (i.e., increasing search area to 330 ft, ceasing activity if a frog is detected, avoiding burrows during the winter, etc.) appears to be acceptable to us. Thank you for checking in with us on this matter.

Sincerely,
Chris

==========

Chris Dellith (he, him)
Senior Fish and Wildlife Biologist
Ventura Field Office
U.S. Fish and Wildlife Service
2493 Portola Rd., Suite B
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Phone: (805) 677-3308
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I often telework and can best be reached via email or Chat with me on TEAMs

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From: David Compton <dcompton@dudek.com>
Sent: Thursday, August 31, 2023 9:19 PM
To: Dellith, Chris <chris_dellith@fws.gov>
Cc: Diel, Christopher <christopher_diel@fws.gov>; Bartlett, Kirby M <kirby_bartlett@fws.gov>; Dana Link-Herrera <dlinkherrera@dudek.com>
Subject: RE: [EXTERNAL] RE: Santa Barbara Fire Safe Council/Santa Barbara Fire South Coast Herbivory Project, Cal-VTP PEIR

Hi again, Chris. We have looked at this a little more closely, and we do have a couple of questions.

With regard to avoiding project activities from October 1 to April 30, the main question for us is where this should apply. For this project, we have already proposed to search for aquatic habitat prior to start of treatment-related activities, as part of implementation of the special-status wildlife survey requirement under the PEIR (SPR BIO-10). We proposed a search for aquatic habitats within 300 ft, but I think we could bump that

to 330 ft, acknowledging that the Service's survey guidance mentions the occurrence of frogs in burrows in uplands up to 100 m away from aquatic habitats. If we identify all aquatic habitat within 100 meters (330 feet) during pre-activity surveys, would this allow us to limit the application of the October to April requirement to areas within 330 feet of the aquatic habitat? Given our understanding that the species may still travel greater distances over uplands during rain events, we would still propose to cease treatment activities during and just after those events. We understand, of course, that some areas within 330 feet of our project site may not be accessible for surveys. We propose that, if any area that has potential to support frogs and that we can't investigate directly has any potential to hold aquatic habitat, we will also avoid that area and a buffer of 330 feet. Also, we understand that "aquatic habitat" in this case should be broadly interpreted as any location that may serve as even temporary refuge, and not just suitable breeding habitat.

Failing this being acceptable, would it be acceptable to incorporate a survey for burrows in uplands, especially in herbaceous communities, where most of the treatment is planned, and avoid these burrows during the winter season? Basically, limiting treatment over a part of the project area to a five-month period, especially given restrictions from things like nesting birds and rare plants in spring and summer, would severely limit what our client can do in those areas. So, we want to make sure we don't end up asking them to apply the seasonal restriction in areas they don't need to.

Thanks for considering our suggestions.

Dave

Dave Compton
Senior Biologist
DUDEK
621 Chapala Street
Santa Barbara, CA 93101
T: 805 . 308 . 8536
F: 805 . 963 . 2074
C: 805 . 252 . 0557

From: Dellith, Chris <chris_dellith@fws.gov>
Sent: Thursday, August 31, 2023 9:25 AM
To: David Compton <dcompton@dudek.com>
Cc: Diel, Christopher <christopher_diel@fws.gov>; Bartlett, Kirby M <kirby_bartlett@fws.gov>
Subject: FW: [EXTERNAL] RE: Santa Barbara Fire Safe Council/Santa Barbara Fire South Coast Herbivory Project, Cal-VTP PEIR

Hi Dave,

I am taking this one over from Kirby Bartlett who was our lead. Thank you for the opportunity to review the attached project description for the Santa Barbara Fire South Coast Herbivory Project. We appreciate your efforts to work with us to ensure direct take and take through harm of the California red-legged frog's habitat is avoided. Although there remains potential for California red-legged frogs to be injured by installation of the electric fence or being trampled by sheep or goats, we believe that pre-fence installation surveys by biologists qualified to survey for the California red-legged frog, avoiding project activities during the rainy season (October 1 to April 30), and avoiding project activities during or 24 hours following a rain event (0.5 inches of precipitation during a 24-hour period) will likely be sufficient to minimize the risk of take. We also

acknowledge that vegetation management through the use of herbivores is likely to have a smaller impact on California red-legged frogs and their dispersal and upland habitats than the use of pesticides or chipping/mulching. Additionally, we are confident that you are committed to ensuring take is avoided and notifying us if conditions or the project description changes. If at that time we determine that project activities resulted in direct take of the species or through significant habitat modification or degradation, it is likely that we will recommend that you apply for a section 10(a)(1)(B) permit for any future phases of the project.

Please feel free to contact me you have any questions regarding this matter.

Sincerely,
Chris

==========

Chris Dellith (he, him)
Senior Fish and Wildlife Biologist
Ventura Field Office
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2493 Portola Rd., Suite B
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From: David Compton <dcompton@dudek.com>
Sent: Tuesday, August 15, 2023 3:32 PM
To: Diel, Christopher <christopher_diel@fws.gov>
Subject: [EXTERNAL] RE: Santa Barbara Fire Safe Council/Santa Barbara Fire South Coast Herbivory Project, Cal-VTP PEIR

Hi again, Chris,

I believe I got only an out of office reply to this email, which is about a vegetation management (specifically, grazing) project under the Cal VTP PEIR, on the south coast of Santa Barbara County. I've attached an updated project description and a new figure that shows only the sites currently being proposed for grazing. Also, our

document includes the following project-specific requirements with regard to implementation of MM BIO-2a of the PEIR, which requires avoidance of listed wildlife species:

Project-Specific Requirements: To avoid take of California red-legged frog in accordance with Mitigation Measure BIO-2a, implement the following special measures:

- Fence installation work shall not be scheduled or implemented when rain is forecast or within 48 hours after a rain event, in any area where California red-legged frog potentially occurs.
- If any California red-legged frogs are observed during pre-activity surveys (see SPR BIO-10), consult with USFWS to determine appropriate avoidance measures in accordance with MM BIO-2a. If any California red-legged frogs are encountered during treatment, stop work in the vicinity of the observation and immediately notify USFWS of the occurrence. Consult with USFWS on the appropriate course of action.

The project is being proposed by the Santa Barbara County Fire Safe Council and Santa Barbara County Fire. Let me know if you have any concerns, if you need more specific location information, etc.

Thanks,
Dave

Dave Compton
Senior Biologist
DUDEK
621 Chapala Street
Santa Barbara, CA 93101
T: 805 . 308 . 8536
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C: 805 . 252 . 0557

From: David Compton
Sent: Friday, June 23, 2023 2:14 PM
To: Diel, Christopher <christopher_diel@fws.gov>
Subject: Santa Barbara Fire Safe Council/Santa Barbara Fire South Coast Herbivory Project, Cal-VTP PEIR

Hi Chris,

Dudek is helping the Santa Barbara County Fire Safe Council and Santa Barbara County Fire with the South Coast Herbivory vegetation treatment project, proposed under the CalFire's California Vegetation Treatment Program Final Programmatic Environmental Impact Report (December 2019). The proposed treatment areas are shown on the pdf map attached to this email. The locations are the "Project Sites" as shown in dark green on the map, and not the light orange "Potential Projects." The project occurs in the Santa Barbara, Goleta, Dos Pueblos Canyon, Tajiguas, and Gaviota USGS quadrangles. The project description, which includes descriptions of treatment methods, is also attached. Note that the project description is subject to change.

I have assumed you are the person at the Service that we need to coordinate with, since we coordinated with you when working on the Purisima Ridge Project in northern Santa Barbara County and the Montecito Fire Protection District treatment project in the south county. Please let us know if that is not the case and we should contact someone else. I was hoping to have an initial conversation with you about the project, if you are available.

We believe the main concern on the part of the Service would be California red-legged frog. There are several occurrences near the more westerly projects sites (near Gaviota), and several creeks elsewhere that occur near the project sites and may have potential for this species. However, none of the project sites includes suitable aquatic habitat, and we believe some level of pre-activity survey to ensure fence installation does not impact aestivating frogs would likely be sufficient for avoiding take, along with seasonal/weather restrictions for fence installation.

Monarch butterfly may also be present in some places. Several known winter roosts occur within treatment area, but we don't believe the treatment, grazing by sheep and possibly goats, would affect this species. We believe that other listed wildlife species for which the Service is responsible and that occur in the region would not be affected by this project. Tidewater goby may occur in several streams near the treatment areas, but we believe standard project requirements to avoid erosion and sedimentation would avert any indirect effects to this species. Other species occurring in the region include California condor, arroyo toad, least Bell's vireo, southwestern willow flycatcher, and a suite of species occurring in coastal environments, such as western snowy plover, light-footed Ridgway's rail, and California least tern, that the project would not affect because no beaches, coastal marshes, or dunes occur within any of the treatment areas.

Several listed plant species, specifically salt marsh bird's-beak, Gambel's water cress, Contra Costa goldfields, Lompoc yerba santa, and Gaviota tarplant, occur in the region, but we don't believe the project has the potential to affect most of these species. It is our understanding that Contra Costa goldfields and Gambel's water cress are both known in the region only from single historical occurrences that are considered extirpated. The project sites support no coastal dune or marsh habitat for salt marsh bird's beak. And we believe the sites are not within the range of Lompoc yerb santa. We do believe Gaviota tarplant has some potential to occur in some of the more western sites, near Gaviota. But the PEIR would require seasonally timed rare plant surveys for all areas, and we will recommend avoidance for any listed species found.

We have flexibility to recommend project modifications to avoid impacts that may require additional permitting not covered under the PEIR measures. We want to do what we can to help the Santa Barbara Fire Safe Council and Santa Barbara County Fire avoid impacts to federally listed species, such as avoiding areas where these species may occur, timing treatment seasonally, or other measures. If you would like to discuss the project and potential issues, I would be a happy to meet with you via Zoom or a phone call. Feel free to suggest potential times. I'm available all next week, if you have time.

We look forward to hearing from you.

Dave Compton
Senior Biologist
DUDEK
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